

**MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY
AIR QUALITY DIVISION**

EFFECTIVE DATE: August 5, 2020

REVISION DATES: November 30, 2020, May 4, 2021, August 9, 2023

ISSUED TO

**Holcim (US) Incorporated
DBA Lafarge Alpena Plant**

State Registration Number (SRN): B1477

LOCATED AT

1435 Ford Avenue, Alpena, Alpena County, Michigan 49707

RENEWABLE OPERATING PERMIT

Permit Number: MI-ROP-B1477-2020c

Expiration Date: August 5, 2025

Administratively Complete ROP Renewal Application Due Between:
February 5, 2024 and February 5, 2025

This Renewable Operating Permit (ROP) is issued in accordance with and subject to Section 5506(3) of Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451). Pursuant to Rule 210(1) of the administrative rules promulgated under Act 451, this ROP constitutes the permittee's authority to operate the stationary source identified above in accordance with the general conditions, special conditions and attachments contained herein. Operation of the stationary source and all emission units listed in the permit are subject to all applicable future or amended rules and regulations pursuant to Act 451 and the federal Clean Air Act.

SOURCE-WIDE PERMIT TO INSTALL

Permit Number: MI-PTI-B1477-2020c

This Permit to Install (PTI) is issued in accordance with and subject to Section 5505(5) of Act 451. Pursuant to Rule 214a of the administrative rules promulgated under Act 451, the terms and conditions herein, identified by the underlying applicable requirement citation of Rule 201(1)(a), constitute a federally enforceable PTI. The PTI terms and conditions do not expire and remain in effect unless the criteria of Rule 201(6) are met. Operation of all emission units identified in the PTI is subject to all applicable future or amended rules and regulations pursuant to Act 451 and the federal Clean Air Act.

Michigan Department of Environment, Great Lakes, and Energy

Shane Nixon, Cadillac / Gaylord District Supervisor

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AUTHORITY AND ENFORCEABILITY

For the purpose of this permit, the **permittee** is defined as any person who owns or operates an emission unit at a stationary source for which this permit has been issued. The **department** is defined in Rule 104(d) as the Director of the Michigan Department of Environment, Great Lakes, and Energy (EGLE) or his or her designee.

The permittee shall comply with all specific details in the permit terms and conditions and the cited underlying applicable requirements. All terms and conditions in this ROP are both federally enforceable and state enforceable unless otherwise footnoted. Certain terms and conditions are applicable to most stationary sources for which an ROP has been issued. These general conditions are included in Part A of this ROP. Other terms and conditions may apply to a specific emission unit, several emission units which are represented as a flexible group, or the entire stationary source which is represented as a Source-Wide group. Special conditions are identified in Parts B, C, D and/or the appendices.

In accordance with Rule 213(2)(a), all underlying applicable requirements are identified for each ROP term or condition. All terms and conditions that are included in a PTI are streamlined, subsumed and/or is state-only enforceable will be noted as such.

In accordance with Section 5507 of Act 451, the permittee has included in the ROP application a compliance certification, a schedule of compliance, and a compliance plan. For applicable requirements with which the source is in compliance, the source will continue to comply with these requirements. For applicable requirements with which the source is not in compliance, the source will comply with the detailed schedule of compliance requirements that are incorporated as an appendix in this ROP. Furthermore, for any applicable requirements effective after the date of issuance of this ROP, the stationary source will meet the requirements on a timely basis, unless the underlying applicable requirement requires a more detailed schedule of compliance.

Issuance of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.

A. GENERAL CONDITIONS

Permit Enforceability

- All conditions in this permit are both federally enforceable and state enforceable unless otherwise noted. **(R 336.1213(5))**
- Those conditions that are hereby incorporated in a state-only enforceable Source-Wide PTI pursuant to Rule 201(2)(d) are designated by footnote one. **(R 336.1213(5)(a), R 336.1214a(5))**
- Those conditions that are hereby incorporated in a federally enforceable Source-Wide PTI pursuant to Rule 201(2)(c) are designated by footnote two. **(R 336.1213(5)(b), R 336.1214a(3))**

General Provisions

1. The permittee shall comply with all conditions of this ROP. Any ROP noncompliance constitutes a violation of Act 451, and is grounds for enforcement action, for ROP revocation or revision, or for denial of the renewal of the ROP. All terms and conditions of this ROP that are designated as federally enforceable are enforceable by the Administrator of the United States Environmental Protection Agency (USEPA) and by citizens under the provisions of the federal Clean Air Act (CAA). Any terms and conditions based on applicable requirements which are designated as "state-only" are not enforceable by the USEPA or citizens pursuant to the CAA. **(R 336.1213(1)(a))**
2. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this ROP. **(R 336.1213(1)(b))**
3. This ROP may be modified, revised, or revoked for cause. The filing of a request by the permittee for a permit modification, revision, or termination, or a notification of planned changes or anticipated noncompliance does not stay any ROP term or condition. This does not supersede or affect the ability of the permittee to make changes, at the permittee's own risk, pursuant to Rule 215 and Rule 216. **(R 336.1213(1)(c))**
4. The permittee shall allow the department, or an authorized representative of the department, upon presentation of credentials and other documents as may be required by law and upon stating the authority for and purpose of the investigation, to perform any of the following activities: **(R 336.1213(1)(d))**
 - a. Enter, at reasonable times, a stationary source or other premises where emissions-related activity is conducted or where records must be kept under the conditions of the ROP.
 - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the ROP.
 - c. Inspect, at reasonable times, any of the following:
 - i. Any stationary source.
 - ii. Any emission unit.
 - iii. Any equipment, including monitoring and air pollution control equipment.
 - iv. Any work practices or operations regulated or required under the ROP.
 - d. As authorized by Section 5526 of Act 451, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the ROP or applicable requirements.
5. The permittee shall furnish to the department, within a reasonable time, any information the department may request, in writing, to determine whether cause exists for modifying, revising, or revoking the ROP or to determine compliance with this ROP. Upon request, the permittee shall also furnish to the department copies of any records that are required to be kept as a term or condition of this ROP. For information which is claimed by the permittee to be confidential, consistent with the requirements of the 1976 PA 442, MCL §15.231 et seq., and known as the Freedom of Information Act, the person may also be required to furnish the records directly to the USEPA together with a claim of confidentiality. **(R 336.1213(1)(e))**

6. A challenge by any person, the Administrator of the USEPA, or the department to a particular condition or a part of this ROP shall not set aside, delay, stay, or in any way affect the applicability or enforceability of any other condition or part of this ROP. **(R 336.1213(1)(f))**
7. The permittee shall pay fees consistent with the fee schedule and requirements pursuant to Section 5522 of Act 451. **(R 336.1213(1)(g))**
8. This ROP does not convey any property rights or any exclusive privilege. **(R 336.1213(1)(h))**

Equipment & Design

9. Any collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in Rule 370(2).² **(R 336.1370)**
10. Any air cleaning device shall be installed, maintained, and operated in a satisfactory manner and in accordance with the Michigan Air Pollution Control rules and existing law. **(R 336.1910)**

Emission Limits

11. Unless otherwise specified in this ROP, the permittee shall comply with Rule 301, which states, in part, "Except as provided in Subrules 2, 3, and 4 of this rule, a person shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of a density greater than the most stringent of the following:"² **(R 336.1301(1))**
 - a. A 6-minute average of 20% opacity, except for one 6-minute average per hour of not more than 27% opacity.
 - b. A limit specified by an applicable federal new source performance standard.

The grading of visible emissions shall be determined in accordance with Rule 303.

12. The permittee shall not cause or permit the emission of an air contaminant or water vapor in quantities that cause, alone or in reaction with other air contaminants, either of the following:
 - a. Injurious effects to human health or safety, animal life, plant life of significant economic value, or property.¹ **(R 336.1901(a))**
 - b. Unreasonable interference with the comfortable enjoyment of life and property.¹ **(R 336.1901(b))**

Testing/Sampling

13. The department may require the owner or operator of any source of an air contaminant to conduct acceptable performance tests, at the owner's or operator's expense, in accordance with Rule 1001 and Rule 1003, under any of the conditions listed in Rule 1001(1).² **(R 336.2001)**
14. Any required performance testing shall be conducted in accordance with Rule 1001(2), Rule 1001(3) and Rule 1003. **(R 336.2001(2), R 336.2001(3), R 336.2003(1))**
15. Any required test results shall be submitted to the Air Quality Division (AQD) in the format prescribed by the applicable reference test method within 60 days following the last date of the test. **(R 336.2001(5))**

Monitoring/Recordkeeping

16. Records of any periodic emission or parametric monitoring required in this ROP shall include the following information specified in Rule 213(3)(b)(i), where appropriate. **(R 336.1213(3)(b))**
 - a. The date, location, time, and method of sampling or measurements.
 - b. The dates the analyses of the samples were performed.
 - c. The company or entity that performed the analyses of the samples.
 - d. The analytical techniques or methods used.
 - e. The results of the analyses.
 - f. The related process operating conditions or parameters that existed at the time of sampling or measurement.
17. All required monitoring data, support information and all reports, including reports of all instances of deviation from permit requirements, shall be kept and furnished to the department upon request for a period of not less than 5 years from the date of the monitoring sample, measurement, report or application. Support information includes all calibration and maintenance records and all original strip-chart recordings, or other original data records, for continuous monitoring instrumentation and copies of all reports required by the ROP. **(R 336.1213(1)(e), R 336.1213(3)(b)(ii))**

Certification & Reporting

18. Except for the alternate certification schedule provided in Rule 213(3)(c)(iii)(B), any document required to be submitted to the department as a term or condition of this ROP shall contain an original certification by a Responsible Official which state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. **(R 336.1213(3)(c))**
19. A Responsible Official shall certify to the appropriate AQD District Office and to the USEPA that the stationary source is and has been in compliance with all terms and conditions contained in the ROP except for deviations that have been or are being reported to the appropriate AQD District Office pursuant to Rule 213(3)(c). This certification shall include all the information specified in Rule 213(4)(c)(i) through (v) and shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the certification are true, accurate, and complete. The USEPA address is: USEPA, Air Compliance Data - Michigan, Air and Radiation Division, 77 West Jackson Boulevard, Chicago, Illinois 60604-3507. **(R 336.1213(4)(c))**
20. The certification of compliance shall be submitted annually for the term of this ROP as detailed in the special conditions, or more frequently if specified in an applicable requirement or in this ROP. **(R 336.1213(4)(c))**
21. The permittee shall promptly report any deviations from ROP requirements and certify the reports. The prompt reporting of deviations from ROP requirements is defined in Rule 213(3)(c)(ii) as follows, unless otherwise described in this ROP. **(R 336.1213(3)(c))**
 - a. For deviations that exceed the emissions allowed under the ROP, prompt reporting means reporting consistent with the requirements of Rule 912 as detailed in Condition 25. All reports submitted pursuant to this paragraph shall be promptly certified as specified in Rule 213(3)(c)(iii).
 - b. For deviations which exceed the emissions allowed under the ROP and which are not reported pursuant to Rule 912 due to the duration of the deviation, prompt reporting means the reporting of all deviations in the semiannual reports required by Rule 213(3)(c)(i). The report shall describe reasons for each deviation and the actions taken to minimize or correct each deviation.
 - c. For deviations that do not exceed the emissions allowed under the ROP, prompt reporting means the reporting of all deviations in the semiannual reports required by Rule 213(3)(c)(i). The report shall describe the reasons for each deviation and the actions taken to minimize or correct each deviation.

22. For reports required pursuant to Rule 213(3)(c)(ii), prompt certification of the reports is described in Rule 213(3)(c)(iii) as either of the following: **(R 336.1213(3)(c))**
 - a. Submitting a certification by a Responsible Official with each report which states that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.
 - b. Submitting, within 30 days following the end of a calendar month during which one or more prompt reports of deviations from the emissions allowed under the ROP were submitted to the department pursuant to Rule 213(3)(c)(ii), a certification by a Responsible Official which states that; “based on information and belief formed after reasonable inquiry, the statements and information contained in each of the reports submitted during the previous month were true, accurate, and complete.” The certification shall include a listing of the reports that are being certified. Any report submitted pursuant to Rule 213(3)(c)(ii) that will be certified on a monthly basis pursuant to this paragraph shall include a statement that certification of the report will be provided within 30 days following the end of the calendar month.

23. Semiannually for the term of the ROP as detailed in the special conditions, or more frequently if specified, the permittee shall submit certified reports of any required monitoring to the appropriate AQD District Office. All instances of deviations from ROP requirements during the reporting period shall be clearly identified in the reports. **(R 336.1213(3)(c)(i))**

24. On an annual basis, the permittee shall report the actual emissions, or the information necessary to determine the actual emissions, of each regulated air pollutant as defined in Rule 212(6) for each emission unit utilizing the emissions inventory forms provided by the department. **(R 336.1212(6))**

25. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the appropriate AQD District Office. The notice shall be provided not later than two business days after the start-up, shutdown, or discovery of the abnormal conditions or malfunction. Notice shall be by any reasonable means, including electronic, telephonic, or oral communication. Written reports, if required under Rule 912, must be submitted to the appropriate AQD District Supervisor within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal conditions or malfunction has been corrected, or within 30 days of discovery of the abnormal conditions or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5) and shall be certified by a Responsible Official in a manner consistent with the CAA.² **(R 336.1912)**

Permit Shield

26. Compliance with the conditions of the ROP shall be considered compliance with any applicable requirements as of the date of ROP issuance if either of the following provisions is satisfied. **(R 336.1213(6)(a)(i), R 336.1213(6)(a)(ii))**
 - a. The applicable requirements are included and are specifically identified in the ROP.
 - b. The permit includes a determination or concise summary of the determination by the department that other specifically identified requirements are not applicable to the stationary source.

Any requirements identified in Part E of this ROP have been identified as non-applicable to this ROP and are included in the permit shield.

27. Nothing in this ROP shall alter or affect any of the following:
 - a. The provisions of Section 303 of the CAA, emergency orders, including the authority of the USEPA under Section 303 of the CAA. **(R 336.1213(6)(b)(i))**
 - b. The liability of the owner or operator of this source for any violation of applicable requirements prior to or at the time of this ROP issuance. **(R 336.1213(6)(b)(ii))**
 - c. The applicable requirements of the acid rain program, consistent with Section 408(a) of the CAA. **(R 336.1213(6)(b)(iii))**

- d. The ability of the USEPA to obtain information from a source pursuant to Section 114 of the CAA. **(R 336.1213(6)(b)(iv))**
28. The permit shield shall not apply to provisions incorporated into this ROP through procedures for any of the following:
 - a. Operational flexibility changes made pursuant to Rule 215. **(R 336.1215(5))**
 - b. Administrative Amendments made pursuant to Rule 216(1)(a)(i)-(iv). **(R 336.1216(1)(b)(iii))**
 - c. Administrative Amendments made pursuant to Rule 216(1)(a)(v) until the amendment has been approved by the department. **(R 336.1216(1)(c)(iii))**
 - d. Minor Permit Modifications made pursuant to Rule 216(2). **(R 336.1216(2)(f))**
 - e. State-Only Modifications made pursuant to Rule 216(4) until the changes have been approved by the department. **(R 336.1216(4)(e))**
 29. Expiration of this ROP results in the loss of the permit shield. If a timely and administratively complete application for renewal is submitted not more than 18 months, but not less than 6 months, before the expiration date of the ROP, but the department fails to take final action before the end of the ROP term, the existing ROP does not expire until the renewal is issued or denied, and the permit shield shall extend beyond the original ROP term until the department takes final action. **(R 336.1217(1)(c), R 336.1217(1)(a))**

Revisions

30. For changes to any process or process equipment covered by this ROP that do not require a revision of the ROP pursuant to Rule 216, the permittee must comply with Rule 215. **(R 336.1215, R 336.1216)**
31. A change in ownership or operational control of a stationary source covered by this ROP shall be made pursuant to Rule 216(1). **(R 336.1219(2))**
32. For revisions to this ROP, an administratively complete application shall be considered timely if it is received by the department in accordance with the time frames specified in Rule 216. **(R 336.1210(10))**
33. Pursuant to Rule 216(1)(b)(iii), Rule 216(2)(d) and Rule 216(4)(d), after a change has been made, and until the department takes final action, the permittee shall comply with both the applicable requirements governing the change and the ROP terms and conditions proposed in the application for the modification. During this time period, the permittee may choose to not comply with the existing ROP terms and conditions that the application seeks to change. However, if the permittee fails to comply with the ROP terms and conditions proposed in the application during this time period, the terms and conditions in the ROP are enforceable. **(R 336.1216(1)(c)(iii), R 336.1216(2)(d), R 336.1216(4)(d))**

Reopenings

34. A ROP shall be reopened by the department prior to the expiration date and revised by the department under any of the following circumstances:
 - a. If additional requirements become applicable to this stationary source with three or more years remaining in the term of the ROP, but not if the effective date of the new applicable requirement is later than the ROP expiration date. **(R 336.1217(2)(a)(i))**
 - b. If additional requirements pursuant to Title IV of the CAA become applicable to this stationary source. **(R 336.1217(2)(a)(ii))**
 - c. If the department determines that the ROP contains a material mistake, information required by any applicable requirement was omitted, or inaccurate statements were made in establishing emission limits or the terms or conditions of the ROP. **(R 336.1217(2)(a)(iii))**
 - d. If the department determines that the ROP must be revised to ensure compliance with the applicable requirements. **(R 336.1217(2)(a)(iv))**

Renewals

35. For renewal of this ROP, an administratively complete application shall be considered timely if it is received by the department not more than 18 months, but not less than 6 months, before the expiration date of the ROP. **(R 336.1210(9))**

Stratospheric Ozone Protection

36. If the permittee is subject to Title 40 of the Code of Federal Regulations (CFR), Part 82 and services, maintains, or repairs appliances except for motor vehicle air conditioners (MVAC), or disposes of appliances containing refrigerant, including MVAC and small appliances, or if the permittee is a refrigerant reclaimer, appliance owner or a manufacturer of appliances or recycling and recovery equipment, the permittee shall comply with all applicable standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F.
37. If the permittee is subject to 40 CFR Part 82 and performs a service on motor (fleet) vehicles when this service involves refrigerant in the MVAC, the permittee is subject to all the applicable requirements as specified in 40 CFR Part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners. The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed by the original equipment manufacturer. The term MVAC as used in Subpart B does not include the air-tight sealed refrigeration system used for refrigerated cargo or an air conditioning system on passenger buses using Hydrochlorofluorocarbon-22 refrigerant.

Risk Management Plan

38. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall register and submit to the USEPA the required data related to the risk management plan for reducing the probability of accidental releases of any regulated substances listed pursuant to Section 112(r)(3) of the CAA as amended in 40 CFR 68.130. The list of substances, threshold quantities, and accident prevention regulations promulgated under 40 CFR Part 68, do not limit in any way the general duty provisions under Section 112(r)(1).
39. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall comply with the requirements of 40 CFR Part 68, no later than the latest of the following dates as provided in 40 CFR 68.10(a):
- June 21, 1999,
 - Three years after the date on which a regulated substance is first listed under 40 CFR 68.130, or
 - The date on which a regulated substance is first present above a threshold quantity in a process.
40. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall submit any additional relevant information requested by any regulatory agency necessary to ensure compliance with the requirements of 40 CFR Part 68.
41. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall annually certify compliance with all applicable requirements of Section 112(r) as detailed in Rule 213(4)(c)). **(40 CFR Part 68)**

Emission Trading

42. Emission averaging and emission reduction credit trading are allowed pursuant to any applicable interstate or regional emission trading program that has been approved by the Administrator of the USEPA as a part of Michigan's State Implementation Plan. Such activities must comply with Rule 215 and Rule 216. **(R 336.1213(12))**

Permit to Install (PTI)

43. The process or process equipment included in this permit shall not be reconstructed, relocated, or modified unless a PTI authorizing such action is issued by the department, except to the extent such action is exempt from the PTI requirements by any applicable rule.² **(R 336.1201(1))**
44. The department may, after notice and opportunity for a hearing, revoke PTI terms or conditions if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of the PTI or is violating the department's rules or the CAA.² **(R 336.1201(8), Section 5510 of Act 451)**
45. The terms and conditions of a PTI shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by the PTI. If a new owner or operator submits a written request to the department pursuant to Rule 219 and the department approves the request, this PTI will be amended to reflect the change of ownership or operational control. The request must include all of the information required by Subrules (1)(a), (b) and (c) of Rule 219. The written request shall be sent to the appropriate AQD District Supervisor, EGLE.² **(R 336.1219)**
46. If the installation, reconstruction, relocation, or modification of the equipment for which PTI terms and conditions have been approved has not commenced within 18 months of the original PTI issuance date, or has been interrupted for 18 months, the applicable terms and conditions from that PTI, as incorporated into the ROP, shall become void unless otherwise authorized by the department. Furthermore, the person to whom that PTI was issued, or the designated authorized agent, shall notify the department via the Supervisor, Permit Section, EGLE, AQD, P. O. Box 30260, Lansing, Michigan 48909, if it is decided not to pursue the installation, reconstruction, relocation, or modification of the equipment allowed by the terms and conditions from that PTI.² **(R 336.1201(4))**

Footnotes:

¹This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

B. SOURCE-WIDE CONDITIONS

Part B outlines the Source-Wide Terms and Conditions that apply to this stationary source. The permittee is subject to these special conditions for the stationary source in addition to the general conditions in Part A and any other terms and conditions contained in this ROP.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply to this source, NA (not applicable) has been used in the table.

SOURCE-WIDE CONDITIONS

DESCRIPTION

All process equipment source-wide including equipment covered by other permits, grand-fathered equipment, and exempt equipment.

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate the facility unless the facility-wide Fugitive Dust Control Plan approved by the AQD is implemented and maintained. The plan shall include, but not be limited to, fugitive emission control for all plant roadways, the plant yard, all material storage piles, and all material handling operations. Should the AQD determine the fugitive dust control program to be inadequate, the District Supervisor may request modification of the program to address those inadequacies. The permittee may also propose changes to the program to the District Supervisor. Upon written approval of a modified Fugitive Dust Control program by the District Supervisor, the permittee shall implement and maintain the modified Fugitive Dust Control program.² (R 336.1371, R 336.1372, R 336.1901)

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall record and keep records as required by the Fugitive Dust Plan for as described in the plan. The records shall be made available to the AQD upon request.² (R 336.1371, R 336.1372, Act 451 324.5524)

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

C. EMISSION UNIT SPECIAL CONDITIONS

Part C outlines terms and conditions that are specific to individual emission units listed in the Emission Unit Summary Table. The permittee is subject to the special conditions for each emission unit in addition to the General Conditions in Part A and any other terms and conditions contained in this ROP.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply, NA (not applicable) has been used in the table. If there are no conditions specific to individual emission units, this section will be left blank.

EMISSION UNIT SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation/ Modification Date	Flexible Group ID
EU QUARRY FUG	Quarry Fugitive Emissions are created from mining the raw material limestone. <u>Process Equipment:</u> portable rock drill, haul roads. <u>Control Devices:</u> water truck, fabric filter on rock drill.	01-01-1957, 01-01-1983, 01-01-1988	FG QUARRY
EU PRIMRYCRUSH	Primary Crushing breaks the raw material limestone from refrigerator size boulders to 12-inch sized rock. <u>Process Equipment:</u> 1 crusher, 1 belt conveyor, stockpile. <u>Control Devices:</u> water spray bar, foam system.	11-30-1990	FG QUARRY
EU SECONDCRUSH	Secondary Crushing breaks the raw material limestone from 12-inch rock into 4-inch sized stone. <u>Process Equipment:</u> 1 crusher, conveyors, stockpile Upper Bench, stockpile Lower Bench. <u>Control Devices:</u> dust collector, foam system, stone towers over stockpiles upper bench and lower bench, 1 building.	11-30-1991, 05-01-2002	FG QUARRY
EU RAW MATERIAL	Raw Materials consist of limestone, sand, bauxite, Bell shale, gypsum. Alternate raw materials consist of slag, iron, fly ash, and Cement Kiln Dust (CKD). <u>Process Equipment:</u> NA <u>Control Devices:</u> NA	01-01-1957, 01-01-1994	FG RAW MAT
EU ARM STOR BLD	Alternate Raw Material Storage Building receives and stores the alternate raw materials of slag, iron, and shale. <u>Process Equipment:</u> storage building, hoppers, conveyors. <u>Control Devices:</u> 1 dust collector.	01-01-1994	FG RAW MAT

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation/ Modification Date	Flexible Group ID
EU ARM FLY ASH	<p>Alternate Raw Material Fly Ash Storage System stores the fly ash.</p> <p><u>Process Equipment:</u> fly ash rail car unloading, fly ash unload hopper, fly ash dome, fly ash day bin, fly ash gravity conveyor.</p> <p><u>Control Devices:</u> 6 dust collectors.</p>	01-01-1994	FG RAW MAT
EU RAW MILL 14	<p>Raw Mill 14 further grinds the raw and alternate raw materials using a ball mill.</p> <p><u>Process Equipment:</u> ball mill, cyclones, separator, associated air slides, screws, elevators, pumps, storage silos, roller press, hammer mill, gas furnace/raw material dryer, storage bins, static separator, conveyor belts, screws, elevator.</p> <p><u>Control Devices:</u> 5 dust collectors.</p>	01-01-1965, 09-01-1990	FG RAW MILL SYS
EU RAW MILL 15	<p>Raw Mill 15 further grinds the raw and alternate raw materials using a ball mill.</p> <p><u>Process Equipment:</u> ball mill, cyclones, separator, associated air slides, screws, elevators, pumps, storage silos, roller press, hammer mill, gas furnace/raw material dryer, storage bins, static separator, conveyor belts, screws, elevator.</p> <p><u>Control Devices:</u> 5 dust collectors.</p>	01-01-1965, 09-01-1990	FG RAW MILL SYS
EU KILN 19	<p>Kiln 19, an indirect fired rotating kiln.</p> <p><u>Process Equipment:</u> rotary kiln, storage silo, waste heat recovery co-generating boiler, stack.</p> <p><u>Control Devices:</u> 1 baghouse, 2 dust collectors, Selective Non-Catalytic Reduction (SNCR), Dry Absorbent Addition (DAA).</p>	01-01-1962 01-01-2008 (indirect firing system), 12-01-2011 (SNCR, DAA)	FG KG5 FG MACT KILNS
EU KILN 20	<p>Kiln 20, an indirect fired rotating kiln.</p> <p><u>Process Equipment:</u> rotary kiln, storage silo, waste heat recovery co-generating boiler, stack.</p> <p><u>Control Devices:</u> 1 baghouse, 2 dust collectors, Selective Non-Catalytic Reduction (SNCR), Dry Absorbent Addition (DAA).</p>	01-01-1965, 01-01-2008 (indirect firing system), 12-01-2011 (SNCR, DAA)	FG KG5, FG MACT KILNS
EU KILN 21	<p>Kiln 21, an indirect fired rotating kiln.</p> <p><u>Process Equipment:</u> rotary kiln, storage silo, waste heat recovery co-generating boiler, stack.</p> <p><u>Control Devices:</u> 1 baghouse, 2 dust collectors; Selective Non-Catalytic Reduction (SNCR), Dry Absorbent Addition (DAA).</p>	01-01-1965 01-01-2008 (indirect firing system), 12-01-2011 (SNCR, DAA)	FG KG5, FG MACT KILNS

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation/ Modification Date	Flexible Group ID
EU KILN 22	Kiln 22, an indirect fired rotating kiln. <u>Process Equipment:</u> rotary kiln, storage silos, waste heat recovery boiler (generates steam to make electricity), stack shared by Kilns 22 and 23. <u>Control Devices:</u> 1 baghouse, 2 dust collectors, Selective Non-Catalytic Reduction (SNCR), Wet Flue Gas Desulfurization (FGD).	01-01-1975, 01-01-2008 (indirect firing system), 03-01-2012 (SNCR), 03-01-2014 (FGD)	FG KG6, FG MACT KILNS
EU KILN 23	Kiln 23, an indirect fired rotating kiln. <u>Process Equipment:</u> rotary kiln, storage silos, waste heat recovery boiler (generates steam to make electricity), stack shared by Kilns 22 and 23. <u>Control Devices:</u> 1 baghouse, 2 dust collectors, Selective Non-Catalytic Reduction (SNCR), Wet Flue Gas Desulfurization (FGD).	01-01-1975, 01-01-2008 (indirect firing system), 03-01-2012 (SNCR), 03-01-2014 (FGD)	FG KG6, FG MACT KILNS
EU CLINK COOL 19	Clinker Cooler 19 cools the clinker. <u>Process Equipment:</u> clinker cooler, drag conveyor number seven. <u>Control Devices:</u> 2 dust collectors.	01-22-1995	FG CLINK COOL
EU CLINK COOL 20	Clinker Cooler 20 cools the clinker. <u>Process Equipment:</u> clinker cooler, 2 drag conveyors. <u>Control Devices:</u> 3 dust collectors.	01-22-1995	FG CLINK COOL
EU CLINK COOL 21	Clinker Cooler 21 cools the clinker. <u>Process Equipment:</u> clinker cooler, 2 drag conveyors. <u>Control Devices:</u> 3 dust collectors.	01-22-1995	FG CLINK COOL
EU CLINK COOL 22	Clinker Cooler 22 cools the clinker. <u>Process Equipment:</u> clinker cooler, conveyor. <u>Control Devices:</u> 2 dust collectors.	01-22-1995	FG CLINK COOL
EU CLINK COOL 23	Clinker Cooler 23 cools the clinker. <u>Process Equipment:</u> clinker cooler, conveyor. <u>Control Devices:</u> 2 dust collectors.	01-22-1995	FG CLINK COOL
EU CLINK STR BLD	Clinker Storage Building stores clinker and sends clinker to the clinker silos or to the ball mills via conveyor. <u>Process Equipment:</u> storage building, grizzly, crusher, conveyors. <u>Control Devices:</u> 5 dust collectors.	01-01-1990, 01-01-1999	FG CLINKER SYS

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation/ Modification Date	Flexible Group ID
EU CLINK AD/PROP	<p>Clinker Additive and Proportioning System. The gypsum, limestone, and Cement Kiln Dust (CKD) are added to the clinker based upon the desired mix.</p> <p><u>Process Equipment:</u> silos, CKD tank, grizzly, conveying equipment.</p> <p><u>Control Devices:</u> dust collectors.</p>	01-01-1989	FG CLINKER SYS
EU BALL MILL 13	<p>Ball Mill 13 is a rotating horizontal steel tube filled with steel balls that crushes the clinker into Portland Cement.</p> <p><u>Process Equipment:</u> ball mill, separator, air slides, elevator, conveyor, feed bin. A pneumatic pump is shared with Ball Mills 13, 14, 15.</p> <p><u>Control Devices:</u> dust collector.</p>	01-01-1990	FG FINISH MILLS
EU BALL MILL 14	<p>Ball Mill 14 is a rotating horizontal steel tube filled with steel balls that crushes the clinker into Portland Cement.</p> <p><u>Process Equipment:</u> ball mill, separator, air slides, elevator, conveyor, feed bin. A pneumatic pump is shared with Ball Mills 13, 14, 15.</p> <p><u>Control Devices:</u> dust collector.</p>	01-01-1990	FG FINISH MILLS
EU BALL MILL 15	<p>Ball Mill 15 is a rotating horizontal steel tube filled with steel balls that crushes the clinker into Portland Cement.</p> <p><u>Process Equipment:</u> ball mill, separator, air slides, elevator, conveyor, feed bin (45-003). A pneumatic pump is shared with Ball Mills 13, 14, 15.</p> <p><u>Control Devices:</u> dust collector.</p>	01-01-1990	FG FINISH MILLS
EU BALL MILL 19	<p>Ball Mill 19 is a rotating horizontal steel tube filled with steel balls that crushes the clinker into Portland Cement.</p> <p><u>Process Equipment:</u> ball mill, separator, feed bins, air slides, elevators, pump, conveyors.</p> <p><u>Control Devices:</u> 4 dust collectors.</p>	01-01-1990	FG FINISH MILLS
EU BALL MILL 20	<p>Ball Mill 20 is a rotating horizontal steel tube filled with steel balls that crushes the clinker into Portland Cement.</p> <p><u>Process Equipment:</u> ball mill, separators, feed bin, air slides, elevators, pump, conveyors.</p> <p><u>Control Devices:</u> 4 dust collectors.</p>	01-01-1990	FG FINISH MILLS

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation/ Modification Date	Flexible Group ID
EU BALL MILL 21	<p>Ball Mill 21 is a rotating horizontal steel tube filled with steel balls that crushes the clinker into Portland Cement.</p> <p><u>Process Equipment:</u> ball mill, separators, feed bin, air slides, elevators, pump, conveyors. <u>Control Devices:</u> 4 dust collectors.</p>	01-01-1990	FG FINISH MILLS
EU ROLL PRESS 20	<p>High pressure roller press rated at 16,000cfm at #20 cement mill.</p> <p><u>Control device:</u> baghouse.</p>	02-11-1993	FG FINISH MILLS
EU ROLL PRESS 21	<p>High pressure roller press rated at 16,000cfm #21 cement mill.</p> <p><u>Control device:</u> baghouse.</p>	02-11-1993	FG FINISH MILLS
EU STORE UNIT 2	<p>Storage Unit 2, various silos store the cement and transfers the cement to EU BULK LD TRUCK via pump.</p> <p><u>Process Equipment:</u> silos, air slides, pump. <u>Control Devices:</u> 1 dust collector.</p>	01-01-1956, 1961-1968	FG CMNT STR LOAD
EU STORE UNIT 3	<p>Storage Unit 3, various silos store the cement and transfers the cement to EU BULK LD TRUCK via pump.</p> <p><u>Process Equipment:</u> silos, air slides, pump. <u>Control Devices:</u> 1 dust collector.</p>	01-01-1956, 1961-1968	FG CMNT STR LOAD
EU STORE UNIT 4	<p>Storage Unit 4 Boat and Rail, various silos store the cement and transfers and loads the cement via air slides to boats or rail cars for sale and shipment of the cement.</p> <p><u>Process Equipment Boat:</u> storage silos, air slides. <u>Process Equipment Rail:</u> storage silos, air slides. <u>Control Devices Boat:</u> dust collectors. <u>Control Devices Rail:</u> dust collectors.</p>	Boat: 01-01-1956, 1961-1968 Rail: Modified 01-01-2006	FG CMNT STR LOAD
EU BULK LD TRUCK	<p>Bulk Loading Truck loads trucks with cement for shipment and sale of the cement; and loads trucks with Cement Kiln Dust (CKD) for transfer and sale.</p> <p><u>Process Equipment:</u> tanks, air slides. <u>Control Devices:</u> dust collectors.</p>	04-26-1988	FG CMNT STR LOAD
EU DUST RETURN 5	<p>Kilns 19, 20, and 21 Dust Return System conveys captured and reclaimed Cement Kiln Dust (CKD) from Kilns 19, 20, and 21 back to these kilns for reuse.</p> <p><u>Process Equipment:</u> dust tanks, air slides, screw conveyors, pump. <u>Control Devices:</u> 2 dust collectors.</p>	01-01-1990	FG CKD HAND SYS

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation/ Modification Date	Flexible Group ID
EU FEED END 6	<p>Kilns 22 and 23 Dust Return System conveys captured and reclaimed Cement Kiln Dust (CKD) from Kilns 22 and 23 back to these kilns for reuse via the feed end system.</p> <p><u>Process Equipment:</u> dust tanks, air slides, screw conveyors, elevators. <u>Control Devices:</u> dust collectors.</p>	01-01-1990	FG CKD HAND SYS
EU CKD PUGMILL	<p>Cement Kiln Dust Pugmill, water is added to the Cement Kiln Dust (CKD) then the CKD is trucked to the onsite landfill for disposal.</p> <p><u>Process Equipment:</u> dust tank, pug mill, screw conveyor, landfill. <u>Control Devices:</u> 1 dust collector.</p>	01-01-1991	FG CKD HAND SYS
EU BLD FUEL PILE	<p>Blended Fuel Pile includes the coal, coke, and blended coal and coke stockpiles.</p> <p><u>Process Equipment:</u> stockpiles, 2 hoppers, 2 bins, conveyors, road. <u>Control Devices:</u> water spray on pile, water truck on roads.</p>	01-01-1984	FG FUEL HAND
EU FUEL PULV 19	<p>Fuel pulverizer on Kiln 19, pulverizes the blended coal, coke, and shingles and feeds this fuel to the kiln's burners.</p> <p><u>Process Equipment:</u> storage tanks, pulverizer, storage bin, conveyors, screw conveyor. <u>Control Devices:</u> 2 dust collectors.</p>	06-01-2006	FG FUEL HAND
EU FUEL PULV 20	<p>Fuel pulverizer on Kiln 20, pulverizes the blended coal, coke and shingles and feeds this fuel to the kiln's burners.</p> <p><u>Process Equipment:</u> storage tanks, pulverizer, storage bin, conveyor, screw conveyor. <u>Control Devices:</u> 2 dust collectors.</p>	05-01-2007	FG FUEL HAND
EU FUEL PULV 21	<p>Fuel pulverizer on Kiln 21, pulverizes the blended coal, coke, and shingles and feeds this fuel to the kiln's burners.</p> <p><u>Process Equipment:</u> storage tanks, pulverizer, storage bin, conveyors, screw conveyor. <u>Control Devices:</u> 2 dust collectors.</p>	12-01-2007	FG FUEL HAND
EU FUEL PULV 22	<p>Fuel pulverizer on Kiln 22, pulverizes the blended coal, coke, and shingles and feeds this fuel to the kiln's burners.</p> <p><u>Process Equipment:</u> storage tank, pulverizer, storage bin, conveyor, screw conveyor. <u>Control Devices:</u> 2 dust collectors.</p>	02-01-2007	FG FUEL HAND

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation/ Modification Date	Flexible Group ID
EU FUEL PULV 23	<p>Fuel pulverizer on Kiln 23, pulverizes the blended coal, coke, and shingles and feeds this fuel to the kiln's burners.</p> <p><u>Process Equipment:</u> storage tanks, pulverizer, storage bin, conveyors, screw conveyor.</p> <p><u>Control Devices:</u> 2 dust collectors.</p>	10-01-2006	FG FUEL HAND
EU ALT FUEL PILE	<p>Alternate Fuel Pile includes non-chlorinated, non-halogenated plastics, clean wood, and shingles.</p> <p><u>Process Equipment:</u> stockpiles, conveyor.</p> <p><u>Control Devices:</u> NA</p>	08-01-2008	FG ALT FUEL HAND
EU MIDKILN FUEL	<p>New equipment added for the ability to burn alternative fuels (specifically to accept whole tires): Trailer tipper, live bottom hopper, tire separator, separation refinement system, tire inspection and rejection, conveying system with accumulation control, mid kiln valve for tire derived fuel introduction, above kiln valve actuator, and weight-based feed rate control.</p>	10-28-2021	FG ALT FUEL HAND
EU PART WASH	<p>Any parts washer/cold cleaner that is grandfathered or exempt from Rule 201 pursuant to Rule 278 and Rule 281(2)(h) or Rule 285(r)(iv). Existing cold cleaners were placed into operation prior to July 1, 1979. New cold cleaners were placed into operation on or after July 1, 1979.</p>		FGCOLDCLEANERS
EU FP ENGINE1	<p>149 hp emergency fire pump compression ignition (diesel) engine manufactured and installed in 2009 that is subject to 40 CFR Part 60, Subpart IIII and 40 CFR Part 63, Subpart ZZZZ.</p>	2009	FGFPENGINES
EU FP ENGINE2	<p>80 hp emergency fire pump compression ignition (diesel) engines manufactured and installed in 2009 that is subject to 40 CFR Part 60, Subpart IIII and 40 CFR Part 63, Subpart ZZZZ.</p>	2009	FGFPENGINES
EU EXGEN19	<p>Emergency SI generator engine firing gasoline rated at approximately 126 hp and subject to NESHAP ZZZZ.</p>	1992	FGEXGEN
EU EXGEN20	<p>Emergency SI generator engine firing gasoline rated at approximately 126 hp and subject to NESHAP ZZZZ.</p>	1992	FGEXGEN
EU EXGEN21	<p>Emergency SI generator engine firing gasoline rated at approximately 126 hp and subject to NESHAP ZZZZ.</p>	1992	FGEXGEN
EU EXGEN22	<p>Emergency SI generator engine firing gasoline subject to NESHAP ZZZZ.</p>	1975	FGEXGEN
EU EXGEN23	<p>Emergency SI generator engine firing gasoline subject to NESHAP ZZZZ.</p>	1975	FGEXGEN

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation/ Modification Date	Flexible Group ID
EU EXIDF	Existing diesel-fired (CI) emergency Reciprocating Internal Combustion Engine rated at less than 500 hp (398 hp), and is subject to 40 CFR Part 63, Subpart ZZZZ - National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE).	2005	NA
EU CIGEN	Caterpillar C15 450 KW (600 hp) compression ignition emergency generator engine manufactured and installed in 2013 that is subject to 40 CFR Part 60, Subpart IIII.	2013	NA
EU PORTCRUSH	Portable crusher (400 tph nominal) to be used onsite to reduce the size of aggregate for use as road gravel.	2020	NA

EU EXIDF EMISSION UNIT CONDITIONS
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DESCRIPTION

One Existing (2005) diesel-fired (CI) emergency Reciprocating Internal Combustion Engine rated at less than 500 hp (398 hp), and is subject to 40 CFR Part 63, Subpart ZZZZ - National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE).

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. There is no time limit on the use of emergency stationary RICE in emergency situations. **(40 CFR 63.6640(f)(1))**
2. The permittee may operate EU EXIDF for no more than 100 hours per calendar year 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, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing. A petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency RICE beyond 100 hours per year. **(40 CFR 63.6640(f)(2)(i))**
3. The permittee may operate EU EXIDF for up to 50 hours per engine per year in non-emergency situations. The 50 hours are counted as part of the 100 hours of operation allowed under SC III.2. The 50 hours cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity. **(40 CFR 63.6640(f)(3))**
4. The permittee must operate and maintain EU EXIDF according to the manufacturer's emission-related written instructions or develop a maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions. **(40 CFR 63.6625(e), 40 CFR 63.6605(b) Table 6.9)**
5. EU EXIDF shall be installed, maintained, and operated in a satisfactory manner. The permittee must comply with the following operational requirements:
 - a. Change oil and filter every 500 hours of operation or annually, whichever comes first, except as allowed in SC III.6;
 - b. Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first;
 - c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

If EU EXIDF is being operated during an emergency and it is not possible to shut down an engine to perform the work practice standards on the schedule required, the work practice standard can be delayed until the emergency

is over. The work practice should be performed as soon as practicable after the emergency has ended. The permittee must report any failure to perform the work practice on the schedule required. **(40 CFR 63.6602, 40 CFR Part 63, Subpart ZZZZ Table 2c, Item 1)**

6. The permittee may utilize an oil analysis program in order to extend the specified oil change requirement in SC III.5. The oil analysis must be performed every 500 hours of operation or annually, whichever comes first, the oil analysis shall test for the following limits:
 - a. Total Acid Number has increased by more than 3.0 mg of potassium hydroxide (KOH) per gram from Total Acid Number of the oil when new;
 - b. Viscosity of the oil has changed by more than 20% from the viscosity of the oil when new; or
 - c. Percent water content (by volume) is greater than 0.5%.

If any of the limits are exceeded, the permittee must change the oil within 2 days of receiving the results of the analysis. If the engine is not in operation when the results of the analysis are received, the permittee must change the oil within 2 days or before commencing operation, whichever is later. The analysis program must be part of the maintenance plan for EU EXIDF. **(40 CFR 63.6625(j))**

7. The permittee shall minimize each engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes. **(40 CFR 63.6625(h))**
8. The permittee must be in compliance with the emission limitations and operating limitations in this subpart that apply to EU EXIDF at all times. **(40 CFR 63.6605(a))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip EU EXIDF with a non-resettable hour meter. **(R 336.1213(3), 40 CFR 63.6625(f))**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall keep the following records: **(40 CFR 63.6655)**
 - a. A copy of each notification and report submitted to comply with 40 CFR Part 63, Subpart ZZZZ including all documentation supporting any Initial Notification or Notification of Compliance status, according to the requirements of 40 CFR 63.10(b)(2)(xiv).
 - b. Records of the occurrence and duration of each malfunction of the engines of EU EXIDF.
 - c. Records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR 63.6605(b), including corrective actions to restore malfunctioning equipment to its normal or usual manner of operation.
 - d. Records to demonstrate continuous compliance with operating limitations in SC III.4.
 - e. Keep records of the maintenance conducted on EU EXIDF in order to demonstrate that EU EXIDF are operated and maintained according to the maintenance plan.
 - f. Records of hours of operation recorded through the non-resettable hour meter. The permittee shall document how many hours were spent during emergency operation; including what classified the operation as emergency and how many hours were spent during non-emergency operation.
2. The permittee must keep records of the parameters that are analyzed as part of the oil analysis program in SC III.6, the results of the analysis, and the oil changes for the engine. **(40 CFR 63.6625(j))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all applicable requirements of the NESHAP as specified in 40 CFR Part 63, Subparts A and ZZZZ for Stationary RICE by the initial compliance date of October 19, 2013. **(40 CFR Part 63, Subparts A & ZZZZ)**

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU CIGEN
 EMISSION UNIT CONDITIONS**

DESCRIPTION

Caterpillar C15 450 KW (600 hp) compression ignition emergency generator engine manufactured and installed in 2013 that is subject to 40 CFR Part 60, Subpart IIII.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. NOx + NMHC Family Emission Limit (FEL)	6.4 g/kW hr (4.7g/HP-hr)	Hourly	EU-CIGEN	SC VI.1	40 CFR 60.4205(b), 40 CFR 60.4212
2. PM (FEL)	0.54 g/kW hr (0.4 g/HP-hr)	Hourly	EU-CIGEN	SC VI.1	40 CFR 60.4205(b), 40 CFR 60.4212

II. MATERIAL LIMIT(S)

1. The permittee shall only fire EU-CIGEN with diesel fuel that meets the following per-gallon standards within 40 CFR 80.510(b) for nonroad diesel fuel:
 - a. A maximum sulfur content of 15 ppm; **(40 CFR 60.4207(b), 40 CFR 80.510(b)(1)(i))**
 - b. Either a minimum cetane index of 40 or a maximum aromatic content of 35% volume. **(40 CFR 60.4207(b), 40 CFR 80.510(b)(2)(i)&(ii))**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall operate and maintain EU-CIGEN to achieve the emission standards in SC I.1 and SC I.2 over the entire life of the emission unit. **(40 CFR 60.4206)**
2. The permittee shall operate and maintain EU-CIGEN according to the manufacturer's emission-related written instructions and shall change only those emission-related settings that are permitted by the manufacturer. **(40 CFR 60.4211(a)(1)&(2))**
3. EU-CIGEN may be operated for the purpose of maintenance checks and readiness testing for up to 100 hours per calendar year. **(40 CFR 60.4211(f)(2))**
4. EU-CIGEN may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance checks and readiness testing. **(40 CFR 60.4211(f)(3))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU-CIGEN unless the emission unit is equipped with a functional non-resettable hour meter. **(40 CFR 60.4209(a))**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall maintain a demonstration of compliance for EU-CIGEN with the emission standards within SC I.1 and SC I.2 by purchasing an emission unit certified according to 40 CFR Part 89 for the same model year and maximum engine power. The emission unit must be installed and configured according to the manufacturer's specifications. **(40 CFR 60.4211(c))**
2. The permittee shall maintain a complete record of the fuel specifications and/or fuel analysis for each delivery, or storage tank, of the fuel fired in EU-CIGEN. These records may include purchase records for ASTM specification diesel fuel, specifications or analyses provided by the vendor at the time of delivery, analytical results from laboratory testing, or any records adequate to demonstrate compliance with the parts per million by weight sulfur limit and either the minimum cetane index or the maximum aromatic content. **(R 336.1213(3))**
3. For each emission unit of EU-CIGEN, the permittee shall keep records of the operation of the emission unit in emergency and non-emergency service that are recorded through the non-resettable hour meter. The permittee shall record the time of operation of the emission unit and the reason the emission unit was in operation during that time. **(40 CFR 60.4214(b), R 336.1213(3))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all applicable provisions of the federal NSPS for Stationary Compression Ignition Internal Combustion Engines as set forth in 40 CFR Part 60, Subparts A and IIII. **(40 CFR 60 Subparts A & IIII)**
2. The permittee shall comply with all applicable provisions of the federal National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines as set forth in 40 CFR Part 63, Subparts A and ZZZZ. **(40 CFR 63 Subparts A & ZZZZ)**

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU PORTCRUSH
 EMISSION UNIT CONDITIONS**

DESCRIPTION

Portable crusher (400 tph nominal to be used onsite to reduce the size of aggregate for use as road gravel.
 Process Equipment: one crusher, conveyors, screens, and storage piles.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

Water spray bar, or foam system.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VE	12% opacity ²	6-minute average	EU PORTCRUSH	SC V.1	40 CFR 60.672(b)
2. VE	7% opacity ²	6-minute average	Screening operations and transfer points on belt conveyors associated with EU PORTCRUSH	SC V.1	40 CFR 60.672(b)

II. MATERIAL LIMIT(S)

Material	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. Crushed material	1,000,000 tpy ²	12-month rolling time period as determined at the end of each calendar month	EU PORTCRUSH	SC VI.2	R 336.1205, 40 CFR 52.21(c) & (d)

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall operate EU PORTCRUSH in accordance with the facility-wide fugitive dust control plan.² (**R 336.1371, R 336.1372, R 336.1901**)
2. The permittee shall only crush material in EU PORTCRUSH that has been properly wetted to control fugitive emissions.² (**R 336.1205, R 336.1301, R 336.1901**)
3. The permittee shall not operate EU PORTCRUSH without installing and properly operating the appropriate dust suppression system, including water sprays to control fugitive emissions. Proper operation includes operating the control equipment or implementing the dust control measures in accordance with the facility-wide fugitive dust control plan.² (**R 336.1331, R 336.1301, R 336.1910, 40 CFR 60.672(b)**)

4. The permittee shall submit, implement, and maintain a malfunction abatement plan (MAP) as described in Rule 911(2), for EU PORTCRUSH, within 90 days of permit issuance. 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.

If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The permittee shall also amend the MAP within 45 days, if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits.² **(R 336.1301, R 336.1331, R 336.1910, R 336.1911, 40 CFR 52.21(c) and (d))**

5. The permittee shall not crush any asbestos tailings or asbestos containing waste materials, as defined by the National Emission Standard for Hazardous Air Pollutants regulations, in EU PORTCRUSH.² **(40 CFR 61.141)**
6. The permittee shall not operate EU PORTCRUSH at any location other than the Lafarge Alpena quarry and plant. The permittee may relocate EU PORTCRUSH to any location within the quarry without notifying the AQD District Supervisor. The permittee shall not relocate EU PORTCRUSH to any on-site location outside of the quarry unless all the following criteria are met:² **(Act 451 324.5505(5), R 336.1201, R 336.1205, R 336.1901)**
 - a. The facility shall have no outstanding unresolved violations of any of the Michigan Department of Environmental Quality Air Pollution Control rules, orders, or permits, or Federal air quality regulations.
 - b. A notice of intent to relocate; a listing of the specific pieces of equipment to be relocated along with equipment ID numbers; any process information forms for previous modifications; and a proposed site plan identifying the proposed new geographical site and the probable duration at the new site shall be provided to the AQD District Supervisor not less than 10 days prior to the scheduled relocation. All residential or commercial establishments and places of public assembly within 1,000 feet of the proposed facility site shall be clearly identified on the proposed site plan.
 - c. The crusher(s) shall be located a minimum of 500 feet from any residential or commercial establishment or place of public assembly.

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. Each crusher and screen of EU PORTCRUSH shall be equipped with a water spray.² **(R 336.1205, R 336.1301, R 336.1303, R 336.1331, and R 336.1910)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. Within 60 days of achieving the maximum production rate, but not later than 180 days after commencement of initial startup, the permittee shall comply with federal Standards of Performance for New Stationary Sources which require evaluation of visible emissions from EU PORTCRUSH, at owner's expense, in accordance with 40 CFR Part 60 Subparts A and OOO. Visible emission observation procedures must have prior approval by the AQD Technical Programs Unit and District Office. No less than ten (10) days prior to the anticipated test date, the permittee shall notify the AQD District Supervisor of the test date. If after the anticipated test date has been submitted, there is a delay in conducting the test, the permittee shall submit to the AQD District Supervisor notice of the new test date. This notification shall take place a minimum of three (3) days prior to the rescheduled test taking place. The permittee must submit a complete report of opacity observations to the AQD Technical Programs Unit and District Office within 30 days following the last date of the test.² **(R 336.1301, 40 CFR 60.11, 40 CFR 60.675, Table 3 to Subpart OOO of Part 60)**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall keep records of all preventative maintenance as described in the MAP. The records shall be made available to the AQD upon request.² **(R 336.1301, R 336.1331, R 336.1910, R 336.1911, 40 CFR 52.21(c) & (d))**
2. The permittee shall record the amount (tons) of material processed by EU PORTCRUSH each operating day and for each month and 12-month rolling time period basis. These records shall be made available to the AQD upon request.² **(R 336.1205, 40 CFR 52.21(c) & (d), R 336.1901)**
3. The permittee shall perform monthly periodic inspections of EU PORTCRUSH water sprays to check that water is flowing to discharge spray nozzles in the wet suppression system. The owner or operator must initiate corrective action within 24 hours and complete corrective action as expeditiously as practical if the owner or operator finds that water is not flowing properly during an inspection of the water spray nozzles.² **(40 CFR 60.674(b), Table 3 to Subpart OOO of Part 60)**
4. The permittee shall record each periodic inspection required under SC VI.3, including date of each inspection and any corrective actions taken, in a logbook (in written or electronic format). If the permittee is using a control mechanism to reduce fugitive emissions other than water sprays during the monthly inspection (for example, water from recent rainfall), the logbook entry required under 40 CFR 60.676(b) must specify the control mechanism being used instead of the water sprays. The owner or operator must keep the logbook onsite and make hard or electronic copies (whichever is requested) of the logbook available to the Department upon request.² **(40 CFR 60.674(b)(2), 40 CFR 60.676(b)(1))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. Within 15 days after the initial startup of EU PORTCRUSH, the permittee shall submit a notification to the AQD District Supervisor, in writing, of the actual date of initial startup.² **(R 336.1201(7)(a), 40 CFR 60.676 (i))**

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall label all equipment associated EU PORTCRUSH within 45 days of initial startup. Labels shall be in a conspicuous location on the equipment.² **(R 336.1201, 40 CFR 60.670)**
2. The permittee shall be in compliance with all applicable requirements of 40 CFR Part 60, Subpart OOO Standards of Performance for Nonmetallic Mineral Processing Plants.² **(40 CFR Part 60, Subpart OOO)**

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

D. FLEXIBLE GROUP SPECIAL CONDITIONS

Part D outlines the terms and conditions that apply to more than one emission unit. The permittee is subject to the special conditions for each flexible group in addition to the General Conditions in Part A and any other terms and conditions contained in this ROP.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply, NA (not applicable) has been used in the table. If there are no special conditions that apply to more than one emission unit, this section will be left blank.

FLEXIBLE GROUP SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FG QUARRY	FG QUARRY encompasses the initial mining and crushing of the raw material limestone and moving limestone to FG RAW MILL SYS. EU QUARRY FUG; quarry fugitive emissions are created from mining the limestone and includes these fugitive dust sources: overburden removal, drilling, blasting and mining limestone, haul roads. Limestone is sent to the Primary Crusher via truck. EU PRIMRYCRUSH; primary crushing breaks the limestone from refrigerator sized boulders to 12-inch sized rock and sends limestone to the Secondary Crusher via conveyor. EU SECONDCRUSH; secondary crushing breaks the raw material limestone from 12-inch rock to 4-inch sized stone and sends limestone to the stockpiles via conveyor then stone is sent to the roller presses or raw mills also by conveyor. The secondary crusher is enclosed in a building	EU QUARRY FUG, EU PRIMRYCRUSH, EU SECONDCRUSH
FG RAW MAT	Raw Materials consist of limestone, sand, bauxite, Bell shale, gypsum. Alternate Raw Materials consist of slag, iron, fly ash, and cement kiln dust (CKD). All materials are used in the Portland Cement mix. EU ARM STOR BLD, Alternate Raw Material Storage Building, via boat receives the alternate raw materials of slag and iron and stores and mixes them in the storage building. The raw materials sand and shale may also be stored in the Alternate Raw Material Storage Building. The materials are sent to the raw mills or roller press via conveyor. Excess materials are stored outdoors in piles for later use. CKD captured and reclaimed from the kilns is recycled to the process and included in the alternate raw material mix. EU ARM FLY ASH, Alternate Raw Material Fly Ash Storage System stores the fly ash. The fly ash is received then moves through this system to the raw mills or roller presses Via rail or truck. Raw Materials and Alternate Raw Materials are sent to FG RAW MILL SYS.	EU RAW MATERIAL, EU ARM STOR BLD, EU ARM FLY ASH

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FG RAW MILL SYS	<p>Raw Mill System mixes and grinds the raw materials (limestone, sand, bauxite, Bell shale, gypsum) and alternate raw materials (slag, iron ore, fly ash, and CKD) then sends the materials to the kilns. The raw materials are conveyed to one of the two thermal dryers in FG RAW MILL SYS and dried, and the combustion gases from the dryers carry the raw materials to the separator in FG RAW MILL SYS.</p> <p>EU RAW MILL 14, (Raw Mill 14) and EU RAW MILL 15, (Raw Mill 15) further grind the raw and alternate raw materials using ball mills. The raw mix powder is then sent to one of four storage silos before the materials are sent to the kilns via air slides, screw elevators and pumps. Two storage silos are associated with Kilns 19, 20, 21, and two storage silos are associated with Kilns 22, 23.</p>	EU RAW MILL 14, EU RAW MILL 15
FG KG5	<p>Kiln Group 5 heats the raw materials and alternate raw materials to make clinker and includes transport of the clinker to FG CLINK COOL. Kilns 19, 20, and 21 are indirect fired rotating kilns which heat raw materials up to 3,000 degrees Fahrenheit to produce clinker. Each kiln is equipped with a baghouse and dust collectors for PM control, a Dry Absorbent Addition system for control of SO₂ and Mercury, and a Selective Non-Catalytic Reduction system for the control of NO_x. Heat from the kiln exhaust is used by the waste heat boiler to generate electricity. The clinker is moved by gravity from each kiln to its respective clinker cooler.</p>	EU KILN 19, EU KILN 20, EU KILN 21
FG KG6	<p>Kiln Group 6 heats the raw materials and alternate raw materials to make clinker and includes transport of the clinker to FG CLINK COOL. Kilns 22 and 23 are indirect fired rotating kilns which heat raw materials up to 3,000 degrees Fahrenheit to produce clinker. Each kiln is equipped with a baghouse and dust collectors for PM control and a Selective Non-Catalytic Reduction system for the control of NO_x. Exhaust from both kilns is directed to a wet gas desulfurization scrubber for SO₂ control. Heat from the kiln exhaust is used by the waste heat boiler to generate electricity. The clinker is moved by gravity from each kiln to its respective clinker cooler.</p>	EU KILN 22, EU KILN 23
FG MACT KILNS	<p>This Flexible Group contains the requirements from 40 CFR Part 63, Subpart LLL (Portland Cement MACT) that apply to each kiln.</p>	EU KILN 19, EU KILN 20, EU KILN 21, EU KILN 22, EU KILN 23
FG CLINK COOL	<p>Clinker Coolers receive clinker directly from the kilns, hot air is reclaimed from the clinker coolers for return to the kilns, clinker is moved from the clinker coolers to FG CLINKER SYS. As the clinker is conveyed toward the clinker storage building, the recovered heat from Clinker Cooler 19 is re-circulated back to Kiln 19, the recovered heat from Clinker Cooler 20 is re-circulated back to the Kiln 20, the recovered heat from Clinker Cooler 21 is re-circulated back to Kiln 21, the recovered heat from Clinker Cooler 22 is re-circulated back to Kiln 22, and the recovered heat from Clinker Cooler 23 is re-circulated back to Kiln 23.</p>	EU CLINK COOL 19, EU CLINK COOL 20, EU CLINK COOL 21, EU CLINK COOL 22, EU CLINK COOL 23

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FG CLINKER SYS	<p>Clinker System stores clinker and adds gypsum, limestone, and CKD to the clinker as needed based upon the desired mix. The clinker is sent via conveyors to the ball mills. EU CLINK STR BLD, Clinker Storage Building, stores clinker and sends clinker via conveyor to the clinker silos or to the ball mills. There is a stack and vent on the storage building. The belt to Clinker Storage Building has a stack and the stack has diameter and height conditions. The grizzly crusher, and associated conveyors, have controls that vent internally. The two clinker silos have a common stack and the stack has diameter and height conditions. EU CLINK AD/PROP, Clinker Additive and Proportioning System, consists of one silo used to store gypsum, one silo used to store limestone, two silos used to store clinker, and a storage tank for CKD. Gypsum railroad unloading is associated with EU CLINK AD/PROP and has stack diameter and height conditions. The gypsum and limestone are added to the clinker based upon the desired mix. (Gypsum can also be blended with CKD and added to the limestone based upon the desired mix.) Clinker is sent via conveyors to the ball mills. The two clinker silos have a common stack. Excess CKD is sent to EU BULK LD TRUCK.</p>	<p>EU CLINK STR BLD, EU CLINK AD/PROP</p>
FG FINSH MILLS	<p>Finish Mills convert clinker to Portland cement and send the cement to FG CMNT STR LOAD. Ball Mills 13, 14, 15, 19, 20, and 21 are rotating horizontal steel tubes filled with steel balls that crush the clinker into Portland Cement, a powder. EU BALL MILL 20 has separator SV 43-270 with an individual particulate matter emission limit, and has mill vent SV43-269 with an individual particulate matter emission limit. EU BALL MILL 21 has separator SV 44-270 with an individual particulate matter emission limit, and has mill vent SV44-269 with an individual particulate matter emission limit. The cement is sent to the Storage Units via pump and air slide. One pump serves Ball Mill 13, 14 and 15.</p>	<p>EU BALL MILL 13, EU BALL MILL 14, EU BALL MILL 15, EU BALL MILL 19, EU BALL MILL 20, EU BALL MILL 21 EU ROLL PRESS 20, EU ROLL PRESS 21</p>
FG CMNT STR LOAD	<p>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. 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.</p> <p>EU STORE UNIT 4, Storage Unit 4 Rail car and Boat loading. EU STORE UNIT 4 Rail has one (1) spout/exhaust point to load one rail car at one time. The EU STORE UNIT 4 Rail has three dust collectors referred to as East, Middle, and West and each dust collector has its own individual emission limit. EU STORE UNIT 4 Boat has 14 spouts used to load boats and each spout has its own dust collector. EU BULK LD TRUCK, bulk Loading station for trucks, also loads trucks with CKD sale of the CKD. EU BULK LD TRUCK receives cement from Storage Unit 2 and Storage Unit 3 and Storage Unit 4, and CKD from EU CLINK AD/PROP. EU STORE UNIT 4 Rail and EU BULK LD TRUCK share dust collector 46-710B and it has its own emission limit. EU STORE UNIT 4 Rail and EU BULK LD TRUCK share a common stack.</p>	<p>EU STORE UNIT 2, EU STORE UNIT 3, EU STORE UNIT 4, EU BULK LD TRUCK</p>

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FG CKD HAND SYS	<p>CKD Handling System, captured CKD is reused to make cement, sold, or disposed of in the landfill. EU DUST RETURN 5, Kilns 19, 20, and 21 Dust Return System, conveys captured and reclaimed CKD from Kilns 19, 20, and 21 back to these kilns for reuse. This CKD is collected from the co-generating boiler air stream. This CKD is recycled to the process and included in the raw material mix. Excess CKD goes to EU CKD PUGMILL. EU DUST RETURN 5 is found on the back end of Kilns 19, 20, and 21. EU FEED END 6, Kilns 22 and 23 Dust Return System, conveys captured and reclaimed CKD from Kilns 22 and 23 back to these kilns for reuse via the feed end system. This CKD is collected from the co-generating boiler air stream. This CKD is recycled to the process and included in the raw material mix. Excess CKD goes to EU CKD PUGMILL, or excess CKD may be loaded on to trucks directly from the bottom of the stack shared by Kiln 22 and Kiln 23 and is typically sold. EU FEED END 6 is found on the back end of Kilns 22 and 23. EU CKD PUGMILL, CKD Pugmill, water is added to the CKD then the CKD is trucked to the onsite landfill for disposal.</p>	<p>EU DUST RETURN 5, EU FEED END 6, EU CKD PUGMILL</p>
FG FUEL HAND	<p>Fuel Handling System stores, transports, and pulverizes fuel used to fuel the kilns. EU BLD FUEL PILE, Blended Fuel Pile, includes the coal, coke, and blended coal and coke stockpiles. Coal and coke are received from boats and placed in separate piles. The coal and coke are blended using conveyors, per a needed ratio and placed in a pile. Blended fuel is transported and loaded into the indirect firing system by scrapers or other haulage equipment. EU FUEL PULV 19-23, Fuel Pulverizers on Kilns 19, 20, 21, 22, and 23, pulverize the blended coal and coke and feed this fuel to the kiln burners. Each pulverizer has its own baghouse and particulate matter emission limit.</p>	<p>EU BLD FUEL PILE, EU FUEL PULV 19, EU FUEL PULV 20, EU FUEL PULV 21, EU FUEL PULV 22, EU FUEL PULV 23</p>
FG ALT FUEL HAND	<p>Alternate Fuel Handling System receives, stores, and transports alternate fuels (fuels other than coal) used to fuel the kilns. EU ALT FUEL PILE, Alternate Fuel Pile, includes non-hazardous secondary materials.</p> <p>All tire-derived fuel (TDF) will be delivered by truck and stored in truck trailers until they are introduced into the system by a truck tipper into a live bottom hopper. The tires will be discharged from the hopper one at a time where they enter an inspection station that places tires in single file and sorted so that all tires exiting the station are fit to be fed into the kiln.</p> <p>Other alternate fuels are transported to the alternate fuel pile or container and then fed by conveyance system to the kilns hood (fire end of the kiln).</p>	<p>EU ALT FUEL PILE, EU MIDKILN FUEL</p>
FG FPENGINES	<p>Two emergency fire pump compression ignition (diesel) engines manufactured and installed in 2009 that are subject to 40 CFR Part 60, Subpart IIII and 40 CFR Part 63, Subpart ZZZZ.</p>	<p>EU FP ENGINE1, EU FP ENGINE2</p>
FG EXGEN	<p>Five Existing gasoline-fired spark-ignited (four stroke, rich burn) engines used only in the event of an emergency. Each is rated at less than 500 hp. and are subject to the requirements of 40 CFR Part 63, Subpart ZZZZ.</p>	<p>EU EXGEN19, EU EXGEN20, EU EXGEN21, EU EXGEN22, EU EXGEN23</p>

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FGCOLDCLEANERS	Any cold cleaner that is grandfathered or exempt from Rule 201 pursuant to Rule 278 and Rule 281(h) or Rule 285(r)(iv). Existing cold cleaners were placed into operation prior to July 1, 1979. New cold cleaners were placed into operation on or after July 1, 1979.	EU PART WASH

**FG QUARRY
FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

FG QUARRY encompasses the initial mining and crushing of the raw material limestone and moving limestone to FG RAW MILL SYS. EU QUARRY FUG; quarry fugitive emissions are created from mining the limestone and includes these fugitive dust sources: overburden removal, drilling, blasting and mining limestone, haul roads. Limestone is sent to the Primary Crusher via truck. EU PRIMRYCRUSH; primary crushing breaks the limestone from refrigerator sized boulders to 12-inch sized rock and sends limestone to the Secondary Crusher via conveyor. EU SECONDCRUSH; secondary crushing breaks the raw material limestone from 12-inch rock to 4-inch sized stone and sends limestone to the stockpiles via conveyor then stone is sent to the roller presses or raw mills also by conveyor. The secondary crusher is enclosed in a building.

Emission Units:

EU QUARRY FUG: Portable rock drill 08-040, haul roads.
 EU PRIMRYCRUSH: Primary crusher 10-001, conveyor 10-032, stockpile.
 EU SECONDCRUSH: Secondary crusher 11-002, secondary belt conveyors 11-061, 11-063, 11-064, 11-065, 11-066, 11-067, 11-069, 11-070, 11-071, 11-035, stockpile Upper Bench, stockpile Lower Bench.

POLLUTION CONTROL EQUIPMENT

EU QUARRY FUG: Fabric filter on rock drill, water truck 91-27 on haul roads
 EU PRIMRYCRUSH: Water spray bars on conveyor belts, foam system 10-049 on belts.
 EU SECONDCRUSH: Building housing secondary crusher (10-921), dust collector 11-055 on secondary crusher, foam system 11-047 on secondary crusher, stone towers on the lower bench and upper bench stockpiles.

Stack and Vent Identification:

EU QUARRY FUG: Rock drill, SV08-840.
 EU PRIMRYCRUSH: NA
 EU SECONDCRUSH: Secondary crusher, SV11-055.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VE	20% opacity ²	6-minute average	EU QUARRY FUG	SC III.1 SC III.2 SC VI.1	R 336.1301
2. VE	15% opacity	6-minute average as observed at the edge of the footprint of the Primary Crusher stockpile	EU PRIMRYCRUSH	SC III.1 SC III.2 SC VI.1	R 336.1301(4)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
3. VE	7% opacity ²	6-minute average	Secondary crusher belt conveyors (11-061, 11-063, 11-064, 11-065, 11-066, 11-067, 11-069, 11-070, 11-071, 11-035), Secondary crusher stockpiles Upper Bench and Lower Bench	SC III.1 SC IV.4 SC VI.1	R 336.1301(1)(c) 40 CFR 60.672(a), 40 CFR 60.672(e)
4. VE	10% opacity ²	6-minute average	Primary Crusher, Transfer points on belt conveyors	SC III.1 SC III.2 SC VI.1	40 CFR 60.672(b)
5. VE	7% opacity ²	6-minute average	Secondary crusher (11-002)	SC III.1 SC III.3 SC V.1 SC VI.1 SC VI.3	R 336.1301(1)(b), 40 CFR 60.672(a), 40 CFR 60.672(e)
6. VE	7% opacity ²	6-minute average	Secondary crusher building, including vents on secondary crusher building	SC III.1 SC III.2 SC VI.1	R 333.1301(1)(c) 40 CFR 60.672(e)
7. PM	0.014 gr/dscf ²	Hourly	Secondary crusher (11-002)	SC III.1 SC III.3 SC V.1	R 336.1331(1)(c), 40 CFR 60.672(a), 40 CFR 60.672(e)

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Raw Materials	6,600,000 tpy ²	12-month rolling time period as determined at the end of each calendar month.	Secondary crusher (11-002)	SC VI. 2	R 336.1205, 40 CFR 52.21(c) & (d)

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU PRIMRYCRUSH or EU SECONDCRUSH and associated process equipment in the EU SECONDCRUSH building (equipment ID 10-921) without installing and properly operating the appropriate dust suppression system, foaming system, stone towers, or dust collector to control fugitive emissions.² Proper operation includes operating the control equipment or implementing the dust control measures in accordance with the facility-wide fugitive dust control plan.² (**R 336.1331, R 336.1301, R 336.1910, 40 CFR 60.672(a) and (b)**)
2. The permittee shall operate all equipment in FG QUARRY in accordance with the facility-wide fugitive dust control plan.² (**R 336.1371, R 336.1372, R 336.1901**)
3. The permittee shall only crush material in EU SECONDCRUSH that has been properly wetted to control fugitive emissions.² (**R 336.1205, R 336.1301, R 336.1901**)

4. The permittee shall submit, implement, and maintain an updated malfunction abatement plan (MAP) as described in Rule 911(2), for FG QUARRY, including the stockpile conveyor and the foaming systems, within 90 days of permit issuance. 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. This includes the differential pressure ranges for the Secondary Crusher dust collector.
 - 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.

If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The permittee shall also amend the MAP within 45 days, if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits.² **(R 336.1301, R 336.1331, R 336.1910, R 336.1911, 40 CFR 52.21(c) & (d))**

5. The permittee shall not crush any asbestos tailings or asbestos containing waste materials, as defined by the National Emission Standard for Hazardous Air Pollutants regulations, in FG QUARRY.² **(40 CFR 61.141)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip and maintain the EU SECONDCRUSH dust collector with a gauge which measures the pressure drop across the dust collector.² **(R 336.1301, R 336.1910, 40 CFR 60.672(a))**
2. The permittee shall not operate EU SECONDCRUSH unless the dust collector baghouse is installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes maintaining operating parameters for the baghouse within the ranges defined in the MAP.² **(R 336.1301, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d))**
3. The permittee shall ensure that above-ground sections of conveyor belts for EU SECONDCRUSH are covered, and above-ground transfer points are enclosed.² **(R 336.1301, R 336.1331, 40 CFR 52.21(c) & (d))**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. Within 60 days of achieving the maximum production rate, but not later than 180 days after commencement of initial startup of EU SECONDCRUSH, the permittee shall verify PM and visible emission rates from EU SECONDCRUSH by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
PM	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules
Visible Emission	40 CFR Part 51, Appendix M; 40 CFR Part 60, Appendix A and B;

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol. No less than 60 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.² **(R 336.1205, R 336.1902, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d), 40 CFR 60.8, 40 CFR 60.11, 40 CFR 60.675, Tables 2 & 3 to Subpart 000 of Part 60)**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

- 1. The permittee shall record and keep records of all preventative maintenance as described in the MAP. The records shall be made available to the AQD upon request.² (R 336.1301, R 336.1331, R 336.1910, R 336.1911, 40 CFR 52.21(c) & (d))
- 2. The permittee shall record the amount (tons) of material processed by EU SECONDCRUSH. These records shall be kept on a monthly and 12-month rolling time period basis, as determined at the end of each calendar month. These records shall be made available to the AQD upon request.² (R 336.1205, 40 CFR 52.21(c) & (d))
- 3. The permittee shall read and record the differential pressure drop across the dust collector of EU SECONDCRUSH daily.² (R 336.1301, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d))
- 4. The permittee shall perform monitoring of the EU SECONDCRUSH baghouse according to 40 CFR 60.674(c), (d), or (e).² (40 CFR 60.674(c), (d), or (e))
- 5. The permittee shall record each periodic inspection required under SC VI.4, including dates and any corrective actions taken, in a logbook (in written or electronic format). The owner or operator must keep the logbook onsite and make hard or electronic copies (whichever is requested) of the logbook available to the Department upon request.² (40 CFR 60.676(b)(1))

VII. REPORTING

- 1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
- 2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
- 3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))
- 4. Within 15 days after the initial startup of EU SECONDCRUSH, the permittee shall submit a notification to the AQD District Supervisor, in writing, of the actual date of initial startup.² (R 336.1201(7)(a), 40 CFR 60.676 (i))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV 11-055	27 ²	15 ²	40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

- 1. The permittee shall be in compliance with all applicable requirements of 40 CFR Part 60, Subpart OOO Standards of Performance for Nonmetallic Mineral Processing Plants.² (40 CFR Part 60, Subpart OOO)

Footnotes:

¹ This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
² This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**FG RAW MAT
 FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Raw Materials consist of limestone, sand, bauxite, Bell shale, gypsum. Alternate Raw Materials consist of slag, iron, fly ash, and cement kiln dust (CKD). All materials are used in the Portland Cement mix. EU ARM STOR BLD, Alternate Raw Material Storage Building, via boat receives the alternate raw materials of slag and iron and stores and mixes them in the storage building. The raw materials sand and shale may also be stored in the Alternate Raw Material Storage Building. The materials are sent to the raw mills or roller press via conveyor. Excess materials are stored outdoors in piles for later use. CKD captured and reclaimed from the kilns is recycled to the process and included in the alternate raw material mix. EU ARM FLY ASH, Alternate Raw Material Fly Ash Storage System stores the fly ash. The fly ash is received then moves through this system to the raw mills or roller presses via rail or truck. Raw Materials and Alternate Raw Materials are sent to FG RAW MILL SYS.

Emission Units:

- EU RAW MATERIAL: Consists of the raw materials limestone, sand, bauxite, Bell shale, and gypsum; and the alternate raw materials slag, iron, fly ash, and CKD.
- EU ARM STOR BLDG: Storage building 18-921, hoppers 18-001, 18-102, 18-310, conveyors 18-020, 18-120, 18-121, 18-220.
- EU ARM FLY ASH: Fly ash rail car unloading 17-018, fly ash receiver bin 17-040, fly ash dome 17-100, fly ash day bin 17-200, fly ash gravity conveyors 17-315, 17-415, 17-032, 17-142, 17-090, 17-091, 17-092, 17-093, 17-132, 17-305, 17-405, fly ash conveyor equipment.

POLLUTION CONTROL EQUIPMENT

- EU ARM STOR BLD: Dust collector 18-205.
- EU ARM FLY ASH: Dust collectors 17-005, 17-045, 17-105, 17-205, 17-325, 17-425.

Stack and Vent Identification:

- EU ARM STOR BLD: Storage building SV18-205
- EU ARM FLY ASH: Fly ash rail car unloading SV17-005, fly ash unload hopper SV17-045, fly ash dome SV17-105, fly ash day bin SV17-205, fly ash gravity conveyor SV17-325, fly ash gravity conveyor SV17-425.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VE	0% ²	6-minute average	EU ARM STOR BLDG Storage building 18-921	SC III.1	R 336.1301(1)(c), R 336.1224, R 336.1225
2. VE	10% opacity	6-minute average	This limit applies to each of the following: Storage bins, conveying system, Transfer points, Bulk loading or unloading.	SC VI.1 SC VI.2 SC V.1	40 CFR 60.62(c), 40 CFR 63.1345

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
3. PM-10	0.02 gr/ actual cubic foot of exhaust gas ²	Hourly	EU ARM FLY ASH This limit applies to each of the following: Fly ash rail car unloading 17-018, Fly ash receiver bin 17-040, Fly ash dome 17-100, Fly ash day bin 17-200, Fly ash gravity conveyors 17-315 and 17-415	SC III.1	R 336.1205, R 336.2802(4), R 336.2803, R 336.2804

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate any equipment in FG RAW MAT unless the associated dust collectors are installed, maintained, and operated in a satisfactory manner. Proper operation of the dust collectors shall include following the AQD approved Operations and Maintenance Plan for FG RAW MAT. The permittee is not required to operate dust collector 18-205 on EU ARM STOR BLDG. However, if the permittee does operate dust collector 18-205, its exhaust shall not be discharged directly to the outside ambient air.² **(R 336.1205, R 336.1910, R 336.1911, 40 CFR 63.1347)**
2. The permittee shall maintain an Operations and Maintenance Plan for FG RAW MAT that is approved by the AQD District Supervisor.² **(R 336.1911, 40 CFR 63.1347)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall conduct opacity tests of FG RAW MAT in accordance with 40 CFR Part 63, Subpart A and Subpart LLL.² **(40 CFR 63.1349(b)(2))**
2. No less than 60 days prior to opacity testing, a complete test plan shall be submitted to the AQD. The final plan must be approved by the AQD prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test.² **(R 336.2001(4), R 336.2003, R 336.2004)**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall conduct visible emissions monitoring and maintain records for FG RAW MAT in accordance with the Operations and Maintenance Plan and the requirements of 40 CFR Part 63, Subpart LLL which are included in Appendix 3.3.² **(40 CFR 63.1350(f))**
2. The permittee shall keep, in a satisfactory manner, all Method 22 and Method 9 visible emissions readings from the FG RAW MILL SYS. These records shall include the time of the visible emissions, cause of the visible emissions, corrective action taken and time of completion of corrective action. All records shall be made available to the AQD upon request. **(R 336.1301, R 336.1331, 40 CFR 63.1355)**

- The permittee shall record, and keep records of, all preventative maintenance required by the Operations and Maintenance Plan for FG RAW MAT and shall make all records available to the AQD upon request.² **(R 336.1911, 40 CFR 63.1355)**

See Appendix 3

VII. REPORTING

- Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
- Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
- Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
- The permittee shall submit any performance test reports to the AQD District Office, in a format approved by the AQD. **(R 336.1213(3)(c), R 336.2001(5))**
- The permittee shall notify the AQD if a change in land use occurs for property classified as industrial or as a public roadway, where this classification was relied upon to demonstrate compliance with Rule 225(1). The notification of a change of land use shall be submitted to the AQD District Supervisor, within 30 days of the actual land use change. Within 60 days of the land use change, the permittee shall submit to the AQD District Supervisor a plan for complying with the requirements of Rule 225(1). The plan shall require compliance with Rule 225(1) no later than one year after the due date of the plan submittal.¹ **(R 336.1225(4))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. EU ARM FLY ASH SV17-005 on fly ash rail car unloading hopper 17-018 with dust collector 17-005	10.8 ²	30 ²	R 336.1205, R 336.1225, R 336.1331, R 336.2803, R 336.2804
2. EU ARM FLY ASH SV17-045 on fly ash receiver bin 17-040 with dust collector 17-045	31 ²	125 ²	R 336.1205, R 336.1225, R 336.1331, R 336.2803, R 336.2804
3. EU ARM FLY ASH SV17-105 on fly ash dome 17-100 with dust collector 17-105	31 ²	125 ²	R 336.1205, R 336.1225, R 336.1331, R 336.2803, R 336.2804

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
4. EU ARM FLY ASH SV17-205 on fly ash day bin 17-200 with dust collector 17-205	31 ²	134.5 ²	R 336.1205, R 336.1225, R 336.1331, R 336.2803, R 336.2804
5. EU ARM FLY ASH SV17-325 on fly ash gravity conveyer 17-315 with dust collector 17- 325	8.5 ²	65 ²	R 336.1205, R 336.1225, R 336.1331, R 336.2803, R 336.2804
6. EU ARM FLY ASH SV17-425 on fly as gravity conveyer 17-415 with dust collector 17- 425	8.5 ²	65 ²	R 336.1205, R 336.1225, R 336.1331, R 336.2803, R 336.2804

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all applicable requirements of the NESHAP from the Portland Cement Manufacturing Industry as specified in 40 CFR Part 63, Subpart A and Subpart LLL, as they apply to FG RAW MAT. **(40 CFR Part 63, Subparts A & LLL)**
2. The permittee shall comply with all applicable requirements of the Standards of Performance for Portland Cement Plants as specified in 40 CFR Part 60, Subpart A and F, as they apply to FG RAW MAT. **(40 CFR Part 60, Subpart A & F)**

Footnotes:

- ¹ This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
- ² This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**FG RAW MILL SYS
 FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Raw Mill System mixes and grinds the raw materials (limestone, sand, bauxite, Bell shale, gypsum) and alternate raw materials (slag, iron ore, fly ash, and CKD) then sends the materials to the kilns. The raw materials are conveyed to one of the two thermal dryers in FG RAW MILL SYS and dried, and the combustion gases from the dryers carry the raw materials to the separator in FG RAW MILL SYS.

EU RAW MILL 14 (Raw Mill 14) and EU RAW MILL 15 (Raw Mill 15) further grind the raw and alternate raw materials using ball mills. The raw mix powder is then sent to one of four storage silos before the materials are sent to the kilns via air slides, screw elevators and pumps. Two storage silos are associated with Kilns 19, 20, 21, and two storage silos are associated with Kilns 22, 23.

Emission Units:

EU RAW MILL 14: Ball mill 20-050, cyclones 20-080, separators 20-090, 20-100, air slides 20-110, 20-111, 20-112, 20-113, 20-114, 20-115, 20-117, screws 20-460, 20-461, 20-463, 20-464, 20-465, 20-466, 20-467, elevators 20-072, 20-073, pumps 20-490, 20-491, storage silos, roller press 20-040, hammer mill 20-060, gas furnace/raw material dryer 20-065, storage bins 20-010, 20-011, static separator 20-100, conveyor belts 20-250, 20-255, 20-257, 20-258, 20-259, screws 20-033, 20-273, 20-462, 20-463, elevator 20-071.

EU RAW MILL 15: Ball mill 21-050, cyclones 21-080, separator 21-090, 21-100, air slides 21-110, 21-111, 21-112, 21-113, 21-114, 21-115, 21-117, screws 21-460, 21-461, 21-463, 21-464, 21-465, 21-466, 21-467, elevators 21-072, 21-073, pumps 21-490, 21-491, storage silos, roller press 21-040, hammer mill 21-060, gas furnace/raw material dryer 21-065, storage bins 21-010, 21-011, static separator 21-100, conveyor belts 21-250, 21-255, 21-257, 21-258, 21-259, screws 21-033, 21-273, 21-462, 21-463, elevator 21-071.

POLLUTION CONTROL EQUIPMENT

EU RAW MILL 14: Dust collectors 20-268, 20-269, 20-270, 20-271, 20-274, 20-275.
 EU RAW MILL 15: Dust collectors 21-268, 21-269, 21-270, 21-271, 21-275.

Stack and Vent Identification:

EU RAW MILL 14: Raw Mill 14 Air Slide Vent - SV20-268, Raw Ball Mill 14 Vent – SV20-269, Raw Grind 14 Dryer and Main Baghouse – SV20-270, Roller Press Raw Grind 14 – SV20-271, Raw Grind 14 Air Slides Conveyor – SV20-275

EU RAW MILL 15: Raw Mill 15 Air Slide Vent - SV21-268, Raw Ball Mill Vent 15 – SV21-269, Raw Grind 15 Dryer and Main Baghouse – SV21-270, Roller Press Raw Grind 15 – SV21-271, Raw Grind 15 Air Slides Conveyor – SV21-275.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VE	10% opacity ²	6-minute average	FG RAW MILL SYS	SC V.4, SC VI.1, SC VI.2	R 336.1301(1)(c), 40 CFR 63.1343, 40 CFR 60.62(c)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
2. PM	0.03 pound per 1,000 pounds of exhaust gases ²	Hourly	EU RAW MILL 14 (from the stack on dust collector SV20-270); EU RAW MILL 15 (from the stack on dust collector SV21-270) Limit applies to each individual stack.	SC V.1 SC V.2	R 336.1331(1)(c)
3. PM	27.51 pph ²	Hourly	EU RAW MILL 14 (from the stack on dust collector SV20-270); EU RAW MILL 15 (from the stack on dust collector SV21-270) Limit applies to each individual stack.	SC V.1 SC VI.3	R 336.1205, R 336.2802(4)
4. PM	120.2 tpy ²	12-month rolling time period as determined at the end of each calendar month	FG RAW MILL SYS	SC VI.3	R 336.1205, R 336.2802(4)
5. SO ₂	0.0147 pound per ton of raw material processed ²	Hourly	EU RAW MILL 14 (from the stack on dust collector SV20-270) EU RAW MILL 15 (from the stack on dust collector SV21-270) Limit applies to each individual stack.	SC V.1 SC VI.4	R 336.1402, R 336.2802(4)
6. THC	24 ppmv on a dry basis ^{2,a,b}	Based on a 30-day rolling average ^c	EU RAW MILL 14 (from the stack on dust collector SV20-270); EU RAW MILL 15 (from the stack on dust collector SV21-270) Limit applies to each individual stack.	SC V.3 SC VI.5	40 CFR 63.1343
7. THC	Work practice standards ²	During startup and shutdown.	EU RAW MILL 14 (from the stack on dust collector SV20-270); EU RAW MILL 15 (from the stack on dust collector SV21-270) Limit applies to each individual stack.	SC VI.5	40 CFR 63.1343 40 CFR 63.1348(b)(9)

^a Measured as propane.

^b Any source subject to the 24 ppmvd THC limit may elect to meet an alternative limit of 12 ppmvd for total organic HAP.

^c *30-day rolling average period*, as defined in 40 CFR Part 63, Subpart LLL, requires calculation of a new average value each operating day and shall include the average of all the hourly averages of the specific operating parameter. For demonstration of compliance with an emission limit based on pollutant concentration a 30-day rolling average is comprised of the average of all the hourly average concentrations over the previous 30 operating days. *Operating day* means any 24-hour period beginning at 12:00 midnight during which the kiln produces any amount of clinker. For calculating the 30-day rolling average emissions, kiln operating days do not include the hours of operation during startup or shutdown.

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Raw and Alternate Raw Materials	5,600,000 tpy ²	12-month rolling time period as determined at the end of each calendar month	FG RAW MILL SYS	SC VI.7	R 336.1205, R 336.2802(4)

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate any equipment in FG RAW MILL SYS unless the associated dust collectors are installed, maintained, and operated in a satisfactory manner. Proper operation of the dust collectors shall include following the AQD approved Operations and Maintenance Plan for FG RAW MILL SYS and operating the dust collectors during start-up and shutdown.² **(R 336.1910, R336.1911, 40 CFR 63.1347)**
2. The permittee shall not operate FG RAW MILL SYS unless an Operations and Maintenance Plan is implemented and maintained.² **(R 336.1911, 40 CFR 63.1347)**
3. The permittee shall not use any fuel in the FG RAW MILL SYS except natural gas.² **(R 336.1205, R 336.2802(4))**
4. The permittee shall install and operate a THC CEMS on FG RAW MILL SYS in accordance with Appendix 3.2 of this PTI, Performance Specification 8 of Appendix B of 40 CFR Part 60 and comply with all of the requirements for continuous monitoring systems found in 40 CFR Part 60, Subpart A in the general provisions. The permittee must operate and maintain each CEMS according to the quality assurance requirements in 40 CFR Part 60, Appendix F, Procedure 1. **(40 CFR 63.1350(i))**

See Appendix 3

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall verify PM and SO₂ emission rates from FG RAW MILL SYS by testing at owner's expense, in accordance with the Department requirements. Testing shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
PM	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules
SO ₂	40 CFR Part 60, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.² **(R 336.2001, R 336.2003, R 336.2004)**

2. The permittee shall verify the PM and SO₂ emission rates from FG RAW MILL SYS, at a minimum, every 5- years from the date of the last test.² **(R 336.2001, R 336.2003, R 336.2004)**
3. The permittee shall perform the Quality Assurance Procedures of the THC CEMS set forth in 40 CFR Part 60, Appendix F.² **(40 CFR Part 60, Appendix F, 40 CFR 60.13, 40 CFR 63.1349)**

4. The permittee shall conduct opacity tests of EU RAW MILL 14 (from the main baghouse SV20-270) and EU RAW MILL 15 (from the main baghouse SV21-270) in accordance with 40 CFR Part 63, Subpart A and Subpart LLL.² **(40 CFR 63.1349(b)(2))**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall conduct visible emissions monitoring for FG RAW MILL SYS in accordance with the Operations and Maintenance Plan and the requirements of 40 CFR Part 63, Subpart LLL which are included in Appendix 3.3 and 3.4.² **(40 CFR 63.1350(f)(1) & (2))**
2. The permittee shall keep, in a satisfactory manner, all Method 22 and Method 9 visible emissions readings from the FG RAW MILL SYS. These records shall include the time of the visible emissions, cause of the visible emissions, corrective action taken and time of completion of corrective action. All records shall be made available to the AQD upon request.² **(R 336.1301, R 336.1331, 40 CFR 63.1355)**
3. The permittee shall calculate and keep, in a satisfactory manner, monthly and 12-month rolling time period emission records of PM, as determined at the end of each calendar month. The most recent stack test results shall be used to calculate the pollutant emissions subject to the approval of the AQD. The permittee shall make all records available to the AQD upon request.² **(R 336.1205(1)(a)&(3), R 336.2802(4))**
4. The permittee shall calculate and keep, in a satisfactory manner acceptable to the AQD, monthly records of SO₂ emissions in pounds per ton of raw material processed EU RAW MILL 14 (from the main baghouse SV20-270) and EU RAW MILL 15 (from the main baghouse SV21-270). The permittee shall make all records available to the AQD upon request.² **(R 336.1205(1)(a)&(3))**
5. The permittee shall install, calibrate, maintain, and operate a THC CEMS for FG RAW MILL SYS in accordance with the requirements of 40 CFR Part 63, Subpart LLL.² **(40 CFR 63.1350(i))**
6. The permittee shall record and keep records of all preventative maintenance required by the Operations and Maintenance Plan for FG RAW MILL SYS and shall make all records available to the AQD upon request.² **(R 336.1911, 40 CFR 63.1355)**
7. The permittee shall monitor and record, in a satisfactory manner, the amount (tons) of raw material used in FG RAW MILL SYS. These records shall be kept on a monthly and 12-month rolling time period basis, as determined at the end of each calendar month.² **(R 336.1205, R 336.2802(4))**

See Appendices 3, 4 and/or 7

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. The permittee shall submit two complete test protocols to the AQD, one to the Technical Programs Unit Supervisor and one to the District Supervisor for approval at least 30 days prior to the anticipated test date. The protocol shall describe the test method(s) and the maximum routine operating conditions, including targets for key operational parameters associated with air pollution control equipment to be monitored and recorded during testing.² **(R 336.1205, R 336.1225, R 336.2001(3), R 336.2802(4))**

5. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor no less than 7 days prior to the anticipated test date.² **(R 336.2001(4))**
6. The permittee shall submit two complete test reports of the test results to the AQD, one to the Technical Programs Unit Supervisor and one to the District Supervisor, within 60 days following the last date of the test, and in a format approved by the AQD.² **(R 336.1205, R 336.1225, R 336.2001(5), R 336.2802(4), 40 CFR 63.1354(b)(1), 40 CFR 63.10(d)(2))**
7. The permittee shall report the Quality Assurance Procedures of the THC CEMS set forth in Appendix F of 40 CFR Part 60. Each quarter the results shall be presented and submitted in the format of the data assessment report (DAR).² **(40 CFR 60.13, 40 CFR Part 60, Appendix F)**
8. In accordance with 40 CFR Part 63 and 40 CFR 60.7(c) and (d), an EER and summary report for the THC CEMS shall be submitted in an acceptable format to the District Supervisor within 30 days following the end of each calendar quarter. The Summary Report shall follow the format of Figure 1 in 40 CFR 60.7(d). The EER shall include: the date, time, magnitude, cause and corrective actions of all occurrences during the reporting period; a report of all periods of THC CEMS downtime and corrective action; a report of the total operating time of each kiln during the reporting period; a report of any periods that the THC CEMS exceeds the instrument range. If no exceedances or CEMS downtime occurred during the reporting period, the permittee shall report that fact.² **(40 CFR 60.7(c)&(d), 40 CFR 63.1354(b)(8), 40 CFR 63.10(e)(3))**
9. The permittee shall submit a summary report semiannually to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI). (CEDRI can be accessed through the EPA's Central Data Exchange (CDX) (www.epa.gov/cdx.) The permittee must use the appropriate electronic report in CEDRI for 40 CFR Part 63, Subpart LLL – NESHAP From the Portland Cement Manufacturing Industry. Instead of using the electronic report in CEDRI for this subpart, the permittee may submit an alternate electronic file consistent with the extensible markup language (XML) schema listed on the CEDRI Web site (<http://www.epa.gov/ttn/chief/cedri/index.html>), once the XML schema is available. If the reporting form specific Subpart LLL is not available in CEDRI at the time that the report is due, the permittee must submit the report to the Administrator at the appropriate address listed in 40 CFR 63.13. The permittee must begin submitting reports via CEDRI no later than 90 days after the form becomes available in CEDRI. The reports must be submitted by the deadline specified in this subpart, regardless of the method in which the reports are submitted. The report must contain the information specified in 40 CFR 63.10(e)(3)(vi). In addition, the summary report shall include:² **(40 CFR 63.1354(b)(9))**
 - a. Any and all failures to comply with any provision of the operation and maintenance plan developed in accordance with 40 CFR 63.1347(a).
 - b. For each PM CPMS, HCl, Hg, and THC CEMS, D/F temperature monitoring system, or Hg sorbent trap monitoring system, within 60 days after the reporting periods, the permittee must report all of the calculated 30-operating day rolling average values derived from the CPMS, CEMS, CMS, or Hg sorbent trap monitoring systems.
 - c. In response to each violation of an emissions standard or established operating parameter limit, the date, duration and description of each violation and the specific actions taken for each violation including inspections, corrective actions and repeat performance tests and the results of those actions.
 - d. Within 60 days after the date of completing each CEMS performance evaluation test as defined in 40 CFR 63.2, the permittee must submit relative accuracy test audit (RATA) data to the EPA's CDX by using CEDRI in accordance with SC VII.9. Only RATA pollutants that can be documented with the ERT (as listed on the ERT Web site) are subject to this requirement. For any performance evaluations with no corresponding RATA pollutants listed on the ERT Web site, the permittee must submit the results of the performance evaluation to the Administrator at the appropriate address listed in 40 CFR 63.13.
 - e. If the total continuous monitoring system downtime for any CEM or any continuous monitoring system (CMS) for the reporting period is 10% or greater of the total operating time for the reporting period, the owner or operator shall submit an excess emissions and continuous monitoring system performance report along with the summary report.

10. Reporting a failure to meet a standard due to a malfunction. For each failure to meet a standard or emissions limit caused by a malfunction at an affected source, the permittee must report the failure in the semi-annual compliance report required by 40 CFR 63.1354(b)(9). The report must contain the date, time and duration, and the cause of each event (including unknown cause, if applicable), and a sum of the number of events in the reporting period. The report must list for each event the affected source or equipment, an estimate of the volume of each regulated pollutant emitted over the emission limit for which the source failed to meet a standard, and a description of the method used to estimate the emissions. The report must also include a description of actions taken by the permittee during a malfunction of an affected source to minimize emissions in accordance with 40 CFR 63.1348(d), including actions taken to correct a malfunction.² **(40 CFR 63.1354(b)(10))**

See Appendices 7 and 8

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all applicable requirements of the National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry as specified in 40 CFR Part 63, Subpart A and Subpart LLL, as they apply to FG RAW MILL SYS.² **(40 CFR Part 63, Subparts A & LLL)**
2. The permittee shall comply with all applicable requirements of the Standards of Performance for Portland Cement Plants as specified in 40 CFR Part 60, Subpart A and F, as they apply to FG RAW MILL SYS.² **(40 CFR Part 60, Subpart A & F)**

Footnotes:

¹ This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

² This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

FG KG5 FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Kiln Group 5 heats the raw materials and alternate raw materials to make clinker and includes transport of the clinker to FG CLINK COOL. Kilns 19, 20, and 21 are indirect fired rotating kilns which heat raw materials up to 3,000 °F to produce clinker. Each kiln is equipped with a baghouse and dust collectors for PM control, a Dry Absorbent Addition system for control of SO₂ and Mercury, and a Selective Non-Catalytic Reduction system for the control of NO_x. Heat from the kiln exhaust is used by the waste heat boiler to generate electricity. The clinker is moved by gravity from each kiln to its respective clinker cooler.

Emission Units:

EU KILN 19: Rotary kiln 25-119, storage silo 25-012
EU KILN 20: Rotary kiln 25-120, storage silo 25-013
EU KILN 21: Rotary kiln 25-121, storage silo 25-014

POLLUTION CONTROL EQUIPMENT

EU KILN 19: Baghouse: 25-253, dust collectors: 25-247, 25-252; Dry Absorbent Addition (DAA): Two hoppers (314 HO 01 and 314 HO 02), DAA reagent storage silo (304 SO 01), and associated dust collector (304 DC 10).
EU KILN 20: Baghouse: 25-265, dust collectors: 25-278, 25-263; DAA: Two hoppers (324 HO 01 and 324 HO 02); DAA reagent storage silo (304 SO 01), and associated dust collector (304 DC 10), Kiln Group 5 Feed Silo: associated dust collector: 25-275; Kiln Group 5 Feed Transfer: associated dust collector: 25-280.
EU KILN 21: Baghouse: 25-266, dust collectors: 25-279, 25-264; DAA: Two hoppers (334 HO 01 and 334 HO 02); DAA reagent storage silo (304 SO 01), and associated dust collector (304 DC10).
FG KG5: Selective Non-Catalytic Reduction system (SNCR): NH3STGTANK - Two 40,000 gallon aqueous ammonia/urea storage tanks (306 TN 01 and 306 TN 02), Feed System Skid for KG5 (306 FS 04), and Ammonia Analyzer (306 AG 02); Feed Silo: associated dust collector: 25-275, Feed Transfer: associated dust collector: 25-280

Stack and Vent Identification:

EU KILN 19: SV25-289
EU KILN 19: Kiln Feed Transfer: SV25-247

EU KILN 20: SV25-290
EU KILN 20: Kiln Feed Transfer: SV25-278

EU KILN 21: SV25-291
EU KILN 21: Kiln Feed Transfer: SV25-279

FG KG5: SV 304 DC10 (DAA Silo)
FG KG5: Kiln Feed Silo: SV25-275 (Kiln Feed Silo)
FG KG5: Kiln Feed Transfer: SV25-280 (Kiln Feed Transfer)

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VE	20% opacity ²	6-minute average	FG KG5 (The limit applies to each individual kiln.)	SC VI.4	R 336.1301
2. SO ₂	4.07 lbs per ton clinker ²	30-day rolling average, as determined at the end of each kiln operating day. ^a	EU KILN 19	SC V.1, SC VI.2, SC VI.4, SC VI.5	R 336.1205, R 336.1971
3. NO _x	4.72 lbs per ton clinker ²	30-day rolling average, as determined at the end of each kiln operating day. ^a	EU KILN 19	SC V.1, SC VI.2, SC VI.4, SC VI.5	R 336.1205, R 336.1971
4. CO	284 tpy ²	12-month rolling time period as determined at the end of each calendar month.	EU KILN 19	SC V.1, SC VI.2, SC VI.3, SC VI.4	R 336.1205
5. SO ₂	4.09 lbs per ton clinker ²	30-day rolling average, as determined at the end of each kiln operating day ^a	EU KILN 20	SC V.1, SC VI.2, SC VI.4, SC VI.5	R 336.1205, R 336.1971
6. NO _x	4.91 lbs per ton clinker ²	30-day rolling average, as determined at the end of each kiln operating day ^a	EU KILN 20	SC V.1, SC VI.2, SC VI.4, SC VI.5	R 336.1205, R 336.1971
7. CO	280 tpy ²	12-month rolling time period as determined at the end of each calendar month.	EU KILN 20	SC V.1, SC VI.2, SC VI.3, SC VI.4	R 336.2804
8. SO ₂	3.93 lbs per ton clinker ²	30-day rolling average, as determined at the end of each kiln operating day ^a	EU KILN 21	SC V.1, SC VI.2, SC VI.4, SC VI.5	R 336.1205, R 336.1971
9. NO _x	4.48 lbs per ton clinker ²	30-day rolling average, as determined at the end of each kiln operating day ^a	EU KILN 21	SC V.1, SC VI.2, SC VI.4, SC VI.5	R 336.1205, R 336.1971
10. CO	279 tpy ²	12-month rolling time period as determined at the end of each calendar month.	EU KILN 21	SC V.1, SC VI.2, SC VI.3, SC VI.4	R 336.2804

^a 30-day rolling average – is defined as a kiln operating day plus the previous 29 kiln operating days. *Kiln operating day* – is defined as any day on which kiln operation has occurred. Kiln operation is any period in which any raw materials are fed into the kiln or any period when any combustion is occurring or fuel is being fired in the kiln.

II. MATERIAL LIMIT(S)

1. The permittee may use alternate fuels in FG KG5 that meet the legitimacy criteria for non-hazardous secondary materials (NHSM) pursuant to 40 CFR Part 241. The legitimacy criteria shall be based on comparisons to traditional fuels permitted for FG KG5, including fossil fuels (e.g., coal, fuel oil, and natural gas), cellulosic biomass (virgin wood), plastics, tire-derived fuel (TDF), and shingles.² (**R 336.1205, R 336.1225, R 336.1702, R 336.2803, R 336.2804, 40 CFR Part 241**)

2. The permittee may not use any alternate fuel in FG KG5 with a heat input less than 5,000 BTU/lb.² **(R 336.1205, R 336.1225, R 336.1702)**
3. The permittee shall not burn any fuel in FG KG5 with asbestos tailing or asbestos containing waste materials as defined in 40 CFR 61.141.² **(R 336.1225, R 336.1901, 40 CFR 61.141)**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate FG KG5 unless the associated SNCR, DAA, baghouses and dust collectors are installed, maintained, and operated in a satisfactory manner. Satisfactory manner includes operating and maintaining the control equipment in accordance with the manufacturer's written instructions and an AQD approved MAP. The permittee shall not operate FG KG5 unless the MAP is implemented and maintained. Proper operation of each control system shall include following the AQD approved MAP.² **(R 336.1225, R 336.1910, R 336.1911, R 336.1971)**
2. The SO₂, NO_x, and CO CEMS shall be installed, calibrated, maintained, and operated in accordance with the procedures set forth in Appendix 3.4, 40 CFR 60.13 and 40 CFR Part 60, Appendix B, Performance Specification PS 2; and PS 4, 4A, or 4B. The span value shall be 2.0 times the lowest emission standard or as specified in the federal regulations.² **(R 336.1205(1)(a)(ii)(E), 40 CFR 60.13)**
3. The permittee shall only burn alternate fuels in FG KG5 as part of normal operations and not during start-up or shut-down operations.² **(R 336.1205, R 336.1225, R 336.1702, R 336.2803, R 336.2804, 40 CFR Part 241)**
4. The permittee shall not fill NH₃STGTANK on the SNCR for FG KG5 unless the vapor balance system is installed, maintained and operated in a satisfactory manner as follows:
 - a. The permittee shall connect the vapor-tight collection line to the delivery vessel before any aqueous ammonia/urea is transferred.
 - b. The permittee shall close the vapor-tight collection line upon disconnection so as to prevent release of ammonia/urea vapors.
 - c. The permittee shall close the hatch and other openings on the delivery vessel and make certain they are vapor-tight to prevent emission of displaced ammonia/urea vapors during transfer operations, except under emergency conditions.

The permittee shall develop written procedures for the operation of all the control measures described above, and shall keep such procedures available in an accessible location near the transfer equipment.¹ **(R 336.1901)**

See Appendix 3

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. Each baghouse associated with FG KG5 shall be equipped with a device to measure pressure differential.² **(R 336.1910)**
2. The permittee shall install, calibrate, maintain and operate in a satisfactory manner, any devices needed to continuously monitor and record operating parameters for SNCR and DAA for FG KG5. Satisfactory manner includes operating and maintaining the control equipment in accordance with the manufacturer's written instructions and an AQD approved MAP.² **(R 336.1205, R 336.1910)**
3. The permittee shall equip and maintain NH₃STGTANK for the SNCR of FG KG5 with vacuum breakers and pressure relief valves rated at 25 psi ±5 psi.¹ **(R 336.1901)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall perform the Quality Assurance Procedures of the SO₂, NO_x and CO CEMS set forth in 40 CFR Part 60, Appendix F.² **(40 CFR 60.13, 40 CFR Part 60, Appendix F)**

2. Verification and quantification of emissions from FG KG5 while burning alternate fuels, by testing at owner's expense, in accordance with the AQD requirements, may be required.² **(R 336.2001, R 336.2003)**
3. The permittee shall verify each shipment of alternate fuels is acceptable to use as fuel in FG KG5, by determining the following:
 - a. NHSM shall meet the Legitimacy Criteria in 40 CFR Part 241.
 - b. Conduct monthly sampling. Samples shall be taken of the "as-fired" fuel and labeled with the unique batch identification number. Sufficient material shall be collected to provide three samples, each of sufficient volume for the required analysis.
 - c. Monthly samples collected shall be analyzed to verify the fuel meets the legitimacy criteria, as defined in SC II.1.

No less than 30 days prior to sampling, a complete sampling plan shall be submitted to the AQD. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. Sampling and analysis of alternate fuels must be kept on file for a period of 5 years and made available to the AQD upon request.² **(R 336.1205, R 336.1225, R 336.1702, R 336.2803, R 336.2804, 40 CFR Part 241)**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall monitor, record, and calculate: the daily kiln feed rates in tons, and the daily clinker production rates in tons, for each kiln in FG KG5. The permittee shall keep all records on file at the facility and make them available to the AQD upon request.² **(R 336.1205, R 336.1224, R 336.1225)**
2. The permittee shall monitor and record the SO₂, NO_x and CO emissions from EU KILN 19, EU KILN 20, and EU KILN 21 on a continuous basis in a manner and with instrumentation acceptable to the AQD. These monitors and the resulting data shall be used for determining compliance with SO₂, NO_x and CO permit limits.² **(R 336.1205(1)(a)(ii)(E), 40 CFR 60.13, 40 CFR Part 60, Appendix B & F)**
3. From EU KILN 19, EU KILN 20, and EU KILN 21, the permittee shall calculate the CO emissions in tons per 12-month rolling time period basis as determined at the end of each calendar month.² **(R 336.1205)**
4. The permittee shall monitor and record operating parameters for each SNCR, DAA, baghouse, and dust collector for FG KG5 on a continuous basis with instrumentation acceptable to the AQD. All operating parameters shall be outlined in the AQD approved MAP. The permittee shall keep all records on file at the facility and make them available to the AQD upon request.² **(R 336.1205(1)(a)(ii)(E), R 336.1911, 40 CFR 60.13, 40 CFR Part 60, Appendix B & F)**
5. The permittee shall monitor, record, and calculate the SO₂ and NO_x emissions in pound per ton of clinker, including emissions from startups, shutdowns, and malfunctions, from each kiln in FG KG5, on a 30-day rolling average as follows: First, sum the total pounds each of SO₂ and NO_x, as measured with a CEMS, from each respective kiln during each kiln operating day and the previous 29 kiln operating days; second, sum the total tons of clinker produced by each respective kiln during the same kiln operating day and previous 29 kiln operating days; third, divide the total pounds each of SO₂ and NO_x emitted from each respective kiln during the 30 kiln operating days by the total tons of clinker produced by each respective kiln during the same 30 kiln operating days. Each 30-day rolling average emission rate shall be calculated each new kiln operating day. The permittee shall keep all records on file at the facility and make them available to the AQD upon request.² **(R 336.1205, R 336.1970, R 336.1971)**
6. The permittee shall monitor and record, in a satisfactory manner acceptable to the AQD District Supervisor, the amount and type of each alternate fuel used in FG KG5 on a monthly and 12-month rolling time period basis as determined at the end of each calendar month. The permittee shall keep all records on file and make them available to the Department upon request.² **(R 336.1205, R 336.1225, R 336.1331, R 336.1702)**

7. The permittee shall monitor and record any sampling and analysis for alternate fuels used in FG KG5 per SC V.3 and the Fuel Procurement Monitoring Plan, as required in FG ALT FUEL HAND. The permittee shall keep all records on file and make them available to the Department upon request.² **(R 336.1205, R 336.1225, R 336.1331, R 336.1702)**

See Appendices 3 and 7

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i), 40 CFR 63.1354)**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. The permittee shall submit two complete test protocols to the AQD, one to the Technical Programs Unit Supervisor and one to the District Supervisor for approval at least 30 days prior to the anticipated test date. The protocol shall describe the test method(s) and the maximum routine operating conditions, including targets for key operational parameters associated with air pollution control equipment to be monitored and recorded during testing.² **(R 336.2001, R 336.2003, R 336.2004, R 336.1205(1))**
5. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor no less than 7 days prior to the anticipated test date.² **(R 336.2001(4), 40 CFR Part 60, Appendix B & F)**
6. The permittee shall submit two complete test reports of the test results to the AQD, one to the Technical Programs Unit Supervisor and one to the District Supervisor, within 60 days following the last date of the test, and in a format approved by the AQD. The test report shall include operating parameters of the kilns and air pollution control equipment.² **(R 336.2001, R 336.2001(5), R 336.2003, R 336.2004)**
7. No less than 30 days prior to the performance specification testing of the CEMS, a complete test plan must be submitted to the District Supervisor. The final test plan must have approval prior to the testing. The permittee shall submit to the District Supervisor within 60 days of completion, two copies of the final report demonstrating the CEMS complies with the applicable requirements.² **(40 CFR Part 60, Appendices B & F)**
8. The permittee shall report the Quality Assurance Procedures of the SO₂, NO_x, and CO set forth in 40 CFR Part 60, Appendix F. Each quarter the results shall be presented and submitted in the format of the data assessment report (DAR).² **(40 CFR Part 60, Appendix F, 40 CFR 60.13)**
9. In accordance with 40 CFR 60.7(c) and (d), an EER and summary report for all CEMS shall be submitted in an acceptable format to the District Supervisor within 30 days following the end of each calendar quarter. The Summary Report shall follow the format of Figure 1 in 40 CFR 60.7(d). The EER shall include the date, time, magnitude, cause and corrective actions of all occurrences during the reporting period; a report of all periods of CEMS downtime and corrective action; a report of the total operating time of each kiln during the reporting period; a report of any periods that the CEMS exceeds the instrument range. If no exceedances or CEMS downtime occurred during the reporting period, the permittee shall report that fact.² **(40 CFR 60.7(c)&(d))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV25-289 EU KILN 19	156 ²	220 ²	R 336.1225, R 336.1228, R 336.1229(2)(b), R 336.2803, R 336.2804
2. SV25-290 EU KILN 20	156 ²	220 ²	R 336.1225, R 336.1228, R 336.1229(2)(b), R 336.2803, R 336.2804
3. SV25-291 EU KILN 21	156 ²	220 ²	R 336.1225, R 336.1228, R 336.1229(2)(b), R 336.2803, R 336.2804

IX. OTHER REQUIREMENT(S)

1. The permittee shall maintain an SO₂, NO_x and CO CEMS Monitoring Plan/QAQC Plan approved by the AQD. The Monitoring Plan shall include drawings or specifications showing locations and descriptions of all required monitors.² **(R 336.1205)**
2. The permittee shall not use emission reductions of SO₂ and NO_x resulting from the installation of the DAA and SNCR as a creditable contemporaneous emission decrease for the purpose of obtaining a netting credit under the Clean Air Act's New Source Review Major Source Permitting Programs.² **(R 336.1201)**
3. The permittee shall comply with all applicable requirements of the National Emissions Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry as specified in 40 CFR Part 63, Subpart A and Subpart LLL, as they apply to FG KG5.² **(40 CFR Part 60, Subparts A & LLL)**

Footnotes:

¹ This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

² This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**FG KG6
 FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Kiln Group 6 heats the raw materials and alternate raw materials to make clinker and includes transport of the clinker to FG CLINK COOL. Kilns 22 and 23 are indirect fired rotating kilns which heat raw materials up to 3,000 °F to produce clinker. Each kiln is equipped with a baghouse and dust collectors for PM control and a Selective Non-Catalytic Reduction system for the control of NOx. Exhaust from both kilns is directed to a wet gas desulfurization scrubber for SO₂ control. Heat from the kiln exhaust is used by the waste heat boiler to generate electricity. The clinker is moved by gravity from each kiln to its respective clinker cooler.

Emission Units:

EU KILN 22: Rotary Kiln 26-122, storage silos 26-003, 26-004
 EU KILN 23: Rotary Kiln 26-123, storage silos 26-003, 26-004

POLLUTION CONTROL EQUIPMENT

EU KILN 22: Baghouse: 26-256, dust collectors: 26-254, 26-255
 EU KILN 23: Baghouse: 26-262, dust collectors: 26-260, 26-261
 FG KG6: Selective Non-Catalytic Reduction system (SNCR): NH3STGTANK - Two 40,000 gallon aqueous ammonia/urea storage tanks (306 TN 01 and 306 TN 02), Feed System Skid for KG6 (306 FS 05), and Ammonia Analyzer (306 AG 03); Wet Flue Gas Desulfurization scrubber (FGD): 308 WS 01 – Wet flue gas desulfurization unit (FGD); Feed Silo: associated dust collector 26-263.

Stack and Vent Identification:

EU KILN 22: SV26-292A (stack shared by Kilns 22 and 23)
 EU KILN 22 Feed Transfer: SV26-254 (Kiln Feed Transfer)
 EU KILN 23: SV26-292A (stack shared by Kilns 22 and 23)
 EU KILN 23 Feed Transfer: SV26-260 (Kiln Feed Transfer)
 EU KG6 Kiln Feed Silo: SV26-263 (Kiln Feed Silo)

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VE	20% opacity ²	6-minute average	FG KG6	SC VI.5	R 336.1301, 40 CFR 60.62(a)(2)
2. NOx	5.47 lbs per ton clinker ²	30-day rolling average, as determined at the end of each kiln operating day ^a	EU KILN 22	SC V.1, SC VI.2, SC VI.4, SC VI.5	R 336.1205, R 336.1801(4), R 336.1971
3. CO	537 tpy ²	12-month rolling time period as determined at the end of each calendar month	EU KILN 22	SC V.1, SC VI.2, SC VI.3, SC VI.5	R 336.2804

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
4. SO ₂	1.98 lbs per ton clinker ²	30-day rolling average, as determined at the end of each kiln operating day ^a	FG KG6 (Applies when both kilns operate simultaneously or either kiln operates individually.)	SC V.1, SC VI.2, SC VI.4, SC VI.5	R 336.1205, R 336.1971
5. NO _x	5.69 lbs per ton clinker ²	30-day rolling average, as determined at the end of each kiln operating day ^a	EU KILN 23	SC V.1, SC VI.2, SC VI.4, SC VI.5	R 336.1205, R 336.1801(4), R 336.1971
6. CO	539 tpy ²	12-month rolling time period as determined at the end of each calendar month	EU KILN 23	SC V.1, SC VI.2, SC VI.3, SC VI.5	R 336.2804

^a30-day rolling average – is defined as a kiln operating day plus the previous 29 kiln operating days. *Kiln operating day* – is defined as any day on which kiln operation has occurred. Kiln operation is any period in which any raw materials are fed into the kiln or any period when any combustion is occurring or fuel is being fired in the kiln.

II. MATERIAL LIMIT(S)

1. The permittee may use alternate fuels in FG KG6 that meet the legitimacy criteria for non-hazardous secondary materials (NHSM) pursuant to 40 CFR Part 241. The legitimacy criteria shall be based on comparisons to traditional fuels permitted for FG KG6, including fossil fuels (e.g., coal, fuel oil, and natural gas), cellulosic biomass (virgin wood), plastics, tire-derived fuel (TDF), and shingles.² **(R 336.1205, R 336.1225, R 336.1702, R 336.2803, R 336.2804, 40 CFR Part 241)**
2. The permittee may not use any alternate fuel in FG KG6 with a heat input less than 5,000 BTU/lb.² **(R 336.1205, R 336.1225, R 336.1702)**
3. The permittee shall not burn any fuel in FG KG6 with asbestos tailing or asbestos containing waste materials as defined in 40 CFR 61.141.² **(R 336.1225, R 336.1901, 40 CFR 61.141)**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate FG KG6 unless the associated SNCR, FGD, baghouses, and dust collectors are installed, maintained, and operated in a satisfactory manner. Satisfactory manner includes operating and maintaining the control equipment in accordance with any applicable manufacturer’s written instructions and an AQD approved MAP. The permittee shall not operate FG KG6 unless the MAPs for the SNCR and main baghouse and the FGD are implemented and maintained. Proper operation of each control system shall include following the AQD approved MAP.² **(R 336.1225, R 336.1910, R 336.1911, R 336.1971)**
2. The SO₂, NO_x and CO CEMS shall be calibrated, maintained, and operated in accordance with the procedures set forth in Appendix 3.4 of this ROP, 40 CFR 60.13 and 40 CFR Part 60, Appendix B, Performance Specification 2; and 40 CFR Part 60, Appendix B, Performance Specification 4, 4A, or 4B. The span value shall be 2.0 times the lowest emission standard or as specified in the federal regulations.² **(R 336.1205(1)(a)(ii)(E), 40 CFR 60.13)**
3. The permittee shall operate the FGD with the liquid flow equal to or exceeding the minimum flow rate as described in the AQD approved MAP.² **(R 336.1205(1), R 336.1301(1), R 336.1910)**
4. The permittee shall operate the FGD within the minimum and maximum differential pressure range as described in the AQD approved MAP.² **(R 336.1205(1), R 336.1301(1), R 336.1910)**

5. The permittee shall operate the FGD within the minimum and maximum outlet temperature range as described in the AQD approved MAP.² **(R 336.1205(1), R 336.1301(1), R 336.1910)**
6. The permittee shall only burn alternate fuels in FG KG6 as part of normal operations and not during start-up or shut-down operations.² **(R 336.1205, R 336.1225, R 336.1331, R 336.1702, R 336.2803, R 336.2804, 40 CFR Part 241)**
7. The permittee shall not burn whole tires in FG KG6 unless the mid-kiln tire injection system is installed and operated.² **(R 336.1205, R 336.1225, R 336.1331, R 336.1702)**
8. All emissions from FG KG6 shall be exhausted through stack SV26-292A.² **(R 336.1225, R 336.2803, R 336.2804)**
9. The permittee shall not fill NH3STGTANK on the SNCR for FG KG6 unless the vapor balance system is installed, maintained and operated in a satisfactory manner as follows:
 - a. The permittee shall connect the vapor-tight collection line to the delivery vessel before any aqueous ammonia/urea is transferred.
 - b. The permittee shall close the vapor-tight collection line upon disconnection so as to prevent release of ammonia/urea vapors.
 - c. The permittee shall close the hatch and other openings on the delivery vessel and make certain they are vapor-tight to prevent emission of displaced ammonia/urea vapors during transfer operations, except under emergency conditions.

The permittee shall develop written procedures for the operation of all the control measures described above, and shall keep such procedures available in an accessible location near the transfer equipment.¹ **(R 336.1901)**

See Appendix 3

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. Each baghouse associated with FG KG6 shall be equipped with a device to measure pressure drop across the baghouses.² **(R 336.1910)**
2. The permittee shall install and maintain monitoring devices on the FGD for measuring the liquid flow rate, pressure differential, and the outlet temperature.² **(R 336.1205(4), R 336.1910)**
3. The permittee shall install, calibrate, maintain and operate in a satisfactory manner, any devices needed to continuously monitor and record operating parameters for SNCR and FGD. Satisfactory manner includes operating and maintaining the control equipment in accordance with the manufacturer's written instructions and an AQD approved MAP for FG KG6.² **(R 336.1205, R 336.1910)**
4. The permittee shall equip and maintain the two SNCR 40,000 gallon aqueous ammonia/urea storage with vacuum breakers and pressure relief valves rated at 25 psi \pm 5 psi.¹ **(R 336.1901)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall perform the Quality Assurance Procedures of the SO₂, NO_X and CO CEMS set forth in 40 CFR Part 60, Appendix F.² **(R 336.2157, 40 CFR 52.21, 40 CFR 60.13, 40 CFR Part 60, Appendix F)**
2. Verification and quantification of emissions from FG KG6 while burning alternative fuels, by testing at owner's expense, in accordance with the AQD requirements, may be required.² **(R 336.2001, R 336.2003)**
3. The permittee shall verify each shipment of alternate fuels is acceptable to use as fuel in FG KG6, by determining the following:
 - a. NHSM shall meet the Legitimacy Criteria in 40 CFR Part 241.
 - b. Conduct monthly sampling. Samples shall be taken of the "as-fired" fuel and labeled with the unique batch

identification number. Sufficient material shall be collected to provide three samples, each of sufficient volume for the required analysis.

- c. Monthly samples collected shall be analyzed to verify the fuel meets the legitimacy criteria, as defined in SC II.1.

No less than 30 days prior to sampling, a complete sampling plan shall be submitted to the AQD. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. Sampling and analysis of alternate fuels must be kept on file for a period of 5 years and made available to the AQD upon request.² **(R 336.1205, R 336.1225, R 336.1702, R 336.2803, R 336.2804, 40 CFR Part 241)**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall monitor, record, and calculate: the daily kiln feed rates in tons, and the daily clinker production rates in tons, for each kiln in FG KG6. The permittee shall keep all records on file at the facility and make them available to the AQD upon request.² **(R 336.1205, R 336.1224, R 336.1225, 40 CFR 60.63(b))**
2. The permittee shall monitor and record the SO₂ (combined stack), NO_x, and CO emissions from EU KILN 22 and EU KILN 23 on a continuous basis in a manner and with instrumentation acceptable to the AQD. These monitors and the resulting data shall be used for determining compliance with SO₂, NO_x and CO permit limits.² **(R 336.1205(1)(a)(ii)(E), 40 CFR 60.13)**
3. From EU KILN 22 and EU KILN 23, the permittee shall calculate the CO emissions in tons per year on a monthly and 12-month rolling time period basis as determined at the end of each calendar month.² **(R 336.1205(1)(a)(ii)(E), 40 CFR 60.13)**
4. The permittee shall monitor, record, and calculate the SO₂ and NO_x emissions in pound per ton of clinker, including emissions from startups, shutdowns, and malfunctions, from FG KG6 on a 30-day rolling average as follows: First, sum the total pounds each of SO₂ and NO_x, as measured with a CEMS, from each respective kiln during each kiln operating day and the previous 29 kiln operating days; second, sum the total tons of clinker produced by each respective kiln during the same kiln operating day and previous 29 kiln operating days; third, divide the total pounds each of SO₂ and NO_x emitted from each respective kiln during the 30 kiln operating days by the total tons of clinker produced by each respective kiln during the same 30 kiln operating days. Each 30-day rolling average emission rate shall be calculated each new kiln operating day. The permittee shall keep all records on file at the facility and make them available to the AQD upon request.² **(R 336.1205, R 336.1971, R 336.1801(8))**
5. The permittee shall monitor and record operating information for each SNCR, FGD, baghouse, and dust collector for FG KG6 on a continuous basis with instrumentation acceptable to the AQD. All operating information shall be outlined in the AQD approved MAP. The permittee shall keep all records on file at the facility and make them available to the AQD upon request.² **(R 336.1205(1)(a)(ii)(E), R 336.1911, 40 CFR 60.13, 40 CFR Part 60, Appendix B & F)**
6. The permittee shall monitor and record, in a satisfactory manner acceptable to the AQD District Supervisor, the amount and type of each alternate fuel used in FG KG6 on a monthly and 12-month rolling time period basis as determined at the end of each calendar month. The permittee shall keep all records on file and make them available to the Department upon request.² **(R 336.1205, R 336.1225, R 336.1331, R 336.1702)**
7. The permittee shall monitor and record any sampling and analysis for alternate fuels used in FG KG6 per SC V.3 and the Fuel Procurement Monitoring Plan, as required in FG ALT FUEL HAND. The permittee shall keep all records on file and make them available to the Department upon request.² **(R 336.1205, R 336.1225, R 336.1331, R 336.1702)**

See Appendices 3 and 7

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i), 40 CFR 63.1354)**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. The permittee shall submit two complete test protocols to the AQD, one to the Technical Programs Unit Supervisor and one to the District Supervisor for approval at least 30 days prior to the anticipated test date, and in a format approved by the AQD. The protocol shall describe the test method(s) and the maximum routine operating conditions, including targets for key operational parameters associated with air pollution control equipment to be monitored and recorded during testing.² **(R 336.1205(1), R 336.2001, R 336.2001(5), R 336.2003, R 336.2004)**
5. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor no less than 7 days prior to the anticipated test date.² **(40 CFR Part 60, Appendix F)**
6. The permittee shall submit two complete test reports of the test results to the AQD, one to the Technical Programs Unit Supervisor and one to the District Supervisor, within 60 days following the last date of the test, and in a format approved by the AQD. The test report shall include operating parameters of the kilns and FGD including FGD flow rate, differential pressure, and outlet temperature.² **(R 336.2001, R 336.2001(5), R 336.2003, R 336.2004, R 336.1205)**
7. The permittee shall report the Quality Assurance Procedures of the SO₂, NO_x and CO CEMS set forth in 40 CFR Part 60, Appendix F. Each quarter the results shall be presented and submitted in the format of the data assessment report (DAR).² **(40 CFR 60.13, 40 CFR Part 60, Appendix F)**
8. In accordance with 40 CFR 60.7(c) and (d), an EER and summary report for all CEMS shall be submitted in an acceptable format to the District Supervisor within 30 days following the end of each calendar quarter. The Summary Report shall follow the format of Figure 1 in 40 CFR 60.7(d). The EER shall include the date, time, magnitude, cause and corrective actions of all occurrences during the reporting period; a report of all periods of CEMS downtime and corrective action; a report of the total operating time of each kiln during the reporting period; a report of any periods that the CEMS exceeds the instrument range. If no exceedances or CEMS downtime occurred during the reporting period, the permittee shall report that fact.² **(40 CFR 60.7(c) & (d))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV26-292A Stack shared by EU KILN 22 and EU KILN 23	100 ²	250 ²	R 336.1225, R 336.1228, R 336.1229(2)(b), R 336.2803, R 336.2804

IX. OTHER REQUIREMENT(S)

1. The permittee shall maintain an SO₂, NO_x and CO Monitoring Plan/QAQC Plan approved by the AQD. The Monitoring Plan shall include drawings or specifications showing locations and descriptions of all required monitors.² **(R 336.2803, R 336.2804)**
2. Once a MAP is approved by the AQD, the permittee shall not operate the kilns in FG KG6 unless the MAP is being implemented and maintained.² **(R 336.1911)**
3. The permittee shall not use emission reductions of SO₂ and NO_x resulting from the installation of the FGD and SNCR as a creditable contemporaneous emission decrease for the purpose of obtaining a netting credit under the Clean Air Act's New Source Review Major Source Permitting Programs.² **(R 336.1201)**
4. The permittee shall comply with all applicable requirements of the National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry as specified in 40 CFR Part 63, Subpart A and Subpart LLL, as they apply to FG KG6. **(40 CFR Part 63, Subparts A & LLL)**

Footnotes:

¹ This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

² This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

FG MACT KILNS FLEXIBLE GROUP CONDITIONS

DESCRIPTION

This Flexible Group contains the requirements from 40 CFR Part 63, Subpart LLL (Portland Cement MACT) that apply to each kiln.

Emission Unit:

- EU KILN 19: Rotary kiln 25-119, storage silo 25-012
- EU KILN 20: Rotary kiln 25-120, storage silo 25-013
- EU KILN 21: Rotary kiln 25-121, storage silo 25-014
- EU KILN 22: Rotary Kiln 26-122, storage silos 26-003, 26-004
- EU KILN 23: Rotary Kiln 26-123, storage silos 26-003, 26-004

POLLUTION CONTROL EQUIPMENT

- EU KILN 19: Baghouse: 25-253, dust collectors: 25-247, 25-252; Dry Absorbent Addition (DAA): Two hoppers (314 HO 01 and 314 HO 02), DAA reagent storage silo (304 SO 01), and associated dust collector (304 DC 10).
- EU KILN 20: Baghouse: 25-265, dust collectors: 25-278, 25-263; DAA: Two hoppers (324 HO 01 and 324 HO 02); DAA reagent storage silo (304 SO 01), and associated dust collector (304 DC 10), Kiln Group 5 Feed Silo: associated dust collector: 25-275; Kiln Group 5 Feed Transfer: associated dust collector: 25-280.
- EU KILN 21: Baghouse: 25-265, dust collectors: 25-279, 25-264; DAA: Two hoppers (334 HO 01 and 334 HO 02); DAA reagent storage silo (304 SO 01), and associated dust collector (304 DC10).
- FG KG5: Selective Non-Catalytic Reduction system (SNCR): NH3STGTANK - Two 40,000 gallon aqueous ammonia/urea storage tanks (306 TN 01 and 306 TN 02), Feed System Skid for KG5 (306 FS 04), and Ammonia Analyzer (306 AG 02); Feed Silo: associated dust collector: 25-275, Feed Transfer: associated dust collector: 25-280
- EU KILN 22: Baghouse: 26-256, dust collectors: 26-254, 26-255
- EU KILN 23: Baghouse: 26-262, dust collectors: 26-260, 26-261
- FG KG6: Selective Non-Catalytic Reduction system (SNCR): NH3STGTANK - Two 40,000 gallon aqueous ammonia/urea storage tanks (306 TN 01 and 306 TN 02), Feed System Skid for KG6 (306 FS 05), and Ammonia Analyzer (306 AG 03); Wet Flue Gas Desulfurization scrubber (FGD): 308 WS 01 – Wet flue gas desulfurization unit; Feed Silo: associated dust collector 26-263.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. PM	0.07 lb/ton clinker ^{2,b}	30-day rolling average as determined at the end of each kiln operating day. ^a	FG MACT KILNS, the limit applies to each individual kiln/exhaust stack	SC IV.1 SC V.1 SC VI.1 SC VI.2	40 CFR 63.1343(b)(1)
2. D/F	0.2 ng/dscm (TEQ) corrected to 7% oxygen ² (0.40 ng/dscm(TEQ) if the avg. temperature at the inlet of the first PM control device during the performance test is 400 °F or less)	3-hour rolling average	FG MACT KILNS, the limit applies to each individual kiln/exhaust stack	SC IV.3 SC V.4	40 CFR 63.1343(b)(1)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
3. Hg	55 lb/MM tons clinker ²	30-day rolling average as determined at the end of each kiln operating day. ^a	FG MACT KILNS, the limit applies to each individual kiln/exhaust stack	SC IV.4 SC V.8	40 CFR 63.1343(b)(1)
4. THC or Total Organic HAP	24 ppmvd corrected to 7% oxygen or 12 ppmvd corrected to 7% oxygen ²	30-day rolling average as determined at the end of each kiln operating day. ^a	FG MACT KILNS, the limit applies to each individual kiln/exhaust stack	SC IV.6 SC V.9	40 CFR 63.1343(b)(1)
5. HCL	3 ppmvd corrected to 7% oxygen ²	30-day rolling average as determined at the end of each kiln operating day. ^a	FG MACT KILNS, the limit applies to each individual kiln/exhaust stack	SC IV.7 SC V.10	40 CFR 63.1343(b)(1)

^a30-day rolling average – is defined as a kiln operating day plus the previous 29 kiln operating days. *Kiln operating day* – means any 24-hour period beginning at 12:00 midnight during which the kiln produces any amount of clinker. For calculating the 30-day rolling average emissions, kiln operating days do not include the hours of operation during startup or shutdown.

^b In accordance with Rule 213(2) and Rule 213(6), compliance with this streamlined particulate matter (PM) emission limit shall be considered compliance with the PM emission limit established by **40 CFR 63.1343(b)(1)**; and also compliance with the FG KG5 and FG KG6 PM emission limits of 0.25 lb per 1000 lbs exhaust established by R 336.1331(1)(a), additional applicable requirements that have been subsumed within this condition.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate any equipment in FG MACT KILNS unless the associated pollution control equipment is installed, maintained, and operated in a satisfactory manner. Proper operation of the pollution control equipment shall include following an AQD approved Operations and Maintenance Plan for FG MACT KILNS that includes operations during periods of startup and shutdown.² **(40 CFR 63.1347)**
2. The temperature of the gas at the inlet of the baghouse dust collector for each kiln shall not exceed the temperature established during the most recent performance test conducted pursuant to 40 CFR 63.1349(b)(3)(iv).² **(40 CFR 63.1346(a))**
3. The permittee shall meet the following requirements during periods of startup and shutdown:² **(40 CFR 63.1346(g))**
 - a. During startup of each kiln the permittee shall use only natural gas until the kiln reaches a temperature of 1200 °F.
 - b. Combustion of the primary kiln fuel may commence once the kiln temperature reaches 1200 °F.
 - c. All dry sorbent and activated carbon systems that control hazardous air pollutants must be turned on and operating at the time the gas stream at the inlet to the baghouse reaches 300 °F (5- minute average) during startup. Temperature of the gas stream is to be measured at the inlet of the baghouse or ESP every minute. Such injection systems can be turned off during shutdown. Particulate control and all remaining devices that control hazardous air pollutants should be operational during startup and shutdown.

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall install, calibrate, maintain, and continuously operate a PM Continuous Parameter Monitoring System (CPMS), in accordance with the procedures set forth in 40 CFR Part 63, Subpart LLL for each kiln in FG KG5 and in the wet gas scrubber exhaust stack for FG KG6.² **(40 CFR 63.1350)**
2. The permittee shall install, calibrate, maintain, and operate a permanent weigh scale system to measure and record either; the amount of clinker produced in tons per hour, or the amount of feed to the kiln in tons per hour, as described in Appendix 3. The chosen measurement system must be maintained within $\pm 5\%$ accuracy. When using kiln feed amount the permittee must calculate the hourly clinker production rate using a kiln-specific feed to clinker ratio based on reconciled clinker production determined for accounting purposes and recorded feed rates and update this ratio monthly.² **(40 CFR 63.1350(d))**
3. The permittee shall install, calibrate, maintain, and continuously operate a Continuous Monitoring System (CMS) to record the temperature of the exhaust gases from each kiln at the inlet, or upstream of, the kiln baghouse to ensure compliance with applicable D/F emission limit.² **(40 CFR 63.1350(g)(1))**
4. The permittee shall install and operate a mercury CEMS in accordance with Performance Specification 12A of Appendix B to 40 CFR Part 60 or an integrated sorbent trap monitoring system in accordance with the Performance Specification 12B of Appendix B to 40 CFR Part 60 of this chapter. The permittee must monitor mercury continuously according to 40 CFR 63.1350(k)(1) through (5). The permittee shall develop an emissions monitoring plan in accordance with 40 CFR 63.1350(p)(1) through (4).² **(40 CFR 63.1350(k))**
5. The permittee shall install, operate, calibrate, and maintain an instrument for continuously measuring and recording the exhaust gas flow rate to the atmosphere for each kiln in FG KG5 and the wet gas scrubber stack of FG KG6 according to the requirements in 40 CFR 63.1350(k)(5).² **(40 CFR 63.1349(b)(5)(i))**
6. The permittee shall install, operate, and maintain a THC CEMS in accordance with Performance Specification 8 or Performance Specification 8A of Appendix B to 40 CFR Part 60 and comply with all of the requirements for continuous monitoring system found in the general provisions, 40 CFR Part 63, Subpart A for each kiln. The permittee must operate and maintain each CEMS according to the quality assurance requirements in Procedure 1 of Appendix F in 40 CFR Part 60. For THC continuous emission monitoring systems certified under Performance Specification 8A, conduct the relative accuracy test audits required under Procedure 1 in accordance with Performance Specification 8, Sections 8 and 11 using Method 25A in Appendix A to 40 CFR Part 60 as the reference method; the relative accuracy must meet the criteria of Performance Specification 8, Section 13.2. In lieu of monitoring for THC, monitoring can be performed to show compliance with the 12 ppmvd organic HAP limit included in 40 CFR 63.1343(b).² **(40 CFR 63.1350(i))**
7. The permittee shall monitor HCL emissions continuously in accordance with procedures set forth in 40 CFR 63.1350(l)(1) for each kiln in FG KG5. The permittee shall monitor HCL emissions continuously in accordance with the procedures set forth in 40 CFR 63.1350(l)(1); or shall continuously monitor SO₂ emissions as a surrogate for HCL in accordance with procedures set forth in 40 CFR 63.1350(l)(3) for the wet gas scrubber exhaust stack in FG KG6.² **(40 CFR 63.1350(l))**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall verify PM emission rates from FG MACT KILNS by testing at the owner's expense, in accordance with the Department requirements. Testing shall be performed using an approved USEPA Method listed in Method 5 or Method 5I. An alternate method, or a modification to the approved USEPA Method, may be specified in an AQD-approved Test Protocol. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.^{2,c} **(R 336.2001, R 336.2003, R 336.2004, 40 CFR 63.1349(b)(1))**

2. The permittee shall use the PM CPMS to establish a site-specific operating limit corresponding to the results of the performance test demonstrating compliance with the PM limit following the procedures in 40 CFR 63.1349(b)(1)(i).² **(40 CFR 63.1349(b)(1))**
3. The permittee shall repeat the PM performance test at least annually to reassess and adjust the site-specific operating limit in accordance with the results of the performance test. The permittee shall also repeat the test if the analytical range of the instrument is changed or if the instrument itself, or any principle analytical component of the instrument that would alter the relationship of output signal to in-stack PM concentration, is changed.^{2,c} **(40 CFR 63.1350(b))**
4. The permittee shall verify D/F emission rates from FG MACT KILNS by testing at the owner's expense, in accordance with the Department requirements. Testing shall be performed using an approved USEPA Method listed in Method 23. An alternate method, or a modification to the approved USEPA Method, may be specified in an AQD-approved Test Protocol. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.² **(40 CFR 63.1349(b)(3), R 336.1213(3), R 336.2001, R 336.2003, R 336.2004)**
5. The following pertain to the verification of D/F emission rates by testing:² **(40 CFR 63.1349(b)(3))**
 - a. Each performance test must consist of three separate runs conducted under representative conditions. The duration of each run must be at least 3 hours, and the sample volume for each run must be at least 2.5 dscm (90 dscf).
 - b. The temperature at the inlet to the kiln baghouse dust collector must be continuously recorded during the period of the Method 23 test, and the continuous temperature record(s) must be included in the performance test report.
 - c. Average temperatures must be calculated for each run of the performance test and the average of the run average temperatures must be determined and included in the performance test report and will determine the applicable temperature limit in accordance with 40 CFR 63.1346(b).
6. The permittee shall verify the D/F emission rates from FG MACT KILNS, at a minimum, every five years from the date of the last test.² **(R 336.2001, R 336.2003, R 336.2004)**
7. The permittee shall perform the Quality Assurance Procedures of the Mercury, THC and HCL CEMS set forth in 40 CFR Part 60, Appendix F.² The initial compliance test must be based on the 30 kiln operating days that occur after the compliance date in which the affected source operates using a CEMS.² **(R 336.2157, 40 CFR 52.21, 40 CFR 60.13, 40 CFR 63.1349(b)(4), 40 CFR 63.1349(b)(5), 40 CFR 63.1349(b)(6), 40 CFR Part 60, Appendix F)**
8. The permittee shall verify Mercury emission rates from FG MACT KILNS by testing at the owner's expense, in accordance with the Department requirements. The Mercury CEMS shall be used to conduct the initial compliance test for the first 30 kiln operating days of kiln operation after the compliance date of the rule. An alternate method, or a modification to the approved USEPA Method, may be specified in an AQD-approved Test Protocol. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.² **(R 336.2001, R 336.2003, R 336.2004, 40 CFR 63.1349(b)(5))**

9. The permittee shall verify THC emission rates from FG MACT KILNS by testing at the owner's expense, in accordance with the Department requirements. Testing shall be performed using an approved USEPA Reference Method listed in Method 25A to conduct the accuracy and quality assurance evaluations of the CEMS. The THC CEMS shall be used to conduct the initial compliance test for the first 30 kiln operating days of kiln operation after the compliance date of the rule. An alternate method, or a modification to the approved USEPA Method, may be specified in an AQD-approved Test Protocol. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.² **(R 336.2001, R 336.2003, R 336.2004, 40 CFR 63.1349(b)(4))**
10. The permittee shall verify HCL emission rates from FG MACT KILNS by testing at the owner's expense, in accordance with the Department requirements. The HCL CEMS shall be used to conduct the initial compliance test for the first 30 kiln operating days of kiln operation after the compliance date of the rule. An alternate method, or a modification to the approved USEPA Method, may be specified in an AQD-approved Test Protocol. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.² **(R 336.2001, R 336.2003, R 336.2004, 40 CFR 63.1349(b)(6))**
11. FG KG6 HCl Emissions Tests with SO₂ Monitoring; If monitoring SO₂ emissions using a CEMS to demonstrate HCl compliance, follow the procedures in (b)(8)(i) through (ix) of 40 CFR 63.1349 and in accordance with the requirements of 40 CFR 63.1350(l)(3). Establish an SO₂ operating limit equal to the average recorded during the HCl stack test. This operating limit will apply only for demonstrating HCl compliance.² **(40 CFR 63.1349(b)(8))**
 - a. Use Method 321 of appendix A to 40 CFR Part 63 to determine emissions of HCl. Each performance test must consist of three separate runs under the conditions that exist when the affected source is operating at the representative performance conditions in accordance with 40 CFR 63.7(e). Each run must be conducted for at least one hour.
 - b. At the same time that the performance test for HCl is conducted, also determine a site-specific SO₂ emissions limit by operating an SO₂ CEMS in accordance with the requirements of 40 CFR 63.1350(l). The duration of the performance test must be three hours and the average SO₂ concentration (as calculated from the average output) during the 3-hour test must be calculated. Establish the SO₂ operating limit and determine compliance with it according to 40 CFR 63.1349(b)(8)(vii) and (viii).

^c In accordance with Rule 213(2) and Rule 213(6), compliance with this streamlined testing requirement shall be considered compliance with the testing requirement established by **40 CFR 63.1349(b)(1) and 40 CFR 63.1350(b)**; and also compliance with the FG KG5 and FG KG6 testing requirements established by **R 336.1331 and R 336.1331(3)**, additional applicable requirements that have been subsumed within this condition.

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. For each emission unit that is equipped with a CPMS, maintain the average emissions or the operating parameter values within the operating parameter limits established through performance tests.² **(40 CFR 63.1350(a))**
2. To determine continuous compliance, the permittee must use the PM CPMS output data for all periods when the process is operating, and the PM CPMS is not out-of-control. The permittee must demonstrate continuous compliance by using all quality-assured hourly average data collected by the PM CPMS for all operating hours to calculate the arithmetic average operating parameter in units of the operating limit (milliamps) on a 30 operating day rolling average basis, updated at the end of each new kiln operating day.² **(40 CFR 63.1350(b))**

3. For any exceedance of the 30 process operating day PM CPMS average value from the established operating parameter limit, the permittee must:² **(40 CFR 63.1350(b))**
 - a. Within 48 hours of the exceedance, visually inspect the APCD;
 - b. If inspection of the APCD identifies the cause of the exceedance, take corrective action as soon as possible and return the PM CPMS measurement to within the established value; and
 - c. Within 30 days of the exceedance or at the time of the annual compliance test, whichever comes first, conduct a PM emissions compliance test to determine compliance with the PM emissions limit and to verify or re-establish the PM CPMS operating limit within 45 days. You are not required to conduct additional testing for any exceedances that occur between the time of the original exceedance and the PM emissions compliance test required under this paragraph.
4. The permittee shall demonstrate continuous compliance with the D/F emission limit by continuously monitoring and recording the temperature of the exhaust gases from each kiln in FG KG5 and the wet gas scrubber stack of FG KG6 in accordance with the requirements of 40 CFR 63.1350(g).² **(40 CFR 63.1350(g))**
5. The permittee shall monitor and record the Mercury emissions from FG MACT KILNS on a continuous basis in a manner and with instrumentation acceptable to the AQD. These monitors and the resulting data shall be used for determining compliance with the mercury emission limit.² **(40 CFR 63.1350(k))**
6. The permittee shall monitor and record the THC emissions from FG MACT KILNS on a continuous basis in a manner and with instrumentation acceptable to the AQD. These monitors and the resulting data shall be used for determining compliance with the THC emission limit.² **(40 CFR 63.1350(i))**
7. The permittee shall monitor and record the HCL emissions from FG MACT KILNS on a continuous basis in a manner and with instrumentation acceptable to the AQD. These monitors and the resulting data shall be used for determining compliance with the HCL emission limit.² **(40 CFR 63.1350(l))**
8. The permittee shall determine the hourly clinker production in one of two methods depending on the method of measurement determined pursuant to SC IV.2:² **(40 CFR 63.1350(d))**
 - a. Install, calibrate, maintain, and operate a permanent weigh scale system to measure and record weight rates in tons-mass per hour of the amount of clinker produced. The system of measuring hourly clinker production must be maintained within ± 5 % accuracy, or
 - b. Install, calibrate, maintain, and operate a permanent weigh scale system to measure and record weight rates in tons-mass per hour of the amount of feed to the kiln. The system of measuring feed must be maintained within ± 5 % accuracy. Calculate your hourly clinker production rate using a kiln-specific feed to clinker ratio based on reconciled clinker production determined for accounting purposes and recorded feed rates. Update this ratio monthly. Note that if this ratio changes at clinker reconciliation, you must use the new ratio going forward, but you do not have to retroactively change clinker production rates previously estimated.
9. The permittee shall determine, record, and maintain a record of the accuracy of the system of measuring hourly clinker production (or feed mass flow if applicable) before initial use (for new sources) or by the effective compliance date of this rule (for existing sources). During each quarter of source operation, you must determine, record, and maintain a record of the ongoing accuracy of the system of measuring hourly clinker production (or feed mass flow).² **(40 CFR 63.1350(d))**
10. The permittee may use the Alternate Monitoring Plan found in Appendix 3.1 to determine the hourly clinker production rate and the PM emission rate in pounds of PM per ton of clinker based on a 30 day rolling average.² **(40 CFR 63.1350(o))**
11. The permittee shall keep records of the date, time and duration of each malfunction that results in a failure to meet an applicable standard; if there is also a monitoring malfunction, the date, time and duration of the monitoring malfunction; the record must list the affected source or equipment, an estimate of the volume of each regulated pollutant emitted over the standard for which the source failed to meet a standard, and a description of the method used to estimate the emissions. as specified in 40 CFR 63.1355 during periods of startup and shutdown.² **(40 CFR 63.1355(g)(1))**

12. The permittee shall keep records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR 63.1348(d) including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.² **(40 CFR 63.1355(g)(2))**
13. The permittee shall keep records of the date, duration and description of each exceedance of an emission limit or operating parameter limit and the specific actions taken for each exceedance including inspections, corrective actions and repeat performance tests and the results of those actions.² **(40 CFR 63.1355(h))**

See Appendix 3

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. The permittee shall submit any performance test reports including RATA reports, to the AQD Technical Programs Unit and District Office, in a format approved by the AQD.² **(R 336.2001(5))**
5. The permittee shall submit a written report of the results of the performance evaluation for the continuous monitoring system required by 40 CFR 63.8(e). The permittee shall submit the report simultaneously with the results of the performance test.² **(40 CFR 63.1354(b)(6))**
6. The permittee shall submit an excess emissions and continuous monitoring system performance report for any event when the continuous monitoring system data indicate the source is not in compliance with the applicable emission limitation or operating parameter limit.² **(40 CFR 63.1354(b)(8))**
7. The permittee shall report each failure to meet a standard or emission limit caused by a malfunction in the semi-annual compliance report required by 40 CFR 63.1354(b)(9). The report must contain the date, time and duration, and the cause of each event (including unknown cause, if applicable), and a sum of the number of events in the reporting period. The report must list for each event the affected source or equipment, an estimate of the amount of each regulated pollutant emitted over the emission limit for which the source failed to meet a standard, and a description of the method used to estimate the emissions. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with 40 CFR 63.1348(d), including actions taken to correct a malfunction.² **(40 CFR 63.1354(c))**
8. The permittee shall submit a summary report semiannually within 60 days of the reporting period to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI). (CEDRI can be accessed through the EPA's Central Data Exchange (CDX) (<https://cdx.epa.gov/>). You must use the appropriate electronic report in CEDRI for this subpart. Instead of using the electronic report in CEDRI for this subpart, you may submit an alternate electronic file consistent with the extensible markup language (XML) schema listed on the CEDRI website (<https://www.epa.gov/electronic-reporting-air-emissions/compliance-and-emissions-data-reporting-interface-cedri>), once the XML schema is available. If the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, you must submit the report the Administrator at the appropriate address listed in 40 CFR 63.13. You must begin submitting reports via CEDRI no later than 90 days after the form becomes available in CEDRI. The excess emissions and summary reports must be submitted no later than 60 days after the end of the reporting period, regardless of the method in which the reports are submitted. The report must contain the information specified in 40 CFR 63.10(e)(3)(vi). In addition, the summary report shall include:² **(40 CFR 63.1354(b)(9))**
 - a. All exceedances of maximum control device inlet gas temperature limits specified in 40 CFR 63.1346(a) and (b);

- b. Notification of any failure to calibrate thermocouples and other temperature sensors as required under 40 CFR 63.1350(g)(1)(iii) of this subpart; and
- c. Notification of any failure to maintain the activated carbon injection rate, and the activated carbon injection carrier gas flow rate or pressure drop, as applicable, as required under 40 CFR 63.1346(c)(2).
- d. Notification of failure to conduct any combustion system component inspections conducted within the reporting period as required under 40 CFR 63.1347(a)(3).
- e. Any and all failures to comply with any provision of the operation and maintenance plan developed in accordance with 40 CFR 63.1347(a).
- f. For each PM CPMS, HCl, Hg, and THC CEMS, SO₂ CEMS, or Hg sorbent trap monitoring system, within 60-days after the reporting periods, you must report all of the calculated 30-operating day rolling average values derived from the CPMS, CEMS, CMS, or Hg sorbent trap monitoring systems.
- g. In response to each violation of an emissions standard or established operating parameter limit, the date, duration and description of each violation and the specific actions taken for each violation including inspections, corrective actions and repeat performance tests and the results of those actions.

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all applicable requirements of the National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry as specified in 40 CFR Part 63, Subpart A and Subpart LLL, as they apply to FG MACT KILNS.² **(40 CFR Part 63, Subparts A & LLL)**

Footnotes:

¹ This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

² This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

FG CLINK COOL FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Clinker Coolers receive clinker directly from the kilns, hot air is reclaimed from the clinker coolers for return to the kilns, clinker is moved from the clinker coolers to FG CLINKER SYS. As the clinker is conveyed toward the clinker storage building, the recovered heat from Clinker Cooler 19 is re-circulated back to Kiln 19, the recovered heat from Clinker Cooler 20 is re-circulated back to the Kiln 20, the recovered heat from Clinker Cooler 21 is re-circulated back to Kiln 21, the recovered heat from Clinker Cooler 22 is re-circulated back to Kiln 22, and the recovered heat from Clinker Cooler 23 is re-circulated back to Kiln 23.

Emission Units:

- EU CLINK COOL 19: Clinker cooler 25-159, drag conveyor number seven 25-207.
- EU CLINK COOL 20: Clinker cooler 25-160, drag conveyors 25-202, 25-204 shared between Clinker Cooler 20 and Clinker Cooler 21.
- EU CLINK COOL 21: Clinker cooler 25-161, drag conveyors 25-202, 25-204 shared between Clinker Cooler 20 and Clinker Cooler 21.
- EU CLINK COOL 22: Clinker cooler 26-162, conveyor 26-205.
- EU CLINK COOL 23: Clinker cooler 26-163, conveyor 26-206.

POLLUTION CONTROL EQUIPMENT

- EU CLINK COOL 19: Dust collectors 25-507, 25-506
- EU CLINK COOL 20: Dust collectors 25-507, 25-267, 25-506
- EU CLINK COOL 21: Dust collectors 25-507, 25-268, 25-506
- EU CLINK COOL 22: Dust collectors 26-251, 26-252
- EU CLINK COOL 23: Dust collectors 26-257, 26-258

Stack and Vent Identification:

- EU CLINK COOL 19: SV25-507(also known as 92 fan), SV25-507A (also known as 93 fan)
- EU CLINK COOL 20: SV25-507, SV25-507A
- EU CLINK COOL 21: SV25-507, SV25-507A
- EU CLINK COOL 22: SV26-252
- EU CLINK COOL 23: SV26-258

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. PM	109.0 tpy ²	12-month rolling time period as determined at the end of each calendar month	FG CLINK COOL	SC VI.7	R 336.1205
2. PM	0.07 lb per ton clinker ²	30-day rolling average, as determined at the end of each kiln operating day ^b	FG CLINK COOL (The limit applies to each clinker cooler individually)	SC V.1, SC VI.1, SC VI.8	40 CFR 63.1343

^b30-day rolling average – is defined as a kiln operating day plus the previous 29 kiln operating days. *Kiln operating day* – is defined as any day on which kiln operation has occurred. Kiln operation is any period in which any raw materials are fed into the kiln or any period when any combustion is occurring or fuel is being fired in the kiln.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate FG CLINK COOL unless the associated dust collectors are installed, maintained, and operating properly. Proper operation of the dust collectors shall include following the AQD approved Operations and Maintenance Plan for FG CLINK COOL and operating the dust collectors during start-up and shutdown.² **(R 336.1910, R336.1911, 40 CFR 63.1347)**
2. The permittee shall install and operate a PM Continuous Parametric Monitoring System (CPMS) for FG CLINK COOL in accordance with 40 CFR Part 63, Subpart LLL.² **(40 CFR 63.1350(b))**
3. The permittee shall not operate FG CLINK COOL unless the AQD approved Operations and Maintenance Plan is implemented and maintained.² **(R 336.1911, 40 CFR 63.1347)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall verify PM emission rates from FG CLINK COOL by testing, at owner's expense, in accordance with the AQD requirement, annually (a minimum of once every 12 months from the date of the last test). The PM CPMS shall be used to establish a site-specific operating limit corresponding to the results of the performance test demonstrating compliance with the PM limit. The performance test shall be repeated annually to reassess and adjust the site-specific operating limit in accordance with the results of the performance test using the procedures in 40 CFR Part 63, Subpart LLL. The permittee shall also repeat the test if there's a change in the analytical range of the instrument, or if the instrument itself or any principle analytical component of the instrument that would alter the relationship of output signal to in-stack PM concentration is replaced.² **(R 336.2001, R 336.2003, R 336.2004, 40 CFR 63.1349, 40 CFR 63.1350)**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall continuously monitor and continuously demonstrate compliance with the PM emissions standard by complying with the requirements of 40 CFR Part 63, Subpart LLL, included in Appendix 3.3.² **(40 CFR 63.1350(f)(1))**
2. For each emission unit that is equipped with a CPMS, maintain the average emissions or the operating parameter values within the operating parameter limits established through performance tests.² **(40 CFR 63.1350(a))**
3. To determine continuous compliance, the permittee must use the PM CPMS output data for all periods when the process is operating, and the PM CPMS is not out-of-control. The permittee must demonstrate continuous compliance by using all quality-assured hourly average data collected by the PM CPMS for all operating hours to calculate the arithmetic average operating parameter in units of the operating limit (milliamps) on a 30 operating day rolling average basis, updated at the end of each new kiln operating day.² **(40 CFR 63.1350(b))**

4. For any exceedance of the 30 process operating day PM CPMS average value from the established operating parameter limit, the permittee must:² **(40 CFR 63.1350(b))**
 - a. Within 48 hours of the exceedance, visually inspect the APCD;
 - b. If inspection of the APCD identifies the cause of the exceedance, take corrective action as soon as possible and return the PM CPMS measurement to within the established value; and
 - c. Within 30 days of the exceedance or at the time of the annual compliance test, whichever comes first, conduct a PM emissions compliance test to determine compliance with the PM emissions limit and to verify or re-establish the PM CPMS operating limit within 45 days. You are not required to conduct additional testing for any exceedances that occur between the time of the original exceedance and the PM emissions compliance test required under this paragraph.
5. The permittee shall determine the hourly clinker production in one of two methods:² **(40 CFR 63.1350(d))**
 - a. Install, calibrate, maintain, and operate a permanent weigh scale system to measure and record weight rates in tons-mass per hour of the amount of clinker produced. The system of measuring hourly clinker production must be maintained within ± 5 % accuracy, or
 - b. Install, calibrate, maintain, and operate a permanent weigh scale system to measure and record weight rates in tons-mass per hour of the amount of feed to the kiln. The system of measuring feed must be maintained within ± 5 % accuracy. Calculate your hourly clinker production rate using a kiln-specific feed to clinker ratio based on reconciled clinker production determined for accounting purposes and recorded feed rates. Update this ratio monthly. Note that if this ratio changes at clinker reconciliation, you must use the new ratio going forward, but you do not have to retroactively change clinker production rates previously estimated.
6. The permittee shall determine, record, and maintain a record of the accuracy of the system of measuring hourly clinker production (or feed mass flow if applicable) before initial use (for new sources) or by the effective compliance date of this rule (for existing sources). During each quarter of source operation, you must determine, record, and maintain a record of the ongoing accuracy of the system of measuring hourly clinker production (or feed mass flow).² **(40 CFR 63.1350(d))**
7. The permittee shall calculate the PM emissions in tons per year on a monthly and 12-month rolling time period basis as determined at the end of each calendar month. The most recent stack test results, or emission factors acceptable to the AQD, shall be used to calculate the pollutant emissions subject to the approval of the AQD. The permittee shall make all records available to the AQD upon request.² **(R 336.1205(3))**
8. The permittee shall keep, in a satisfactory manner acceptable to the AQD, monthly calculation records of PM emissions from FG CLINK COOL, in pounds per ton of clinker using Appendix 3.1. The permittee shall make all records available to the AQD upon request.² **(R 336.1205(1)(a)&(3))**
9. The permittee shall use the Alternate Monitoring Plan found in Appendix 3.1 to determine the hourly clinker production rate and the PM emission rate in pounds of PM per ton of clinker based on a 30 day rolling average.² **(40 CFR 63.1350)(o))**

See Appendices 3 and 7

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

4. The permittee shall submit two complete test protocols to the AQD, one to the Technical Programs Unit Supervisor and one to the District Supervisor for approval at least 30 days prior to the anticipated test date. The protocol shall describe the test method(s) and the maximum routine operating conditions, including targets for key operational parameters associated with air pollution control equipment to be monitored and recorded during testing.² **(R 336.2001, R 336.2003, R 336.2004, 336.1205(1))**
5. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor no less than 7 days prior to the anticipated test date.² **(40 CFR Part 60, Appendix F)**
6. The permittee shall submit two complete test reports of the test results to the AQD, one to the Technical Programs Unit Supervisor and one to the District Supervisor, within 60 days following the last date of the test, and in a format approved by the AQD. The test report shall include operating parameters of the kilns and FGD including FGD flow rate, differential pressure, and outlet temperature.² **(R 336.1205, R 336.2001, R 336.2001(5), R 336.2003, R 336.2004)**
7. The permittee shall submit a summary report semiannually which includes: all failures to comply with any provision of the operation and maintenance plan developed in accordance with 40 CFR 63.1350(a); monthly rolling average PM emissions levels in the units of the applicable emissions limit for each clinker cooler. If the total continuous monitoring system downtime for the PM CPMS for the reporting period is 10% or greater of the total operating time for the reporting period, the permittee shall submit an excess emissions and continuous monitoring system performance report along with the summary report.² **(40 CFR 63.1354)**

See Appendices 7 and 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV 25-507 (serves EU CLINK COOL 19, EU CLINK COOL 20, EU CLINK COOL 21)	78 ²	69 ²	R 336.1225, R 336.1228, R 336.2803, R 336.2804
2. SV25-507A (serves EU CLINK COOL 19, EU CLINK COOL 20, EU CLINK COOL 21)	78 ²	69 ²	R 336.1225, R 336.1228, R 336.2803, R 336.2804
3. SV 26-252 (serves EU CLINK COOL 22)	84 x 66 ²	49 ²	R 336.1225, R 336.1228, R 336.2803, R 336.2804
4. SV 26-258 (serves EU CLINK COOL 23)	84 x 66 ²	49 ²	R 336.1225, R 336.1228, R 336.2803, R 336.2804

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all applicable requirements of the National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry as specified in 40 CFR Part 63, Subpart A and Subpart LLL, as they apply to FG CLINK COOL.² **(40 CFR Part 63, Subparts A & LLL)**
2. The permittee shall comply with all applicable requirements of the Standards of Performance for Portland Cement Plants as specified in 40 CFR Part 60, Subpart A and Subpart F, as they apply to FG CLINK COOL.² **(40 CFR Part 60, Subparts A & F)**

Footnotes:

¹ This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

² This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**FG CLINKER SYS
 FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Clinker System stores clinker and adds gypsum, limestone, and CKD to the clinker as needed based upon the desired mix. The clinker is sent via conveyors to the ball mills. EU CLINK STR BLD, Clinker Storage Building, stores clinker and sends clinker via conveyor to the clinker silos or to the ball mills. There is a stack and vent on the storage building. The belt to Clinker Storage Building has a stack and the stack has diameter and height conditions. The grizzly crusher, and associated conveyors, have controls that vent internally. The two clinker silos have a common stack and the stack has diameter and height conditions. EU CLINK AD/PROP, Clinker Additive and Proportioning System, consists of one silo used to store gypsum, one silo used to store limestone, two silos used to store clinker, and a storage tank for CKD. Gypsum railroad unloading is associated with EU CLINK AD/PROP and has stack diameter and height conditions. The gypsum and limestone are added to the clinker based upon the desired mix. (Gypsum can also be blended with CKD and added to the limestone based upon the desired mix.) clinker is sent via conveyors to the ball mills. The two clinker silos have a common stack. Excess CKD is sent to EU BULK LD TRUCK.

Emission Units:

EU CLINK STR BLD: Storage building 309B102, grizzly 41-418, crusher 41-420, conveyors 40-010, 40-020, 40-175, 40-421, 40-423.

EU CLINK AD/PROP: Silos 41-425, 41-426, 41-453, 41-454, CKD tank 403HO02, grizzly 41-436, conveying equipment 41-205, 41-421, 41-423, 41-471, 41-473, 41-474, 41-475, 41-430, 41-435, 41-357.

POLLUTION CONTROL EQUIPMENT

EU CLINK STR BLD: Dust collectors 40-100, 40-110, 40-120, 309DC9, 309DC10.

EU CLINK AD/PROP: Dust collectors 41-352, 41-356, 41-439, 41-427, 41-447.

Stack and Vent Identification:

EU CLINK STR BLD: Clinker reclaim belt SV40-100, clinker belt transfer SV40-110, Clinker Storage Building SV40-120, and SVDC-09, SVDC-10.

EU CLINK AD/PROP: Clinker transfer belt 41-176 SV41-352, clinker transfer belt 41-205 SV41-439, clinker silos vent SV41-427, stone bins vent SV41-447, KG5 clinker transfer SV25-825, KG6 clinker transfer SV26-825, stone bin discharge SV41-450, clinker belt transfer tower SV41-485.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VE	10% opacity ²	6-minute average	FG CLINKER SYS	SC V.1 SC VI.1 SC VI.2	R 336.1301, 40 CFR 63.1345, 40 CFR 60.62(c)
2. PM	0.02 grain per dry standard cubic foot ²	Hourly	FG CLINKER SYS	SC III.1	R 336.1331(1)(c)
3. PM	0.10 lb per 1,000 lbs of exhaust gases calculated on a dry gas basis ²	Hourly	EU CLINK AD/PROP	SC III.1	R 336.1331(1)(a)
4. PM	13.8 tpy ²	12-month rolling time period as determined at the end of each calendar month	EU CLINK AD/PROP	SC VI.3	R 336.1331(1)(c)

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate any equipment in FG CLINKER SYS unless the associated dust collectors and covered clinker conveyors are installed, maintained, and operated in a satisfactory manner. Proper operation of the dust collectors and covered clinker conveyors shall include following the AQD approved Operations & Maintenance Plan for FG CLINKER SYS and operating the dust collectors during start-up and shutdown.² **(R 336.1910, R336.1911, 40 CFR 63.1347)**
2. The permittee shall not operate FG CLINKER SYS unless the Operations and Maintenance Plan is implemented and maintained.² **(R 336.1911, 40 CFR 63.1347)**
3. The permittee may store clinker onsite according to the procedures outlined in 40 CFR 63.1343(c). **(40 CFR 63.1343(c))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip and maintain the clinker conveyors, associated with FG CLINKER SYS, with covers to minimize fugitive emissions from the conveyors.² **(R 336.1910)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall conduct opacity tests of FG CLINKER SYS in accordance with 40 CFR Part 63, Subpart A and Subpart LLL.² **(40 CFR 63.1349(b)(2))**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall conduct visible emissions monitoring for FG CLINKER SYS (storage bins, conveying system transfer points, bulk loading and unloading systems), in accordance with the Operations and Maintenance Plan and 40 CFR Part 63, Subpart LLL, as specified in Appendix 3.3.² **(40 CFR 63.1350(f)(1))**
2. The permittee shall keep, in a satisfactory manner, all Method 22 and Method 9 visible emissions readings from the FG CLINKER SYS. 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. All records shall be made available to the AQD upon request.² **(R 336.1301, 40 CFR 63.1355, R 336.1213(3))**
3. The permittee shall calculate the PM emissions in tons per year on a monthly and 12-month rolling time period basis as determined at the end of each calendar month. The most recent stack test results, or emission factors acceptable to the AQD, shall be used to calculate the pollutant emissions subject to the approval of the AQD. The permittee shall make all records available to the AQD upon request.² **(R 336.1205(3), R 336.1213(3))**

See Appendices 3 and 7

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

4. The permittee shall submit two complete test protocols to the AQD, one to the Technical Programs Unit Supervisor and one to the District Supervisor for approval at least 30 days prior to the anticipated test date. The protocol shall describe the test method(s) and the maximum routine operating conditions, including targets for key operational parameters associated with air pollution control equipment to be monitored and recorded during testing.² (R 336.2001, R 336.2003, R 336.2004, 336.1205(1))
5. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor no less than 7 days prior to the anticipated test date.² (40 CFR Part 60, Appendix F)
6. The permittee shall submit two complete test reports of the test results to the AQD, one to the Technical Programs Unit Supervisor and one to the District Supervisor, within 60 days following the last date of the test, in a format approved by the AQD. The test report shall include operating parameters of the kilns and FGD including FGD flow rate, differential pressure, and outlet temperature.² (R 336.2001, R 336.2003, R 336.2004, R 336.1205, R 336.1213(3)(c), R 336.2001(5))

See Appendices 7 and 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV40-120 EU CLINK STR BLD	56.4 ²	63 ²	R 336.1225, R 336.2803, R 336.2804
2. SV40-100 EU CLINK STR BLD clinker reclaim belt	559 (square inches) ²	54 Orientation is not unobstructed vertically upwards ²	40 CFR 52.21(d) R 336.2803, R 336.2804
3. SV 40-110 EU CLINK STR BLD clinker belt transfer	346 (square inches) ²	121 Orientation is not unobstructed vertically upwards ²	40 CFR 52.21(d) R 336.2803, R 336.2804
4. EU CLINK AD/PROP SV25-825	437 (square inches) ²	21.3 Orientation is not unobstructed vertically upwards ²	40 CFR 52.21(d) R 336.2803, R 336.2804
5. EU CLINK AD/PROP SV26-825	437 (square inches) ²	55.3 Orientation is not unobstructed vertically upwards ²	40 CFR 52.21 (d) R 336.2803, R 336.2804

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all applicable requirements of the National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry as specified in 40 CFR Part 63, Subpart A and Subpart LLL, as they apply to FG CLINKER SYS. **(40 CFR Part 63, Subparts A & LLL)**
2. The permittee shall comply with all applicable requirements of the Standards of Performance for Portland Cement Plants as specified in 40 CFR Part 60, Subpart A and Subpart F, as they apply to FG CLINKER SYS. **(40 CFR Part 60, Subpart A & F)**

Footnotes:

¹ This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

² This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

FG FINISH MILLS FLEXIBLE GROUP CONDITIONS

DESCRIPTION:

Finish Mills convert clinker to Portland cement and send the cement to FG CMNT STR LOAD. Ball Mills 13, 14, 15, 19, 20, and 21 are rotating horizontal steel tubes filled with steel balls that crush the clinker into Portland Cement, a powder. EU BALL MILL 20 has separator SV 43-270 with an individual particulate matter emission limit and has mill vent SV43-269 with an individual particulate matter emission limit. EU BALL MILL 21 has separator SV 44-270 with an individual particulate matter emission limit and has mill vent SV44-269 with an individual particulate matter emission limit. The cement is sent to the Storage Units via pump and air slide. One pump serves Ball Mill 13, 14 and 15.

Emission Units:

EU BALL MILL 13: Ball mill 454-043, separator 45-083, air slides 45-103, 45-123, 45-163, 45-181, elevator 45-064, conveyor 45-013, feed bin 45-001, pneumatic pump 50-058 shared between Ball Mills 13, 14, and 15.

EU BALL MILL 14: Ball mill 454-044, separator 45-084, air slides 45-104, 45-124, 45-164, 45-181, elevator 45-065, conveyor 45-014, feed bin 45-001, pneumatic pump 50-058 shared between Ball Mills 13, 14, and 15.

EU BALL MILL 15: Ball mill 454-045, separator 45-085, air slides 45-105, 45-125, 45-165, 45-181, elevator 45-068, conveyor 45-015, feed bin 45-003, pneumatic pump 50-058 shared between Ball Mills 13, 14, and 15.

EU BALL MILL 19: Ball mill 49-049, separator 49-089, feed bins 49-009, 49-609, air slides 49-169, 49-133, 49-139, 49-149, 49-109, elevators 49-075, 49-076, pump 50-059, conveyor 49-019, 49-612.

EU BALL MILL 20: Mill vent EU-43-269, separator EU-43-270, ball mill 43-050, separator 43-090, 43-100, feed bin 43-010, air slides 43-116, 43-111, 43-117, 43-113, 43-114, elevators 43-072, 43-073, pump 50-060, conveyors 43-251, 43-252, 43-250, 43-020.

EU BALL MILL 21: Mill vent EU-44-269, separator EU-44-270, ball mill 44-050, separator 44-090, 44-100, feed bin 43-010, air slides 44-116, 44-111, 44-117, 44-113, 44-114, elevators 44-072, 44-073, pump 50-062, conveyor 44-251, 44-252, 44-250, 44-020.

EU ROLL PRESS 20: 43-271

EU ROLL PRESS 21: 44-271

POLLUTION CONTROL EQUIPMENT:

EU BALL MILL 13: Dust collector 45-261.

EU BALL MILL 14: Dust collector 45-262.

EU BALL MILL 15: Dust collector 45-264.

EU BALL MILL 19: Dust collectors 49-011, 49-265, 49-269, 49-270.

EU BALL MILL 20: Dust collectors 43-011, 43-269, 43-270.

EU BALL MILL 21: Dust collectors 44-011, 44-269, 44-270.

EU ROLL PRESS 20: Dust collectors 43-271, 43-272

EU ROLL PRESS 21: Dust collectors 44-271, 44-272

Stack and Vent Identification:

EU BALL MILL 13: SV45-261

EU BALL MILL 14: SV45-262

EU BALL MILL 15: SV45-264

EU BALL MILL 19: SV49-269, SV49-270

EU BALL MILL 20: Ball Mill vent SV43-269- separator SV43-270 (vent and separator share a common stack).

EU BALL MILL 21: Ball Mill vent SV44-269, separator SV44-270 (vent and separator share a common stack).

EU ROLL PRESS 20: Roll press #20 SV43-271, roll press auxiliary SV 43-272.

EU ROLL PRESS 21: Roll press #21 SV44-271, roll press auxiliary SV 44-272.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VE	10% opacity ²	6-minute average	FG FINISH MILLS	SC V.1, SC VI.1, SC VI.2	R 336.1301, 40 CFR 63.1343, 40 CFR 60.62(c)
2. PM-10	1.0 pph ²	Hourly	EU BALL MILL 20 Mill Vent EU BALL MILL 21 Mill Vent (Limit applies to each individual emission unit.)	SC III.1 SC VI.1 SC VI.3	R 336.1205, R 336.1225, R 336.2803, R 336.2804
3. PM-10	10.0 pph ²	Hourly	EU BALL MILL 20 Separator EU BALL MILL 21 Separator (Limit applies to each individual emission unit.)	SC III.1 SC VI.1 SC VI.3	R 336.1205, R 336.1225, R 336.2803, R 336.2804
4. PM-10	4.1 tpy ²	12-month rolling time period as determined at the end of each calendar month	EU BALL MILL 20 Mill Vent	SC VI.5 GC 13	R 336.1205, R 336.2803, R 336.2804
5. PM-10	4.5 tpy ²	12-month rolling time period as determined at the end of each calendar month	EU BALL MILL 21 Mill Vent	SC VI.5	R 336.1205, R 336.2803, R 336.2804
6. PM-10	44.0 tpy 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.)	SC VI.4	R 336.1205, R 336.2803, R 336.2804
7. PM	0.15 lb per 1000 lbs of exhaust gases, calculated on a dry basis ²	NA	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.)	SC III.1	R 336.1331(1)(c)
8. PM	0.07 pph ²	NA	EU Roll Press 20 EU Roll Press 21	SC III.1	R 336.1331((1)(c)

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate any equipment in FG FINISH MILLS unless the associated dust collectors are installed, maintained, and operated in a satisfactory manner. Proper operation of the dust collectors shall include following the AQD approved Operations and Maintenance Plan for FG FINISH MILLS and operating the dust collectors during start-up and shutdown.² **(R 336.1910, R336.1911, 40 CFR 63.1347)**
2. The permittee shall not operate FG FINISH MILLS unless the Operations and Maintenance Plan is implemented and maintained.² **(R 336.1911, 40 CFR 63.1347)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall conduct opacity tests of FG FINISH MILLS in accordance with 40 CFR Part 63, Subparts A and Subpart LLL. Testing shall be performed using an approved EPA Method listed in 40 CFR Part 51, Appendix M; 40 CFR Part 60, Appendix A and B. An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol.² **(40 CFR 63.1349(b)(2))**

See Appendix 5

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall conduct visible emissions monitoring of FG FINISH MILLS in accordance with the Operations and Maintenance Plan and 40 CFR Part 63 Subpart LLL, as specified in Appendix 3.3 and 3.4. **(40 CFR 63.1350(f)(1) & (2)), 40 CFR 64.6(c)(1)(iii))**
2. The permittee shall keep, in a satisfactory manner, all Method 9 visible emissions readings from each ball mill in FG FINISH MILLS. Records shall include the time of the visible emissions, cause of the visible emissions, corrective action taken and time of completion of corrective action. All records shall be made available to the AQD upon request.² **(R 336.1301, R 336.1331, 40 CFR 63.1355)**
3. The permittee shall perform daily 1-minute Method 22 visible emission readings on the dust collectors on EU BALL MILL 20 separator and EU BALL MILL 21 separator during all required periods when the EU BALL MILL 20 and EU BALL MILL 21 separators are operating. If visible emissions are observed during any Method 22 performance test, the permittee must conduct five 6-minute averages of opacity in accordance with Method 9. The Method 9 performance test must begin within 1 hour of any observation of visible emissions. An excursion is a six minute average opacity greater than 10%. Data recorded during monitoring malfunctions, and repair activities shall not be used for 40 CFR, Part 64 compliance. **(40 CFR 64.7(c), 40 CFR 64.6(c)(2), 40 CFR 64.6(c)(3))**
4. The permittee shall calculate monthly and 12-month rolling time period PM10 emissions for EU BALL MILL 20 separator and EU BALL MILL 21 separator using the most recent stack test results, or other emission factors acceptable to the AQD. All records shall be made available to the AQD upon request.² **(R 336.1205(1)(a)&(3))**
5. The permittee shall calculate monthly and 12-month rolling time period PM10 emissions for EU BALL MILL 20 mill vent and EU BALL MILL 21 mill vent using the most recent stack test results, or other emission factors acceptable to the AQD. All records shall be made available to the AQD upon request.² **(R 336.1205(1)(a)&(3))**
6. The permittee shall utilize visible emission readings as an indicator of the proper functioning of the dust collectors on EU BALL MILL 20 and EU BALL MILL 21 including mill vents and separators to demonstrate continuous compliance with the emission limits in Special Conditions I.3,6,&7. The appropriate range of opacity is 0-10 %. **(40 CFR 64.4(c)(1)(i)&(ii))**

7. Upon detecting an excursion or exceedance, the permittee shall restore operation of the EU BALL MILL 20 and EU BALL MILL 21, separators and including the control device and associated capture system, to their normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). In response to an excursion of more than 10 % opacity on the dust collectors on EU BALL MILL 20 separator and EU BALL MILL 21 separator the permittee shall check the dust collectors for malfunction within one hour of the excursion and take corrective actions to maintain the dust collectors. **(40 CFR 64.7(d))**
9. Upon detecting an excursion or exceedance, the permittee shall restore operation of the EU BALL MILL 20 and EU BALL MILL 21, including mill vents and separators, and including the control device and associated capture system, to their normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). **(40 CFR 64.7(d))**
10. The permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. **(40 CFR 64.9(b)(1))**

See Appendices 3 and 7

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. The permittee shall submit two complete test protocols to the AQD, one to the Technical Programs Unit Supervisor and one to the District Supervisor for approval at least 30 days prior to the anticipated test date. The protocol shall describe the test method(s) and the maximum routine operating conditions, including targets for key operational parameters associated with air pollution control equipment to be monitored and recorded during testing.² **(R 336.2001, R 336.2003, R 336.2004, 336.1205(1))**
5. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor no less than 7 days prior to the anticipated test date.² **(40 CFR Part 60, Appendix F)**
6. The permittee shall submit two complete test reports of the test results to the AQD, one to the Technical Programs Unit Supervisor and one to the District Supervisor, within 60 days following the last date of the test, and in a format approved by the AQD. The test report shall include operating parameters of the kilns and FGD including FGD flow rate, differential pressure, and outlet temperature.² **(R 336.2001, R 336.2003, R 336.2004, R 336.1205, R 336.1213(3)(c), R 336.2001(5))**
7. Each semiannual report of monitoring and deviations shall include summary information on the number, duration and cause of excursions and/or exceedances and the corrective actions taken. If there were no excursions and/or exceedances in the reporting period, then this report shall include a statement that there were no excursions and/or exceedances. **(40 CFR 64.9(a)(2)(i))**

8. Each semiannual report of monitoring and deviations shall include summary information on monitor downtime. If there were no periods of monitor downtime in the reporting period, then this report shall include a statement that there were no periods of monitor downtime. **(40 CFR 64.9(a)(2)(ii))**

See Appendices 7 and 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV43-269 EU BALL MILL 20 mill vent	80 ²	108 ²	R 336.1225, R 336.2803, R 336.2804
2. SV43-270 EU BALL MILL 20 separator	80 ²	108 ²	R 336.1225, R 336.2803, R 336.2804
3. SV44-269 EU BALL MILL 21 mill vent	80 ²	108 ²	R 336.1225, R 336.2803, R 336.2804
4. SV44-270 EU BALL MILL 21 separator	80 ²	108 ²	R 336.1225, R 336.2803, R 336.2804

IX. OTHER REQUIREMENT(S)

1. If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the AQD and if necessary, submit a proposed modification of the CAM Plan to address the necessary monitoring changes. Such a modification may include but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters. **(40 CFR 64.7(e))**
2. The permittee shall comply with all applicable requirements of 40 CFR Part 64 as it applies to EU BALL MILL 20 separator, and EU BALL MILL 21 separator. **(40 CFR Part 64)**
3. The permittee shall comply with all applicable requirements of the National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry as specified in 40 CFR Part 63, Subpart A and Subpart LLL, as they apply to FG FINISH MILLS. **(40 CFR Part 63 Subparts A & LLL)**
4. The permittee shall comply with all applicable requirements of the Standards of Performance for Portland Cement Plants as specified in 40 CFR Part 60, Subpart A and Subpart F, as they apply to FG FINISH MILLS. **(40 CFR Part 60, Subpart A & F)**

Footnotes:

¹ This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
² This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

FG CMNT STR LOAD FLEXIBLE GROUP CONDITIONS

DESCRIPTION:

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. 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, Storage Unit 4 Rail car and Boat loading. EU STORE UNIT 4 Rail has one (1) spout/exhaust point to load one rail car at one time. The EU STORE UNIT 4 Rail has three dust collectors referred to as East, Middle, and West and each dust collector has its own individual emission limit. EU STORE UNIT 4 Boat has 14 spouts used to load boats and each spout has its own dust collector. EU BULK LD TRUCK, bulk Loading station for trucks, also loads trucks with CKD sale of the CKD. EU BULK LD TRUCK receives cement from Storage Unit 2 and Storage Unit 3 and Storage Unit 4, and CKD from EU CLINK AD/PROP. EU STORE UNIT 4 Rail and EU BULK LD TRUCK share dust collector 46-710B and it has its own emission limit. EU STORE UNIT 4 Rail and EU BULK LD TRUCK share a common stack.

Emission Units:

EU STORE UNIT 2: Silos numbers 24 through 33, air slides 46-294, 46-295, pump 570PF01.
EU STORE UNIT 3: Silos numbers 1 through 8, and numbers 16 through 23, air slides 46-277, 46-278, 46-279, 46-280, 46-294, 46-295, 46-298, 46-299, pump 570PF02.
EU STORE UNIT 4: Boat storage silos numbers 34 through 61, air slides 50-334, 50-335, 50-336, 50-337, 50-338, 50-339, 46-451, 46-452, 46-453, 46-454, 46-455, 46-456, 46-457, 46-458, 46-459, 46-460, 46-461, 46-462, 46-463, 46-464.
EU STORE UNIT 4: Rail storage silos 573-S020, 573-S022, 573-S024, 573-S025, air slides 574AS01, 574AS02, 574AS03, 574AS04, 574AS05, 574AS06, 574AS12, 574AS13, 574AS14, 574AS07, 574AS08, 574AS09.
EU BULK LD TRUCK: Tanks 46-731, 46-732, 46-733, 46-734, air slides 46-711, 46-713, 46-714, 46-756, 46-757, 46-755, 46-758.

POLLUTION CONTROL EQUIPMENT:

EU STORE UNIT 2: Silo dust collector 50-462, bottom transfer dust collector 570DC01.
EU STORE UNIT 3: South silos dust collector SV50-701, north silos dust collector SV50-702, bottom transfer dust collector 570DC02.
EU STORE UNIT 4: Dust collectors: air slide vent east 50-415, air slide vent west 50-416, northeast silo vent 50-417, northeast silo 50-418, northeast silo 50-419, northeast silo 50-420, northeast silo 50-421, southeast silo 50-422, southeast silo 50-423, southwest silo 50-424, southwest silo 50-425, northwest silo 50-426, northwest silo 50-427, northwest silo 50-428, Rig 1A telescope DC09, Rig 2B telescope DC10, Rig 3C telescope DC11, Rig 4D telescope DC12, Rig 5E telescope DC13, Rig 6F telescope DC14, Rig 7G telescope DC15, Rig 8H telescope DC16, Rig 9I telescope DC17, Rig 10J telescope DC18, Rig 11K telescope DC19, Rig 12L telescope DC20, Rig 13M telescope DC21, Rig 14N telescope DC22, Rig 1A Air Slide DC 23, Rig 2B Air Slide DC24, Rig 3C Air Slide DC25, Rig 4D Air Slide DC26, Rig 5E Air Slide DC27, Rig 6F Air Slide DC28, Rig 7G Air Slide DC29, Rig 8H Air Slide DC30, Rig 9I Air Slide DC31, Rig 10J Air Slide DC32, Rig 11K Air Slide DC33, Rig 12L Air Slide DC34, Rig 13M Air Slide DC35, Rig 14N Air Slide DC36.
EU STORE UNIT 4: Rail dust collectors 574DC01, 574DC02, 574DC03, 574DC04, 46-710B.
EU BULK LD TRUCK: Dust collectors 46-710, 46-762, 571DC05.

Stack and Vent Identification:

EU STORE UNIT 2: SV50-462, SV570DC01.
 EU STORE UNIT 3: SV50-701, SV50-702, SV570DC02.
 EU STORE UNIT 4: Boat: SV50-415, SV50-416, SV50-417 (includes SV50-418, SV50-419, SV50-420), SV50-422-(includes SV50-423), SV50-424-(includes SV50-425), SV50-426-(includes SV50-427, SV50-428), DC09, DC10, DC11, DC12, DC13, DC14, DC15, DC16, DC17, DC18, DC19, DC20, DC21, DC22, DC23, DC24, DC25, DC26, DC27, DC28, DC29, DC30, DC31, DC32, DC33, DC34, DC35, DC36.
 EU STORE UNIT 4: Rail: SV574DC03 (Rail Load Spout), SV574DC01 (Air Slide 1), SV574DC02 (Air Slide 2).
 EU BULK LD TRUCK: Tanks 1, 3, 4 fill alleviator SV46-710, tank 2 fill alleviator (SV571DC05), truck/rail load spout collector SV46-762.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VE	10% opacity ²	6-minute average	FG CMNT STR LOAD	SC V.1, SC VI.1 SC VI.2	R 336.1301, 40 CFR 63.1345, 40 CFR 60.62(c)
2. PM	0.05 lb per 1000 lbs of exhaust gas, calculated on a dry gas basis ²	Hourly	EU STORE UNIT 2	SC III.1 SC VI.1	R 336.1331(1)(c)
3. PM	0.15 lb per 1000 lbs of exhaust gas, calculated on a dry gas basis ²	Hourly	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)	SC III.1 SC VI.1	R 336.1331(1)(c)
4. PM	2.33 pph ²	Hourly	EU BULK LD TRUCK	SC III.1 SC VI.1	R 336.1205
5. PM	2.4 tpy ²	12-month rolling time period as determined at the end of each calendar month	EU BULK LD TRUCK	SC VI.4	R 336.1205
6. PM-10	0.2 pph ²	Hourly	EU STORE UNIT 4, Rail (The limit applies to each individual dust collector of East, Middle, and West)	SC III.1 SC VI.1	R 336.1205, R 336.2803, R 336.2804
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)	SC VI.3	R 336.1205, R 336.2803, R 336.2804
8. PM-10	1.5 pph ²	Hourly	EU BULK LD TRUCK (Dust collector EU-46-710B)	SC VI.1	R 336.1331(1)(c), R 336.1205, R 336.2803, R 336.2804

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
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)	SC VI.3	R 336.1331(1)(c)

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate any equipment in FG CMNT STR LOAD unless the associated dust collectors are installed, maintained, and operated in a satisfactory manner. Proper operation of each baghouse and dust collector shall include following the AQD approved Operations and Maintenance Plan for FG CMNT STR LOAD and operating the dust collectors during start-up and shutdown.² (R 336.1910, R336.1911, 40 CFR 63.1347)
2. The permittee shall not operate FG CMNT STR LOAD unless the Operations and Maintenance Plan is implemented and maintained.² (R 336.1911, 40 CFR 63.1347)

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall conduct opacity tests of FG CMT STR LOAD in accordance with 40 CFR Part 63, Subpart A and Subpart LLL. Testing shall be performed using an approved EPA Method listed in 40 CFR Part 51, Appendix M; 40 CFR Part 60, Appendix A and B. An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol.² (40 CFR 63.1349(b)(2))

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall conduct visible emission monitoring of FG CMT STR LOAD, in accordance with 40 CFR Part 63, Subpart LLL and as specified in Appendix 3.3. (40 CFR 63.1350(f)(2))
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. All records shall be made available to the AQD upon request.² (R 336.1301, 40 CFR 63.1355, R 336.1213(3))
3. The permittee shall calculate and keep monthly and 12-month rolling time period PM10 emissions for EU STORE UNIT 4 Rail and EU BULK LD TRUCK Dust Collector EU-46-710B using EPA AP-42 emission factors, or other emission factors acceptable to the AQD. All records shall be made available to the AQD upon request.² (R 336.1213(3), R 336.1205(1)(a) & (3))
4. The permittee shall keep, in a satisfactory manner, calculations of the annual PM emissions for FG CMNT STR LOAD using emission factors approved by the AQD. All records shall be made available to the AQD upon request. (R 336.1213(3))

See Appendices 3 and 7

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. The permittee shall submit two complete test protocols to the AQD, one to the Technical Programs Unit Supervisor and one to the District Supervisor for approval at least 30 days prior to the anticipated test date. The protocol shall describe the test method(s) and the maximum routine operating conditions, including targets for key operational parameters associated with air pollution control equipment to be monitored and recorded during testing.² **(R 336.2001, R 336.2003, R 336.2004, 336.1205(1))**
5. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor no less than 7 days prior to the anticipated test date.² **(40 CFR Part 60, Appendix F)**
6. The permittee shall submit two complete test reports of the test results to the AQD, one to the Technical Programs Unit Supervisor and one to the District Supervisor, within 60 days following the last date of the test, in a format approved by the AQD. The test report shall include operating parameters of the kilns and FGD including FGD flow rate, differential pressure, and outlet temperature.² **(R 336.2001, R 336.2003, R 336.2004, R 336.1205, R 336.1213(3)(c), R 336.2001(5))**

See Appendices 7 and 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

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

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all applicable requirements of the National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry as specified in 40 CFR Part 63, Subpart A and Subpart LLL, as they apply to FG CMNT STR LOAD. **(40 CFR Part 63 Subparts A & LLL)**
2. The permittee shall comply with all applicable requirements of the Standards of Performance for Portland Cement Plants as specified in 40 CFR Part 60, Subpart A and Subpart F, as they apply to FG CMNT STR LOAD. **(40 CFR Part 60 Subpart A & F)**

Footnotes:

- ¹ This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
- ² This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

FG CKD HAND SYS FLEXIBLE GROUP CONDITIONS

DESCRIPTION

CKD Handling System, captured CKD is reused to make cement, sold, or disposed of in the landfill. EU DUST RETURN 5, Kilns 19, 20, and 21 Dust Return System, conveys captured and reclaimed CKD from Kilns 19, 20, and 21 back to these kilns for reuse. This CKD is collected from the co-generating boiler air stream. This CKD is recycled to the process and included in the raw material mix. Excess CKD goes to EU CKD PUGMILL. EU DUST RETURN 5 is found on the back end of Kilns 19, 20, and 21. EU FEED END 6, Kilns 22 and 23 Dust Return System, conveys captured and reclaimed CKD from Kilns 22 and 23 back to these kilns for reuse via the feed end system. This CKD is collected from the co-generating boiler air stream. This CKD is recycled to the process and included in the raw material mix. Excess CKD goes to EU CKD PUGMILL, or excess CKD may be loaded on to trucks directly from the bottom of the stack shared by Kiln 22 and Kiln 23 and is typically sold. EU FEED END 6 is found on the back end of Kilns 22 and 23. EU CKD PUGMILL, CKD Pugmill, water is added to the CKD then the CKD is trucked to the onsite landfill for disposal.

Emission Units:

EU DUST RETURN 5: Dust tanks 31-006 (Batman Tank), 31-007, air slides 31-109, 31-110, 31-111, 31-021, screw conveyors 31-220, 31-245, pump 31-112.
EU FEED END 6: Dust tanks 32-002, 32-003, air slides 32-025, 32-015, 32-019, screw conveyors 32-101, 32-104, 32-105, 32-106, 32-108, 32-109, 32-110, 32-111, 32-112, 32-113, 32-115, 32-116, 32-117, elevators 32-131, 32-132, 32-133, 32-134, vibrating screen 32-006.
EU CKD PUGMILL: Dust tank 33-200, pug mill 33-230, screw conveyor 33-305, 33-310.

POLLUTION CONTROL EQUIPMENT

EU DUST RETURN 5: Dust collectors 31-181, 31-182, 31-184, 31-185 31-187.
EU FEED END 6: Dust collectors 32-171, 32-173, 32-172.
EU CKD PUGMILL: Dust collector 33-250.

Stack and Vent Identification:

EU DUST RETURN 5: SV31-181 (KG5 Reject Dust System), SV31-182 (K19 Reclaim Dust System), SV31-184 (K20 Reclaim Dust System), SV31-185 (K21 Reclaim Dust System), SV31-187 (KG5 Return Dust System).
EU DUST RETURN 6: SV32-171, SV32-172, SV32-173.
EU CKD PUGMILL : SV33-250.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VE	10% opacity	6-Minute Average	FG CKD HAND SYS	SC V.1 SC VI.1 SC VI.2	40 CFR 63.1345, 40 CFR 60.62(c)
2. PM-10	0.02 gr per actual cubic foot of exhaust gas ²	Hourly	EU DUST RETURN 5 (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)	SC III.1 SC VI.1	R 336.1205, R 336.1331(1)(c), R 336.2803, R 336.2804
3. PM	0.10 lb per 1,000 lbs of exhaust gases, calculated on a dry gas basis ²	Hourly	FG CKD HAND SYS	SC III.1 SC VI.1	R 336.1331(1)(c)

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate any equipment in FG CKD HAND SYS unless the associated dust collectors are installed, maintained, and operated in a satisfactory manner. Proper operation of each baghouse and dust collector shall include following the AQD approved Operations and Maintenance Plan for FG CKD HAND SYS and operating the dust collectors during start-up and shutdown.² **(R 336.1910, R336.1911, 40 CFR 63.1347)**
2. The permittee shall not operate FG CKD HAND SYS unless the Operations and Maintenance Plan is implemented and maintained.² **(R 336.1911, 40 CFR 63.1347)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall conduct opacity tests of FG CKD HAND SYS in accordance with 40 CFR Part 63, Subparts A and LLL.² **(40 CFR 63.1349(b)(2))**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall conduct visible emissions monitoring of FG CKD HAND SYS in accordance with the Operations and Maintenance Plan and 40 CFR Part 63, Subpart LLL, as specified in Appendix 3.3. **(40 CFR 63.1350(f)(2))**
2. The permittee shall collect and keep, in a satisfactory manner, all Method 22 and Method 9 visible emissions readings from the FG CKD HAND SYS. 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. All records shall be made available to the AQD upon request.² **(R 336.1301, 40 CFR 63.1355)**

3. The permittee shall record, and keep records of, all preventative maintenance associated with the MAP. The permittee shall make records available to the AQD upon request.² **(R 336.1910, R 336.1911)**

See Appendices 3 and 7

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. The permittee shall submit two complete test protocols to the AQD, one to the Technical Programs Unit Supervisor and one to the District Supervisor for approval at least 30 days prior to the anticipated test date. The protocol shall describe the test method(s) and the maximum routine operating conditions, including targets for key operational parameters associated with air pollution control equipment to be monitored and recorded during testing.² **(R 336.2001, R 336.2003, R 336.2004, 336.1205(1))**
5. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor no less than 7 days prior to the anticipated test date.² **(40 CFR Part 60, Appendix F)**
6. The permittee shall submit two complete test reports of the test results to the AQD, one to the Technical Programs Unit Supervisor and one to the District Supervisor, within 60 days following the last date of the test, and in a format approved by the AQD. The test report shall include operating parameters of the kilns and FGD including FGD flow rate, differential pressure, and outlet temperature.² **(R 336.2001, R 336.2003, R 336.2004, R 336.1205, R 336.1213(3)(c), R 336.2001(5))**
7. The permittee shall notify the AQD if a change in land use occurs for property classified as industrial or as a public roadway, where this classification was relied upon to demonstrate compliance with Rule 225(1). The notification of a change of land use shall be submitted to the AQD District Supervisor, within 30 days of the actual land use change. Within 60 days of the land use change, the permittee shall submit to the AQD District Supervisor a plan for complying with the requirements of Rule 225(1). The plan shall require compliance with Rule 225(1) no later than one year after the due date of the plan submittal.¹ **(R 336.1225(4))**

See Appendices 7 and 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV31-187 Serves EU DUST RETURN 5 Dust tank 31-006 (Batman Tank)	24.2 ²	120 ²	R 336.1205, R 336.1225, R 336.1331, R 336.2803, R 336.2804
2. SV32-171 Serves EU FEED END 6 elevators 32-131, 32-132, and vibrating screen 32-006	33.7 ²	110 ²	R 336.1205, R 336.1225, R 336.1331, R 336.2803, R 336.2804

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all applicable requirements of the National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry as specified in 40 CFR Part 63, Subpart A and Subpart LLL, as they apply to FG CKD HAND SYS. **(40 CFR Part 63 Subparts A & LLL)**
2. The permittee shall comply with all applicable requirements of the Standards of Performance for Portland Cement Plants as specified in 40 CFR Part 60, Subpart A and Subpart F, as they apply to FG CKD HAND SYS. **(40 CFR Part 60 Subparts A & F)**

Footnotes:

- ¹ This condition is state only enforceable and was established pursuant to Rule 201(1) (b).
- ² This condition is federally enforceable and was established pursuant to Rule 201(1) (a).

FG FUEL HAND FLEXIBLE GROUP CONDITIONS

DESCRIPTION:

Fuel Handling System receives, stores, transports, and pulverizes fuel used to fuel the kilns. EU BLD FUEL PILE, Blended Fuel Pile, includes the coal, coke, and blended coal and coke stockpiles. Coal and coke are received from boats and placed in separate piles. The coal and coke are blended using conveyors, per a needed ratio and placed in a pile. Blended fuel is transported and loaded into the indirect firing system by scrapers or other haulage equipment. EU FUEL PULV 19-23, Fuel Pulverizers on Kilns 19, 20, 21, 22, and 23, pulverize the blended coal and coke and feed this fuel to the kiln burners. Each pulverizer has its own baghouse and particulate matter emission limit. The pulverizer dust collectors exhaust to the atmosphere.

Emission Units:

EU BLD FUEL PILE: Stockpiles, hoppers 74-031, 74-032, bins 74-041, 74-042, conveyors 74-101, 74-102, 74-103, 74-104, 74-105.
EU FUEL PULV 19: Storage tanks 36-002, pulverizer 613CR01, storage bin 614HO01, conveyors 36-041, screw conveyor 614SC01.
EU FUEL PULV 20: Storage tanks 36-004, pulverizer 623CR01, storage bin 624HO01, conveyors 36-042, screw conveyor 624SC01.
EU FUEL PULV 21: Storage tanks 36-005, pulverizer 633CR01, storage bin 634HO01, conveyors 36-043, screw conveyor 634SC01.
EU FUEL PULV 22: Storage tanks 37-001, pulverizer 6A3CR01, storage bin 6A4HO01, conveyor 37-024, screw conveyor 6A4SC01.
EU FUEL PULV 23: Storage tank 37-002, pulverizer 6B3CR01, storage bin 6B4HO01, conveyors 37-025, screw conveyor 6B4SC01.

POLLUTION CONTROL EQUIPMENT:

EU BLD FUEL PILE: Water spray on pile
EU FUEL PULV 19: Dust collectors 613DC01, 614DC01
EU FUEL PULV 20: Dust collectors 623DC01, 624DC01
EU FUEL PULV 21: Dust collectors 633DC01, 634DC01
EU FUEL PULV 22: Dust collectors 6A3DC01, 6A4DC01
EU FUEL PULV 23: Dust collectors 6B3DC01, 6B4DC01

STACK AND VENT IDENTIFICATION

EU BLD FUEL PILE: NA
EU FUEL PULV 19: SV613-01
EU FUEL PULV 20: SV623-01
EU FUEL PULV 21: SV633-01
EU FUEL PULV 22: SV6A3-01
EU FUEL PULV 23: SV6B3-01

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VE	20% opacity ²	6-minute average	FG FUEL HAND	SC III.1 SC VI.2	R 336.1301
2. PM-10	1.8 pph ²	Hourly	EU FUEL PULV 19 EU FUEL PULV 20 EU FUEL PULV 21	SC V.1 SC VI.2	R 336.1205, R 336.1225, R 336.2803, R 336.2804
3. PM-10	8.0 tpy ²	12-month rolling time period as determined at the end of each calendar month	EU FUEL PULV 19 EU FUEL PULV 20 EU FUEL PULV 21	SC V.1 SC VI.1	R 336.1205, R 336.2803, R 336.2804
4. PM-10	2.9 pph ²	Hourly	EU FUEL PULV 22 EU FUEL PULV 23	SC V.1 SC VI.2	R 336.1205, R 336.1225, R 336.2803, R 336.2804
5. PM-10	12.8 tpy ²	12-month rolling time period as determined at the end of each calendar month	EU FUEL PULV 22 EU FUEL PULV 23	SC V.1 SC VI.1	R 336.1205, R 336.2803, R 336.2804
6. PM	0.15 lb per 1000 lbs of exhaust gases, calculated on a dry basis ²	Hourly	EU FUEL PULV 19 EU FUEL PULV 20 EU FUEL PULV 21 EU FUEL PULV 22 EU FUEL PULV 23	SC VI.2	R 336.1331(1)(a)

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

- The permittee shall not operate any equipment in FG FUEL HAND unless the associated dust collectors are installed, maintained, and operated in a satisfactory manner. Proper operation of each baghouse and dust collector shall include following the AQD approved MAP for FG FUEL HAND.² **(R 336.1910, R336.1911)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

- EU BLD FUEL PILE shall be operated in a manner which will minimize the fugitive particulate emissions from the coal blending operation.² **(R 336.1331)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

- Once every five years, verification of PM10 emission rates by testing at owner's expense, in accordance with AQD requirements shall be required from EU FUEL PULV 19, EU FUEL PULV 20, EU FUEL PULV 21, EU FUEL PULV 22, and EU FUEL PULV 23.² **(R 336.1205, R 336.2803, R 336.2804)**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall calculate and keep, in a satisfactory manner, monthly and 12-month rolling time-period PM10 emission calculation records using the most recent stack test results for EU FUEL PULV 19, EU FUEL PULV 20, EU FUEL PULV 21, EU FUEL PULV 22, and EU FUEL PULV 23. All records shall be made available to the AQD upon request.² **(R 336.1205(1)(a) & (3))**
2. The permittee shall monitor and record the pressure drop across each dust collector associated with FG FUEL HAND SYS, on a daily basis.² **(R 336.1201)**

See Appendices 3 and 7

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. The permittee shall submit two complete test protocols to the AQD, one to the Technical Programs Unit Supervisor and one to the District Supervisor for approval at least 30 days prior to the anticipated test date. The protocol shall describe the test method(s) and the maximum routine operating conditions, including targets for key operational parameters associated with air pollution control equipment to be monitored and recorded during testing.² **(R 336.1205(1), R 336.2001, R 336.2003, R 336.2004)**
5. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor no less than 7 days prior to the anticipated test date.² **(40 CFR Part 60, Appendix F)**
6. The permittee shall submit two complete test reports of the test results to the AQD, one to the Technical Programs Unit Supervisor and one to the District Supervisor, within 60 days following the last date of the test. The test report shall include operating parameters of the kilns and FGD including FGD flow rate, differential pressure, and outlet temperature.² **(R 336.1205, R 336.2001, R 336.2003, R 336.2004)**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions Diameter (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV613-01 (36-K19) EU FUEL PULV 19	30 ²	60 ²	R 336.1225, R 336.2803, R 336.2804
2. SV623-01 (36-K20) EU FUEL PULV 20	30 ²	60 ²	R 336.1225, R 336.2803, R 336.2804
3. SV633-01 (36-K21) EU FUEL PULV 21	30 ²	60 ²	R 336.1225, R 336.2803, R 336.2804
4. SV6A3-01 (36-K22) EU FUEL PULV 22	40 ²	60 ²	R 336.1225, R 336.2803, R 336.2804
5. SV6B3-01 (36-K23) EU FUEL PULV 23	40 ²	60 ²	R 336.1225, R 336.2803, R 336.2804

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹ This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
² This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

FG ALT FUEL HAND FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Alternate Fuel Handling System receives, stores, and transports alternate fuels (fuels other than coal) used to fuel the kilns. EU ALT FUEL PILE, Alternate Fuel Pile, includes non-hazardous secondary materials.

All tire-derived fuel (TDF) will be delivered by truck and stored in truck trailers until they are introduced into the system by a truck tipper into a live bottom hopper. The tires will be discharged from the hopper one at a time where they enter an inspection station that places tires in single file and sorted so that all tires exiting the station are fit to be fed into the kiln.

Other alternate fuels are transported to the alternate fuel pile or container and then fed by conveyance system to the kilns hood (fire end of the kiln).

Emission Units:

EU ALT FUEL PILE: Stockpiles, conveyor 18-071.

EU MIDKILN FUEL: Trailer tipper, live bottom hopper, tire separator, separation refinement system, tire inspection and rejection, conveying system with accumulation control, mid kiln valve for tire derived fuel introduction, above kiln valve actuator, and weight-based feed rate control.

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate any equipment in FG ALT FUEL HAND unless proper storage of alternate fuels is maintained and operated in a satisfactory manner. Proper operation of each storage pile or container shall include following the AQD approved Fugitive Dust Plan for FG ALT FUEL HAND.² (R 336.1910, R 336.1911)

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. FG ALT FUEL HAND shall be operated in a manner which will minimize the fugitive particulate emissions from the transporting and storing of all materials on site.² (R 336.1331)

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall monitor and record the amount and types of alternate fuels received on site.² (R 336.1371, R 336.1372)

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall update the fugitive dust control plan for to include FG ALT FUEL HAND.² (R 336.1371, R 336.1372, Act 451 324.5524)
2. The permittee shall submit to the AQD District Supervisor a Fuel Procurement Monitoring Plan for the alternative fuels burned in FG KG5 and FG KG6. The plan shall include but is not limited to the types of materials taken on site, how the materials are managed, how sampling and analysis is performed to determine if they are suitable fuels. The plan shall be kept on site and any revised plan shall be sent to the AQD District Supervisor within 45 days with the reason of the revision(s).¹ (R 336.1225)

Footnotes:

¹ This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

² This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**FG FPENGINES
 FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Two emergency fire pump compression ignition (diesel) engines manufactured and installed in 2009 that are subject to 40 CFR Part 60, Subpart IIII and 40 CFR Part 63, Subpart ZZZZ.

Emission Units: EU-FP ENGINE1(149 hp) and EU-FPENGINE2 (80 hp)

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. CO	5.0 grams per kWhr (3.7g/HP-hr)	As specified within the test methods and procedures at 40 CFR 60.4212	Applies individually to each emission unit of FG-FPENGINES	SC VI.1	40 CFR 60.4205(c), 40 CFR 60.4212 40 CFR 63.6590(c)(7)
2. NOx + NMHC	10.5 grams per kWhr (7.8g/HP-hr)	As specified within the test methods and procedures at 40 CFR 60.4212	Applies individually to each emission unit of FG-FPENGINES	SC VI.1	40 CFR 60.4205(c), 40 CFR 60.4212 40 CFR 63.6590(c)(7)
3. PM	0.80 grams per kWhr (0.6 g/HP-hr)	As specified within the test methods and procedures at 40 CFR 60.4212	Applies individually to each emission unit of FG-FPENGINES	SC VI.1	40 CFR 60.4205(c), 40 CFR 60.4212 40 CFR 63.6590(c)(7)

II. MATERIAL LIMIT(S)

1. The permittee shall only fire the emission units in FG-FPENGINES with diesel fuel that meets the following per-gallon standards within 40 CFR 80.510(b) for nonroad diesel fuel:
 - a. a maximum sulfur content of 15 ppm; **(40 CFR 60.4207(b), 40 CFR 63.6590(c), 40 CFR 80.510(b)(1)(i))**
 - b. either a minimum cetane index of 40 or a maximum aromatic content of 35 % volume. **(40 CFR 60.4207(b), 40 CFR 63.6590(c), 40 CFR 80.510(b)(2)(i) & (ii))**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall operate and maintain each emission unit of FG-FPENGINES to achieve the emission standards in SC I.1, SC I.2, and SC I.3 over the entire life of the emission unit. **(40 CFR 60.4206, 40 CFR 63.6590(c))**
2. The permittee shall operate and maintain emission units of FG-FPENGINES according to the manufacturer's emission-related written instructions and shall change only those emission-related settings that are permitted by the manufacturer. **(40 CFR 60.4211(a)(1) & (2), 40 CFR 63.6590(c))**
3. Each emission unit of FG-FPENGINES may be operated for the purpose of maintenance checks and readiness testing for up to 100 hours per calendar year. **(40 CFR 60.4211(f)(2), 40 CFR 63.6590(c))**

- Each emission unit of FG-FPENGINES may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance checks and readiness testing. **(40 CFR 60.4211(f)(3), 40 CFR 63.6590(c))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

- The permittee shall not operate any emission unit of FG-FPENGINES unless the emission unit is equipped with a functional non-resettable hour meter. **40 CFR 60.4209(a), 40 CFR 63.6590(c)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

- If the permittee chooses to demonstrate compliance with the emission limits in Section I by conducting an initial performance test as specified in SC VI.1., the permittee shall follow the requirements of 40 CFR 60.4212. **(40 CFR 60.4212, 40 CFR 63.6590(c))**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

- For each emission unit of FG-FPENGINES the permittee shall maintain a demonstration of compliance with the emission standards within SC I.1, SC I.2, and SC I.3 by one of the following methods: **(40 CFR 60.4211(b), 40 CFR 63.6590(c))**
 - Purchasing an emission unit certified according to 40 CFR Part 89 or 40 CFR Part 94, as applicable, for the same model year and maximum engine power. The emission unit must be installed and configured according to the manufacturer's specifications; **(40 CFR 60.4211(b)(1), 40 CFR 63.6590(c))**
 - Keeping records of performance test results for each pollutant for a test conducted on a similar emission unit. The test must have been conducted using the same methods specified in 40 CFR Part 60, Subpart IIII and these methods must have been followed correctly; **(40 CFR 60.4211(b)(2), 40 CFR 63.6590(c))**
 - Keeping records of emission unit manufacturer data indicating compliance with the standards; **(40 CFR 60.4211(b)(3), 40 CFR 63.6590(c))**
 - Keeping records of control device vendor data indicating compliance with the standards; **(40 CFR 60.4211(b)(4), 40 CFR 63.6590(c))**
 - Conducting an initial performance test to demonstrate compliance with the emission standards in SC I.1, SC I.2, and SC I.3 according to the requirements specified in 40 CFR 60.4212, as applicable. **(40 CFR 60.4211(b)(5), 40 CFR 63.6590(c))**
- The permittee shall maintain a complete record of the fuel specifications and/or fuel analysis for each delivery, or storage tank, of the fuel fired in FG-FPENGINES. These records may include purchase records for ASTM specification diesel fuel, specifications or analyses provided by the vendor at the time of delivery, analytical results from laboratory testing, or any records adequate to demonstrate compliance with the parts per million by weight sulfur limit and either the minimum cetane index or the maximum aromatic content. **(R 336.1213(3))**
- For each emission unit of FG-FPENGINES, the permittee shall keep records of the operation of the emission unit in emergency and non-emergency service that are recorded through the non-resettable hour meter. The permittee shall record the time of operation of the emission unit and the reason the emission unit was in operation during that time. **(R 336.1213(3))**

See Appendices 3 and 7

VII. REPORTING

- Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
- Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all applicable provisions of the federal New Source Performance Standards for Stationary Compression Ignition Internal Combustion Engines as set forth in 40 CFR Part 60, Subpart A and Subpart IIII. **(40 CFR 60 Subparts A & IIII)**
2. The permittee shall comply with all applicable provisions of the federal National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines as set forth in 40 CFR Part 63, Subparts A and ZZZZ. **(40 CFR 63 Subparts A & ZZZZ)**

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

FGEXGEN FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Five Existing gasoline-fired spark-ignited (four stroke, rich burn) engines used only in the event of an emergency. Each is rated at less than 500 hp and are subject to the requirements of 40 CFR Part 63, Subpart ZZZZ.

Emission Units: EUEXGEN19 (126 HP), EUEXGEN20 (126 HP), EUEXGEN21 (126 HP), EUEXGEN22 (HP unknown), and EUEXGEN23 (HP unknown)

POLLUTION CONTROL EQUIPMENT

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee may operate FGEXGEN as necessary during emergencies with no time limit. **(40 CFR 63.6640(f)(1))**
2. The permittee may operate FGEXGEN for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State, or local government, the engine manufacturer or vendor, or the insurance company associated with the engines. Maintenance checks and readiness testing is limited to 100 hours per year. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency RICE beyond 100 hours per year. **(40 CFR 63.6640(f)(2)(i))**
3. The permittee may operate FGEXGEN for up to 50 hours per engine per year in non-emergency situations. The 50 hours are counted as part of the 100 hours of operation allowed under SC III.2. The 50 hours cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity. **(40 CFR 63.6640(f)(3))**
4. The permittee must operate and maintain FGEXGEN according to the manufacturer's emission-related written instructions or develop a maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions. **(40 CFR 63.6625(e), 40 CFR 63.6640(a), 40 CFR, Part 63, Subpart ZZZZ, Table 6, Item 9)**
5. The permittee must comply with the following operational requirements:
 - a. Change oil and filter every 500 hours of operation or annually, whichever comes first, except as allowed in SC III.6;
 - b. Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first;
 - c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

If FGEXGEN is being operated during an emergency and it is not possible to shut down an engine to perform the work practice standards on the schedule required, the work practice standard can be delayed until the emergency is over. The work practice should be performed as soon as practicable after the emergency has ended. The permittee must report any failure to perform the work practice on the schedule required. **(40 CFR 63.6602, 40 CFR 63.6640(a), 40 CFR, Part 63, Subpart ZZZZ Table 2c, Item 6)**

6. The permittee has the option of utilizing an oil analysis program in order to extend the specified oil change requirement in SC III.5. The oil analysis must be performed at the same frequency specified for changing the oil in SC III.5. The oil analysis shall test for the following limits:
 - a. Total Acid Number has increased by more than 3.0 milligrams of potassium hydroxide (KOH) per gram from Total Acid Number of the oil when new;
 - b. Viscosity of the oil has changed by more than 20 % from the viscosity of the oil when new; or
 - c. Percent water content (by volume) is greater than 0.5%.

If any of the limits are exceeded, the permittee must change the oil within 2 days of receiving the results of the analysis. If the engine is not in operation when the results of the analysis are received, the permittee must change the oil within 2 days or before commencing operation, whichever is later. The analysis program must be part of the maintenance plan for FGEXGEN. **(40 CFR 63.6625(j))**

7. The permittee shall minimize each engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes. **(40 CFR 63.6625(h))**
8. The permittee must be in compliance with the emission limitations and operating limitations in this subpart that apply to FGEXGEN at all times. **(40 CFR 63.6605(a))**
9. The permittee at all times must operate and maintain FGEXGEN in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of FGEXGEN. **(40 CFR 63.6605(b))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip each engine in FGEXGEN with a non-resettable hour meter. **(R 336.1213(3), 40 CFR 63.6625(f))**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall keep the following records: **(40 CFR 63.6655)**
 - a. A copy of each notification and report submitted to comply with 40 CFR Part 63, Subpart ZZZZ, including all documentation supporting any Initial Notification or Notification of Compliance status, according to the requirements of 40 CFR 63.10(b)(2)(xiv)
 - b. Records of the occurrence and duration of each malfunction of the engines of FGEXGEN
 - c. Records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR 63.6605(b), including corrective actions to restore malfunctioning equipment to its normal or usual manner of operation.
 - d. Records to demonstrate continuous compliance with operating limitations in SC III.5.
 - e. Keep records of the maintenance conducted on FGEXGEN in order to demonstrate that FGEXGEN are operated and maintained according to the maintenance plan.
 - f. Records of hours of operation recorded through the non-resettable hour meter. The permittee shall document how many hours were spent during emergency operation; including what classified the operation as emergency and how many hours were spent during non-emergency operation.

2. The permittee must keep records of the parameters that are analyzed as part of the oil analysis program in SC III.6, the results of the analysis, and the oil changes for the engine. **(40 CFR 63.6625(j))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. Report each instance in which the permittee did not meet the operating limitations in Table 2c, Item 6. These instances are deviations from the operating limitations in 40 CFR Part 63, Subpart ZZZZ. **(40 CFR 63.6640(b))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all applicable requirements of the National Emission Standards for Hazardous Air Pollutants as specified in 40 CFR Part 63, Subparts A and ZZZZ for Stationary Reciprocating Internal Combustion Engines by the initial compliance date of October 19, 2013. **(40 CFR Part 63, Subparts A & ZZZZ)**

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

FG COLD CLEANERS FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Any cold cleaner that is grandfathered or exempt from Rule 201 pursuant to Rule 278 and Rule 281(h) or Rule 285(r)(iv). Existing cold cleaners were placed into operation prior to July 1, 1979. New cold cleaners were placed into operation on or after July 1, 1979.

Emission Unit:

EU PART WASH

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

1. The permittee shall not use cleaning solvents containing more than 5% by weight of the following halogenated compounds: methylene chloride, perchloroethylene, trichloroethylene, 1,1,1-trichloroethane, carbon tetrachloride, chloroform, or any combination thereof. **(R 336.1213(2))**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. Cleaned parts shall be drained for no less than 15-seconds or until dripping ceases. **(R 336.1611(2)(b), R 336.1707(3)(b))**
2. The permittee shall perform routine maintenance on each cold cleaner as recommended by the manufacturer. **(R 336.1213(3))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The cold cleaner must meet one of the following design requirements:
 - a. The air/vapor interface of the cold cleaner is no more than ten square feet. **(R 336.1281(h))**
 - b. The cold cleaner is used for cleaning metal parts and the emissions are released to the general in-plant environment. **(R 336.1285(r)(iv))**
2. The cold cleaner shall be equipped with a device for draining cleaned parts. **(R 336.1611(2)(b), R 336.1707(3)(b))**
3. All new and existing cold cleaners shall be equipped with a cover and the cover shall be closed whenever parts are not being handled in the cold cleaner. **(R 336.1611(2)(a), R 336.1707(3)(a))**
4. The cover of a new cold cleaner shall be mechanically assisted if the Reid vapor pressure of the solvent is more than 0.3 psia or if the solvent is agitated or heated. **(R 336.1707(3)(a))**
5. If the Reid vapor pressure of any solvent used in a new cold cleaner is greater than 0.6 psia; or, if any solvent used in a new cold cleaner is heated above 120°F, then the cold cleaner must comply with at least one of the following provisions:
 - a. The cold cleaner must be designed such that the ratio of the freeboard height to the width of the cleaner is equal to or greater than 0.7. **(R 336.1707(2)(a))**
 - b. The solvent bath must be covered with water if the solvent is insoluble and has a specific gravity of more than 1.0. **(R 336.1707(2)(b))**
 - c. The cold cleaner must be controlled by a carbon adsorption system, condensation system, or other method of equivalent control approved by the AQD. **(R 336.1707(2)(c))**

V. TESTING/SAMPLING

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. For each new cold cleaner in which the solvent is heated, the solvent temperature shall be monitored and recorded at least once each calendar week during routine operating conditions. **(R 336.1213(3))**
2. The permittee shall maintain the following information on file for each cold cleaner: **(R 336.1213(3))**
 - a. A serial number, model number, or other unique identifier for each cold cleaner.
 - b. The date the unit was installed, manufactured or that it commenced operation.
 - c. The air/vapor interface area for any unit claimed to be exempt under Rule 281(h).
 - d. The applicable Rule 201 exemption.
 - e. The Reid vapor pressure of each solvent used.
 - f. If applicable, the option chosen to comply with Rule 707(2).
3. The permittee shall maintain written operating procedures for each cold cleaner. These written procedures shall be posted in an accessible, conspicuous location near each cold cleaner. **(R 336.1611(3), R 336.1707(4))**
4. As noted in Rule 611(2)(c) and Rule 707(3)(c), if applicable, an initial demonstration that the waste solvent is a safety hazard shall be made prior to storage in non-closed containers. If the waste solvent is a safety hazard and is stored in non-closed containers, verification that the waste solvent is disposed of so that not more than 20%, by weight, is allowed to evaporate into the atmosphere shall be made on a monthly basis. **(R 336.1213(3), R 336.1611(2)(c), R 336.1707(3)(c))**

See Appendices 3 and 7

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

E. NON-APPLICABLE REQUIREMENTS

At the time of the ROP issuance, the AQD has determined that no non-applicable requirements have been identified for incorporation into the permit shield provision set forth in the General Conditions in Part A pursuant to Rule 213(6)(a)(ii).

APPENDICES

Appendix 1. Acronyms and Abbreviations

Common Acronyms		Pollutant / Measurement Abbreviations	
AQD	Air Quality Division	acfm	Actual cubic feet per minute
BACT	Best Available Control Technology	BTU	British Thermal Unit
CAA	Clean Air Act	°C	Degrees Celsius
CAM	Compliance Assurance Monitoring	CO	Carbon Monoxide
CEM	Continuous Emission Monitoring	CO ₂ e	Carbon Dioxide Equivalent
CEMS	Continuous Emission Monitoring System	dscf	Dry standard cubic foot
CFR	Code of Federal Regulations	dscm	Dry standard cubic meter
COM	Continuous Opacity Monitoring	°F	Degrees Fahrenheit
COMS	Continuous Opacity Monitoring System	gr	Grains
Department/ Department	Michigan Department of Environment, Great Lakes, and Energy	HAP	Hazardous Air Pollutant
DAA	Dry Absorbent Addition	Hg	Mercury
EGLE	Michigan Department of Environment, Great Lakes, and Energy	hr	Hour
EU	Emission Unit	HP	Horsepower
FG	Flexible Group	H ₂ S	Hydrogen Sulfide
GACS	Gallons of Applied Coating Solids	kW	Kilowatt
GC	General Condition	lb	Pound
GHGs	Greenhouse Gases	m	Meter
HVLP	High Volume Low Pressure*	mg	Milligram
ID	Identification	mm	Millimeter
IRSL	Initial Risk Screening Level	MM	Million
ITSL	Initial Threshold Screening Level	MW	Megawatts
LAER	Lowest Achievable Emission Rate	NMOC	Non-methane Organic Compounds
MACT	Maximum Achievable Control Technology	NO _x	Oxides of Nitrogen
MAERS	Michigan Air Emissions Reporting System	ng	Nanogram
MAP	Malfunction Abatement Plan	PM	Particulate Matter
MSDS	Material Safety Data Sheet	PM10	Particulate Matter equal to or less than 10 microns in diameter
NA	Not Applicable	PM2.5	Particulate Matter equal to or less than 2.5 microns in diameter
NAAQS	National Ambient Air Quality Standards	pph	Pounds per hour
NESHAP	National Emission Standard for Hazardous Air Pollutants	ppm	Parts per million
NSPS	New Source Performance Standards	ppmv	Parts per million by volume
NSR	New Source Review	ppmw	Parts per million by weight
PS	Performance Specification	%	Percent
PSD	Prevention of Significant Deterioration	psia	Pounds per square inch absolute
PTE	Permanent Total Enclosure	Psig	Pounds per square inch gauge
PTI	Permit to Install	QAQC	Quality Assurance Quality Control
RACT	Reasonable Available Control Technology	scf	Standard cubic feet
ROP	Renewable Operating Permit	sec	Seconds
SC	Special Condition	SO ₂	Sulfur Dioxide
SCR	Selective Catalytic Reduction	TAC	Toxic Air Contaminant
SNCR	Selective Non-Catalytic Reduction	Temp	Temperature
SRN	State Registration Number	THC	Total Hydrocarbons
TEQ	Toxicity Equivalence Quotient	tpy	Tons per year
USEPA/EPA	United States Environmental Protection Agency	µg	Microgram
VE	Visible Emissions	µm	Micrometer or Micron
		VOC	Volatile Organic Compounds
		yr	Year

*For HVLP applicators, the pressure measured at the gun air cap shall not exceed 10 psig.

Appendix 2. Schedule of Compliance

The permittee certified in the ROP application that this stationary source is in compliance with all applicable requirements and the permittee shall continue to comply with all terms and conditions of this ROP. A Schedule of Compliance is not required. (R 336.1213(4)(a), R 336.1119(a)(ii))

Appendix 3. Monitoring Requirements

The following monitoring procedures, methods, or specifications are the details to the monitoring requirements identified and referenced in **FG MACT KILNS** and **FG CLINK COOL**.

3.1 - Alternate Monitoring Plan to Determine the Hourly Clinker Production Rate, and a PM emission rate in pounds of PM per ton of clinker based on a 30 day rolling average, from FG KG5, FG KG6 and FG CLINK COOL

Purpose:

The following describes the method for determining clinker production using the impact flow meters for each kiln. The following monitoring procedures, methods, or specifications are the details to the alternative monitoring requirements identified and referenced in FG KG5 and FG KG6. Each kiln produces clinker that combines on a single line for each killing group. Weight of clinker production is measured on these two separate lines. The final weight for each kiln is apportioned according to the feed rate into the individual kilns and the associated recycle streams. Because of a recycle stream (whose amounts can vary), it is not possible to directly measure kiln feed rate and use only kiln feed rate in apportioning clinker production to each kiln. This alternate method is employed to remove the variability caused by multiple kilns all being measured by one source to distribute the clinker properly.

Definitions:

CKD/clinker factor (CCF): This is a constant initially set at 1.15 and is only adjusted based on the results of a kiln audit. Units of measure are in tonnes of CKD feed per tonnes of Clinker produced.

Dust Rate (DR): Cement Kiln Dust (CKD) return rate is measured by the impact flow meter on each kiln. The units of measure are in metric tonnes per hour.

Kiln Audit: A review of the kiln system including various measurements of the process to verify overall system performance. The frequency of the audit activity of a kiln can vary from ever one to ten years depending on kiln performance.

Kiln feed/clinker factor (KFC): This is a constant that is initially set at 1.7 and is only adjusted based on the results of a kiln audit. Units of measure are in tonnes of Raw Meal per tonnes of Clinker.

Kiln Feed from PLC (KF): Raw measured value of kiln feed measured by the impact flow meter on each kiln. The units of measure are recorded in metric tonnes per hour.

Limestone Injection (LSI): Crushed limestone that is introduced to the kiln just prior to clinker exiting the kiln. LSI is measured by weight belt prior to entering the kiln. The units of measure are recorded in metric tonnes per hour.

Limestone Factor (LSF): Constant that is proprietary and is only adjusted based on the results of laboratory testing. This factor adjusts the weight of the limestone fed to the kiln as weight is lost due to removal of moisture and the chemical transformation resulting from the heat of the kiln.

Raw meal rate (RMR): Kiln Feed (KF) will be multiplied by the Weight Test Factor (WTF) to calculate the quantity of kiln feed flowing to the kiln.

Total Kiln Clinker (TKC): Kiln clinker is based on the combined Kiln Feed (KF) and Dust Rate (DR) and the representative Weight Test Factor (WTF) applied for each kiln. Units of measure are in metric tonnes of Clinker per hour.

Weight Test: This is an audit of the clinker volume being recorded. This is completed by diverting clinker produced by a kiln to an isolated storage and weighing the clinker produced over the duration of the test. The weighing of the clinker is performed using a Department of Transportation (DOT) certified scale and is measured typically in mobile equipment such as a dump truck.

Weight Test Factor (WTF): Constant entered into the Plant Control System (PCS). The initial value for this constant is determined on a kiln by kiln basis to calculate the current reported clinker rate for each kiln.

Weight Test Results (WTR): This is the result of a clinker weight test that is performed on a quarterly basis.

Monitoring and Measuring of Clinker Production:

The permittee shall continuously monitor Kiln Feed (KF) rate to each individual kiln, KF rate is monitored by independent impact flow meters on each kiln for both return dust – CKD (DR) and KF to determine total kiln feed (TKF) for each kiln. These values are recorded and stored electronically (currently in the TIS/SAP, a group database for managing process parameters). The KF rates are used to determine weight rates in tons-mass per hour of the amount of clinker produced from each kiln. This methodology of calculating clinker is referred to as the Kiln Feed Method (KFM). In the KFM, clinker produced is calculated by using the following formula:

$$TKC = (RMR/KFC)+(DR/CCF)+(LSI*LSF)$$

Total Kiln Clinker Produced = (hourly raw meal rate/kiln feed clinker factor) + (hourly return dust rate/return dust clinker factor) + (total limestone injected to the kiln * Limestone Factor)

Quarterly, for each operational kiln, the permittee shall perform a weight test of the actual clinker produced. The weight test shall include checks of the KFM by monitoring feed rate and then comparing results with the measured clinker from the weight test. The weight test is used to verify, or if necessary, make corrections to the Weight Test Factor that is used to ensure the RMR, and ultimately, TKC is within +/- 5% accuracy. The weight test requires a minimum of 4 hours to complete. The following describes the guidelines for validating and performing the weight test; when preparing for a weight test no changes can be made to the KF or DR/KF ratio in the previous 24 hours leading up to the test. Perform clinker test a minimum of 4 hours. When this is complete, take the weight test results (WTR) and adjust the WTF using the following equation.

$$\text{New WTF} = (WTR) / (TKC/\text{previous WTF})$$

Monthly, a verification of clinker production will be calculated based on a physical inventory measurement. This is to verify that calculated clinker production remains within +/- 5% accuracy using the current WTF. Should the results of the inventory indicate that the quantity of clinker produced is greater than the +/- 5% tolerance, an adjustment to the WTF will be made. The WTF adjustment will be applied to kilns that operated during the timeframe being verified and proportioned based on clinker production recorded during this same period of time.

During each quarter that FG KG5, FG KG6, and FG CLINK COOL operates, the permittee shall determine, record, and maintain a record of the ongoing accuracy of the existing clinker measurement. These records shall be maintained on file for five years and made available to the AQD upon request.

The following monitoring procedures, methods, or specifications are the details to the monitoring requirements identified and referenced in **FG RAW MILL SYS, FG KG5 and FG KG6**.

3.2 – Requirements for NO_x, SO₂, CO, THC, CO₂/O₂ Continuous Emission Monitoring and Emission Rate Monitoring Systems (CEMS/CERMS)

1. Within 30 calendar days after commencement of initial start-up, the permittee shall submit two copies of a Monitoring Plan to the AQD, for review and approval. The Monitoring Plan shall include drawings or specifications showing proposed locations and descriptions of the required CEMS/CERMS.
2. Within 150 calendar days after commencement of initial start-up, the permittee shall submit two copies of a complete test plan for the CEMS/CERMS to the AQD for approval.
3. Within 180 calendar days after commencement of initial start-up, the permittee shall complete the installation and testing of the CEMS/CERMS.
4. Within 60 days of completion of testing, the permittee shall submit to the AQD two copies of the final report demonstrating the CEMS/CERMS complies with the requirements of the corresponding Performance Specifications (PS) in the following table:

Pollutant	Applicable PS
NO _x /SO ₂	2
CO	4
CO ₂ /O ₂	3
THC	6
*Or other PS as approved by the AQD.	

5. The span value shall be 2.0 times the lowest emission standard or as specified in the federal regulations.
6. The CEMS/CERMS shall be installed, calibrated, maintained, and operated in accordance with the procedures set forth in 40 CFR 60.13 and PS 2, 3, 6 and 12A (see No. 4 above) of 40 CFR Part 60, Appendix B to.
7. Each calendar quarter, the permittee shall perform the Quality Assurance Procedures of the CEMS/CERMS set forth in 40 CFR Part 60, Appendix F. Within 30 days following the end of each calendar quarter, the permittee shall submit the results to the AQD in the format of the data assessment report (Figure 1, 40 CFR Part 60, Appendix F).
8. In accordance with 40 CFR 60.7(c) and (d), the permittee shall submit two copies of an excess emission report (EER) and summary report in an acceptable format to the AQD, within 30 days following the end of each calendar quarter. The Summary Report shall follow the format of Figure 1 in 40 CFR 60.7(d). The EER shall include the following information:
 - a. A report of each exceedance above the limits specified in the Emission Limits of this permit. This includes the date, time, magnitude, cause and corrective actions of all occurrences during the reporting period.
 - b. A report of all periods of CEMS/CERMS downtime and corrective action.
 - c. A report of the total operating time of each emission unit during the reporting period.
 - d. A report of any periods that the CEMS/CERMS exceeds the instrument range.
 - e. If no exceedances or CEMS/CERMS downtime occurred during the reporting period, the permittee shall report that fact.
9. The permittee shall keep all monitoring data on file for a period of at least five years and make them available to the AQD upon request.

The following monitoring procedures, methods, or specifications are the details to the monitoring requirements identified and referenced in **FG RAW MAT, FG RAW MILL SYS, FG CLINKER SYS, FG FINISH MILLS, FG CEMENT STR LOAD, FG CKD HAND SYS.**

3.3 – Visible Emissions Monitoring 40 CFR 63.1350(f)(1)

The permittee shall conduct visible emissions monitoring for each applicable emission unit, in accordance with 40 CFR 63.12350(f)(1) in part as specified below:

- a. Conduct a monthly 10-minute visible emissions test in accordance with Method 22. The performance test must be conducted while the emission unit is in operation.
- b. If no visible emissions are observed in six consecutive monthly tests, the frequency of performance testing may be decreased from monthly to semi-annually. If visible emissions are observed during any semi-annual test, the permittee must resume performance testing on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.
- c. If no visible emissions are observed during the semi-annual test, the frequency of performance testing may be decreased from semi-annually to annually. If visible emissions are observed during any annual performance test, the permittee must resume performance testing on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.
- d. If visible emissions are observed during any Method 22 performance test, the permittee must conduct five 6-minute averages of opacity in accordance with Method 9. The Method 9 performance test must begin within 1 hour of any observation of visible emissions.

The following monitoring procedures, methods, or specifications are the details to the monitoring requirements identified and referenced in **FG RAW MILL SYS and FG FINISH MILLS**.

3.4 – Visible Emissions Monitoring 40 CFR 63.1350(f)(2)

The permittee shall conduct visible emissions monitoring for each applicable emission unit, in accordance with 40 CFR 63.12350(f)(2) in part as specified below:

- a. For a raw mill or finish mill, you must monitor opacity by conducting daily visible emissions observations of the mill sweep and air separator PM control devices (PMCD) of these affected sources in accordance with the procedures of Method 22 of appendix A-7 to part 60 of this chapter. The duration of the Method 22 performance test must be 6 minutes.
- b. Within 24 hours of the end of the Method 22 performance test in which visible emissions were observed, the owner or operator must conduct a follow up Method 22 performance test of each stack from which visible emissions were observed during the previous Method 22 performance test.
- c. If visible emissions are observed during the follow-up Method 22 performance test required by paragraph (f)(2)(ii) of this section from any stack from which visible emissions were observed during the previous Method 22 performance test required by paragraph (f)(2)(i) of the section, you must then conduct an opacity test of each stack from which emissions were observed during the follow up Method 22 performance test in accordance with Method 9 of appendix A-4 to part 60 of this chapter. The duration of the Method 9 test must be 30 minutes.

Appendix 4. Recordkeeping

Specific recordkeeping requirement formats and procedures are detailed in Part A or the appropriate Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Therefore, this appendix is not applicable.

Appendix 5. Testing Procedures

Specific testing requirement plans, procedures, and averaging times are detailed in the appropriate Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Therefore, this appendix is not applicable.

Appendix 6. Permits to Install

The following table lists any PTIs issued or ROP revision applications received since the effective date of the previously issued ROP No. MI-ROP-B1477-2012. Those ROP revision applications that are being issued concurrently with this ROP renewal are identified by an asterisk (*). Those revision applications not listed with an asterisk were processed prior to this renewal.

Source-Wide PTI No MI-PTI-B1477-2012c is being reissued as Source-Wide PTI No. MI-PTI-B1477-2020c.

Permit to Install Number	ROP Revision Application Number/Issuance Date	Description of Change	Corresponding Emission Unit(s) or Flexible Group(s)
89-13A	201500067/ December 22, 2015	Incorporate Permit to Install (PTI) No. 89-13A. PTI No. 89-13A incorporated NOx and SO ₂ emission limits into FG KG5 and FG KG6 that were required by the USEPA global consent decree 3:10-cv-44-JPG	FG KG5 FG KG6
195-10B	201500093/ December 22, 2015	Incorporate PTI No. 195-10B. PTI No. 195-10B placed mercury emission limits on the following flexible groups: FG RAW MILL SYS, FG KG5, FG KG6, and FG CLINK COOL.	FG RAW MILL SYS FG KG5 FG KG6 FG CLINK COOL
106-08A	201500094/ December 22, 2015	Incorporate PTI No. 106-08A. PTI No. 106-08A permitted burning in the kilns the following fuels: <ol style="list-style-type: none"> 1. Clean wood Clean wood is defined as leaf material, bark, grass, and wood in any form containing no paint, stain, or other types of coatings, and has not been treated with wood preservatives, including but not limited to, formaldehyde, arsenate (copper, chromium, and arsenic), creosote (phenols and cresols), or pentachlorophenol. 2. Plastics Plastics are defined as non-chlorinated, non-halogenated, and containing 2.0 % (20,000 mg/Kg) or less of chlorine or total halogens, as received by weight. These plastics are commonly referred to as resin code numbers 1, 2, 4, 5, 6, and 7. The plastics may contain paper, cardboard, wood fibers, or other cellulosic materials, and may not contain polyvinyl chloride (PVC) or resin code number 3. 3. Shingles Shingles are defined as shredded/ chipped asphalt roofing shingle material that contains no asbestos and no appreciable amount of paint, stain, or other types of coatings. <p>PTI 106-08A also included changes from PTI 126-86E for the removal of FG KG6 COMS requirements and replacement with scrubber operating parameter monitoring.</p>	FG KG5 FG KG6 FG CLINK COOL FG MERCURY

Permit to Install Number	ROP Revision Application Number/Issuance Date	Description of Change	Corresponding Emission Unit(s) or Flexible Group(s)
NA	201500128/ November 4, 2016	<p>The particulate matter (PM) monitoring device referred to in FG CLINK COOL was incorrectly identified as the PM CEMS (Particulate Matter Continuous Emission Monitoring System) in the ROP. The monitoring device is actually a PM continuous parametric monitoring system (CPMS), and the monitoring conditions were for a PM CPMS. The AQD has changed all references of PM CEMS to PM CPMS in FG CLINK COOL. The minor modification also requested to remove the CAM requirements from FG CLINK COOL, FG KG5, FG KG6, and FG FINISH MILLS, and add the requirements as an Appendix in the ROP. Removal of requirements referencing the opacity limit and Continuous Opacity Monitor System (COMS) was also requested. The AQD denied the request to add the CAM requirements in an Appendix, and to remove opacity and COM Conditions from FG CLINK COOL, since opacity limits and monitoring were originally required in a Permit to Install and an opacity monitor is still in place and being used at the facility. The emission limitation for PM from FG CLINK COOL at the stationary source is subject to the federal CAM rule, but monitoring included in 40 CFR Part 63, Subpart LLL (PC MACT) is considered to be presumptively acceptable monitoring for PM and is included in the ROP in FG CLINK COOL. There are some existing Conditions related to CAM that could not be removed, because the PC MACT does not include references to these specific CAM requirements. For the most part, the AQD added the CAM UARs along with the PC MACT UARs to show compliance with both. Additionally, The AQD updated the CAM requirements for FG KG6 and removed the COM requirements since this emission unit uses a baghouse and wet scrubber for PM control and the COMS has been removed.</p>	FG CLINK COOL FG KG5 FG KG6 FG FINISH MILLS
171-15	201600164/ July 14, 2017	<p>PTI 171-15 was issued to eliminate the outdated requirements and streamline the permit to allow modification of the existing ROP to include only the most relevant applicable requirements. Additionally, this PTI established a lower SO₂ emission rate in pounds per ton of clinker based on a 30-day rolling average for FG KG6. Also, changes to the Federal PSD Regulation 40 CFR 52.21 versus Michigan Part 18 Rules were clarified. UARs for PSD were replaced with the corresponding Michigan Part 18 Rule.</p>	Source-Wide Conditions EU KILN 19, EU KILN 20 EU KILN 21, EU KILN 22 EU KILN 23, FG QUARRY FG RAW MILL SYS FG RAW MAT FG KG5, FG KG6 FG CLINK COOL FG FINSH MILLS FG CLINKER SYS FG CMNT STR LOAD FG CKD HAND SYS

Permit to Install Number	ROP Revision Application Number/Issuance Date	Description of Change	Corresponding Emission Unit(s) or Flexible Group(s)
			FG FUEL HAND FG MERCURY FGCOLDCLEANERS
NA	201800036 March 3, 2018	Administrative Amendment to change the source name to Holcim (US) Inc. d/b/a Lafarge Alpena Plant.	All
NA	201800144 November 7, 2018	Add WGS Emergency Generator to ROP application.	EU CIGEN
155-19	202000061 March 18, 2020	Add requirements for EU SECONDCRUSH and EU PORTCRUSH from the permit to the ROP	EU PORTCRUSH FG QUARRY

The following table lists the ROP amendments or modifications issued after the effective date of ROP No. MI-ROP-B1477-2020.

Permit to Install Number	ROP Revision Application Number - Issuance Date	Description of Equipment or Change	Corresponding Emission Unit(s) or Flexible Group(s)
NA	202000144 / November 30, 2020	The Minor Modification was to update the Clinker Monitoring Plan included in Appendix 3.1 of the ROP. The updated Monitoring Plan for FG KG5, FG KG6, and FG CLINK COOL added in definitions and how the Total Kiln Clinker Produced (TKC) and Weight Test Factor (WTF) are calculated.	Appendix 3.1
171-15A	202100023 / May 4, 2021	<p>The Minor Modification was to incorporate PTI No. 171-15A, which removed references to FGMERCURY, removed COMS Conditions, and subsume the particulate emission limits for FG KG5 and FG KG6 with the FG MACT KILNS particulate emission limit. Additionally, updated Appendix 3 to remove Mercury and COMS requirements.</p> <p>The following emission units did not have any changes to them but removed FGMERCURY reference in the Emission Unit Summary Table: EU RAW MILL 14, EU RAW MILL 14, EU CLINK COOL 19, EU CLINK COOL 20, EU CLINK COOL 21, EU CLINK COOL 22, EU CLINK COOL 23, EU FUEL PULV 19, EU FUEL PULV 20, EU FUEL PULV 21, EU FUEL PULV 22, and EU FUEL PULV 23.</p> <p>The emission limitations for PM at the stationary source with the underlying applicable requirement of 40 CFR PART 63, Subpart LLL, from EU KILN 19, EU KILN 20, EU KILN 21, EU KILN 22, EU KILN 23 are exempt from the federal Compliance Assurance Monitoring (CAM) regulation pursuant to 40 CFR 64.2(b)(1)(i) because PM limits meet the CAM exemption for MACT proposed after November 15, 1990.</p>	FG RAW MILL SYS FG KG5 FG KG6 FG MACT KILNS FG CLINK COOL FG FUEL HAND

Permit to Install Number	ROP Revision Application Number - Issuance Date	Description of Equipment or Change	Corresponding Emission Unit(s) or Flexible Group(s)
83-21	202300094 / August 9, 2023	<p>The Minor Modification was to incorporate PTI No. 83-21, for the addition of alternative fuels, to utilize treated wood, TDF, and other NHSM (per Rule 40 CFR 241) compliant materials as fuel in the kilns. The production of clinker in cement kilns has several characteristics that make it an ideal candidate for the effective use of alternative fuels. The PTI was not required to go through the public participation process.</p> <p>For Kilns 22 and 23, whole tires will be fed to the kilns by a mid-kiln injection system. There will not be any outdoor storage of the fuels.</p> <p>Once the tires are fed to the existing kilns there will be a reduction in the primary pyro-processing fuels added to the burner pipe of each kiln. The result is expected to reduce the consumption of petroleum coke /coal. An emissions reduction (specifically NOx, and mercury) is anticipated due to the staged combustion that reduces maximum burning zone temperature, thus reduces NOx generation. Tires used in the production of clinker are completely consumed and incorporated into the product.</p> <p>Kilns in FG KG5 and FG KG6 are currently subject to the NSPS Subpart F and the PC MACT along with the emission limitations and requirements established in those regulations. The use of additional alternative fuels as a fuel source for the kilns will not affect the compliance status with these Subparts. The addition of these alternative fuels will not constitute construction, modification, or reconstruction of the kilns and will not trigger the NSPS requirements for these kilns.</p>	<p>EU KILN 19 EU KILN 20 EU KILN 21 EU KILN 22 EU KILN 23 EU ALT FUEL PILE EU MIDKILN FUEL FG KG5 FG KG6 FG FUEL HAND FG ALT FUEL HAND</p>

Appendix 7. Emission Calculations

Specific emission calculations to be used with monitoring, testing or recordkeeping data are detailed in the appropriate Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Therefore, this appendix is not applicable.

Appendix 8. Reporting

A. Annual, Semiannual, and Deviation Certification Reporting

The permittee shall use EGLE, AQD, Report Certification form (EQP 5736) and EGLE, AQD, Deviation Report form (EQP 5737) for the annual, semiannual and deviation certification reporting referenced in the Reporting Section of the Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Alternative formats must meet the provisions of Rule 213(4)(c) and Rule 213(3)(c)(i), respectively, and be approved by the AQD District Supervisor.

B. Other Reporting

Specific reporting requirement formats and procedures are detailed in Part A or the appropriate Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Therefore, Part B of this appendix is not applicable.