MOJAVE DESERT AIR QUALITY MANAGEMENT DISTRICT
14306 Park Avenue Victorville, CA 92392-2310
760.245.1661 -- 800.635.4617 -- FAX 760.245.2022

PERMIT TO OPERATE

B007435

Operation under this permit must be conducted in compliance with all information included with the initial application, initial permit condition, and conditions contained herein. The equipment must be maintained and kept in good operating condition at all times. This Permit to Operate or copy must be posted on or within 8 meters of equipment. If a copy is posted, the original must be maintained on site, available for inspection at all times.

EXPIRES LAST DAY OF: MAY 2026

OWNER OF OPERATOR (Co.#2239)

CalPortland Company
19409 National Trails Hwy
Oro Grande, CA 92368

EQUIPMENT LOCATION (Fac.#3)

CalPortland Oro Grande
19409 National Trails Hwy
Oro Grande, CA 92368

Description:
KILN AND PREHEATER consisting of: Process Groups 331, 421, 431, and 441, A nominal 250 ton per hour pre-heater/pre-calciner cement kiln and a clinker cooler assembly. Note that horsepower ratings have been converted to heat input assuming 2550 Btu per horsepower.

EQUIPMENT

Capacity	Equipment Description
0.22	Seven screw conveyors (331SC101, 102, 103, 104, 105, 110, 120), 85.8 total hp
0.0092	Two Rotary valves (331RF101 and 102), 3.6 total hp
0.51	Two pneumatic pumps (331PP101 and 102), 200 total hp
1.27	Two conveying compressors (331CP101 and 102), 500 total hp
4.55	Plant air compressors (741CP110 through 116), 1785 total hp
0.0026	Diverter gate 331DG101, 1hp
0.2	Two water pumps, 80 total hp
0.0046	Three baghouse hoists, 1.8 total hp
14.03	Kiln induced draft (ID) fan 331FN120, 5500 hp
0	Preheater 421STR101
0.18	Two Freight Elevator Motors 421EL900, 70 total hp
0.038	Kiln feed and tertiary fan, 15 total hp

Fee Schedule: 8 (f) Rating: 766651035 Btu SIC: 3241 SCC: 30500623 Location/UTM(Km): 469E/3830N

This permit does not authorize the emission of air contaminants in excess of those allowed by law, including Division 26 of the Health and Safety Code of the State of California and the Rules and Regulations of the District. This permit cannot be construed as permission to violate existing laws, ordinances, statutes or regulations of this or other governmental agencies. This permit must be renewed by the expiration date above. If billing for renewal fee required by Rule 301(c) is not received by expiration date above, please contact the District.

CalPortland Company
Attn: Catalina Elias

Oro Grande, CA 92368

By: **COPY**
Eldon Heaston
Air Pollution Control Officer

Capacity	Equipment Description
0	Calciner 421CL400
726	Rotary kiln 431KL100, 726 MMBtu/hr
3.31	Two kiln drive motors, 1300 total hp
0.29	Kiln drive motor cooling fans, oil pumps and auxiliary drives, 114.8 total hp
0.0041	Eight roller lubrication pumps, 1.6 total hp
1.02	Kiln burner primary air fan 431FN104, 400 hp
0.14	Kiln burner carriage motor and cooling air fan, 53 total hp
0.077	Two kiln outlet cowl cooling fans, 30 total hp
0.001	Two kiln burner isolation gates, 0.4 total hp
1.53	Two kiln shell cooling fans, 600 total hp
1.17	Cooling water pumps, 460 total hp
0.23	Clinker cooler hydraulic pump, 88.5 hp
0.26	Polytrack clinker cooler 441CC100, 100.3 total hp
2.03	Clinker cooler oil supply pump and oil pumps, 797.7 total hp
7.29	Eleven cooler fans, 2857.5 total hp
0.55	Clinker breaker and cooling fan 441AC101, 215 total hp
1.64	Heat exchanger 441HE500, 644.1 total hp
0.051	Three screw conveyors (441SC501, 551 and 552), 19.8 total hp
0.033	Two drag chain conveyors (441CV552 and 553), 13 total hp
0.0046	Three cooler baghouse hoists, 1.8 total hp
0.0046	Two baghouse tipping valves, 1.8 total hp
0	Selective Non-Catalytic Reduction (SNCR) injection system

CONDITIONS:

1. This equipment must be installed, operated and maintained in strict accordance with those recommendations of the manufacturer/supplier and/or sound engineering principles which produce the minimum emissions of air contaminants. Unless otherwise noted, this equipment must also be operated in accordance with all data and specifications submitted with the application for this permit. [District Rule 204]

2. The kiln shall not be operated unless vented to baghouse 331BF101 (C007411). The clinker handling system shall not be operated unless vented to baghouse 441BF101 (C007406). The clinker cooler (441CC100) shall not be operated unless vented to baghouse 441BF550 (C007412).
[District Rules 204, 1303(A); 40 CFR 63.1346(g)]

3. When the kiln is in operation, emissions shall not exceed the following limits at any firing rate, without regard to the nature of fuel or fuel combination charged except during startup or shutdown. Compliance with these emissions limits shall be determined by using stack test results, a CPMS, a CEMS and/or clinker production data (TSP and PM10 emission limit compliance shall be determined by using annual source test results and clinker production data) and calculating an arithmetic average of the previous 30 operating days (operating day is defined as any 24-hour period beginning at midnight in which any combustion of fuel and/or introduction of feedstock into the kiln occurs) with exception, as noted for D/F.
(a) Kiln Exhaust:
(i) NOx - 2.45 lb/ton of clinker and 16,800 pounds per day
(ii) SOx - 0.13 lb/ton of clinker and 780 pounds per day
(iii) CO - 1.5 lb/ton of clinker and 9000 pounds per day
(iv) VOC (as propane) - 0.06 lb/ton of clinker and 360 pounds per day
(v) PM10 - 0.106 lb/ton of clinker and 636 pounds per day
(vi) PM, filterable - 0.07 lb/ton of clinker (includes inline coal mill stack emissions per 40 CFR 63.1343(b)(2))
(vii) D/F - 0.2 ng/dscf (TEQ) of exhaust gases @ 7% O2 [3-hour average]
(i) unless the average temperature at the inlet to the first PM control device during the D/F testing is 400 F or less, then 0.40 ng/dscm (TEQ).

(viii) Hg - 55 lb/MM tons clinker
(ix) THC (as propane) - 24 ppmvd as propane @ 7% O2
(x) HCl - 3 ppmvd @ 7% O2
(xi) Ammonia Slip - 10 ppmvd @ 7% oxygen [24-hour average], verified by CEMS, and 9.06 tons per year
(b) Clinker Cooler Exhaust
(i) TSP (front half only) - 0.099 lb/ton of clinker and 595 pounds per day
(ii) PM10 (front and back half) - 0.084 lb/ton of clinker and 504 pounds per day
(iii) PM, filterable - 0.07 lb/ton clinker
[District Rules 204, 1161, 1303, 1320; 40 CFR 63.1343(a),(b)]

4. Pound per ton of clinker emission limits for NOx, SOx, CO, and VOC shall not apply during startup or shutdown (as defined by District Rule 1161). The duration of a startup or shutdown period shall not exceed 36 hours.
[District Rule 1161]

5. PM filterable, D/F, Hg, THC, HCl limits shall not apply during startup (from when the induced draft fan is turned on and fuel is fired in the main burner to when feed is continuously introduced into the kiln for at least 120 minutes or when the feed rate exceeds 60 percent of the kiln design limitation rate, whichever occurs first) or shutdown (beginning when feed to the kiln is halted and ending when the continuous kiln rotation ceases).
[40 CFR 63.1341, 1343(b)]

6. The owner/operator shall install, operate, and maintain a Continuous Emissions System (CEMS) for CO, NOx, SOx, HCl, ammonia slip, and THC/VOC (as propane) as well as gaseous O2 on the kiln exhaust [baghouse (311BF101) under permit C007411], a Continuous Emission Rate Monitoring System (CERMS) on the kiln exhaust, and a Continuous Parametric Monitoring System (CPMS) for PM-filterable, D/F, and Hg on the kiln exhaust [baghouse (311BF101) under permit C007411], and a CPMS for PM-filterable on the clinker cooler exhaust [baghouse (441BF550) under permit C007412].
[District Rules 401, 1203, 1303(A); 40 CFR 63.1348(b), 1350]

7. The owner/operator shall develop and follow emissions monitoring plans for each CEMs and CPMS.
[District Rules 218, 1303; 40 CFR 63.8, 63.1350]

8. The District requires an approved quality assurance program for the continuous monitoring systems. This program shall be in strict accord with 40 CFR 60 Appendix F and shall include all monitored pollutants, gases, and parameters. Missing CEMS data shall be substituted per the procedures stipulated in 40 CFR 75, Subpart D. Continuous monitoring systems shall meet the following acceptability testing requirements from 40 CFR Appendix B and the requirements provided in 40 CFR 63.1350.
(a) For SO2 and NOx CEMS - Performance Specification 2.
(b) For O2 CEMS - Performance Specification 3.
(c) For CO CEMS - Performance Specification 4.
(d) For CERMS (stack gas flow rate - Performance Specification 6.
(e) For THC/VOC CEMS - Performance Specification 8 or 8A.
(f) For Hg CPMS (sorbent trap monitoring, exhaust gas flow) - Performance Specification 12B.
(g) For HCl CEMS - Performance Specification 15 or 18.
(f) For PM and D/F CPMS - follow 40 CFR 63.1350(m) requirements.
[District Rules 401, 1161, 1203; 1303(A); 40 CFR Part 60 Appendix B, 63.1350, 75 - Subpart D]

9. The owner/operator shall submit to the APCO and USEPA Region IX the following information for the preceding calendar quarter by January 30, April 30, July 30 and October 30 of each year this permit is in effect. Each January 30 submittal shall include a summary of the reported information for the previous year. This information shall be maintained on site for a minimum of five (5) years and shall be provided to District, State or Federal personnel on request:
(a) Daily and rolling 30-day average kiln and clinker cooler CO, NOx, SOx, and VOC (as propane) emissions (in pounds and pounds per ton of clinker);
(b) 24-hour average ammonia concentrations (corrected to 7% oxygen). Annual ammonia kiln emissions (in tons per year), must be reported in the January 30 submittal for the previous year;
(c) Daily and rolling 30-day average clinker production (in tons);
(d) Type and amount of each fuel used (tons for coal, thousands of cubic feet for gas) on a daily basis;
(e) A log of all excess emissions, including the information regarding malfunctions/breakdowns;

(f) A continuous monitoring system performance report for any event when data indicates the source is not in compliance with the applicable emission limit.
(g) Any permanent changes made in the plant process or production which would affect air pollutant emissions, and indicate when such changes were made; and,
(h) Any maintenance to any air pollutant control system (recorded on an as performed basis).
[District Rules 1161, 1320 and 1600; 40 CFR 63.1354(b)]

10. Within 180 days of initial start-up of this equipment, the o/o shall conduct emissions measurements on the effluent gases of this equipment. The testing shall follow the District's Compliance Testing Procedural Manual. This manual requires a pre-test meeting with the o/o, the testing firm selected by the o/o and District personnel. This meeting shall decide the salient features of accepted testing methods and deviations therefrom. Once agreement to methods and any necessary deviations have been agreed upon by all parties, the o/o shall submit a written protocol. After the District accepts the protocol with modifications, testing may begin. The District requires a minimum of 10 days' notice prior to the testing, so that observers may be scheduled for the District. Within 45 days subsequent to the last day of on-site measurement and/or samples collections, the o/o shall submit a final report to the District. The written protocol and final report requirements are spelled out in the manual. Parameters to be measured are as follows: NOx, SOx, CO, VOC (as propane), PM and PM10, Pb, Cr, Ni, HCl, H2O, O2 , N2 and CO2.
[District Rule 1161]

11. Placement of sampling ports, their number and material of construction as well as access to them shall be approved by the District, pursuant to District Rule 217. The District shall also approve any utilities which may be necessary for any and all sample collections and measurements required for compliance demonstrations.
[District Rule 217]

12. The owner/operator shall comply with the general source testing requirements of 40 CFR Part 63 Subpart LLL summarized as follows:
(a) PM (kiln, coal mill, and clinker cooler)
(i) Conduct performance tests using EPA Method 5 or 5I annually. For the kiln, test with raw mill on and raw mill off, separately. Follow testing requirements per 40 CFR 63.1349(b)(1).
(ii) During the performance test, monitor continuous performance through the use of a PM CPMS and establish a site-specific operating limit.
(b) D/F (kiln)
(i) Conduct performance tests using EPA Method 23 every 30 months. Test with raw mill on and raw mill off, separately. Follow testing requirements per 40 CFR 63.1349(b)(3).
(ii) During the performance test, monitor the baghouse inlet temperature continuously and average for each run.
(c) HCl (coal mill)
(i) Conduct performance tests using EPA Method 321 every 30 months at the coal mill. Test with raw mill on and raw mill off, separately. Follow testing requirements per 40 CFR 63.1349(b)(6).
(ii) During the performance test, continuously monitor the HCl from the kiln through use of a CEMS during the test.
(iii) Establish a 30-day kiln operating day site-specific operating limit, based upon the results of the HCl source test results from the coal mill.
(d) THC (coal mill)
(i) Conduct performance tests using EPA Method 25A every 30 months at the coal mill.
(ii) During the performance test, continuously monitor the THC at the kiln through use of a CEMS during the test.
(iii) Establish a 30-day kiln operating day site-specific operating limit based on the results of the THC source test results from the coal mill.
(e) Hg (coal mill)
(i) Conduct performance tests using EPA Method 30B every 12 months at the coal mill. If the mercury emissions from the coal mill are below method detection limits for two consecutive annual performance tests, reduce frequency of source testing to once every thirty (30) months.
(ii) Use the Hg results from the coal mill source test as described in 40 CFR 63.1350(k)(5) to demonstrate continuous compliance with the kiln mercury emission limit.
[40 CFR 63.1349, 1350(b)(1)]

13. The owner/operator shall limit the temperature at the kiln baghouse inlet to values measured during D/F performance test (with raw mill on and off, respectively) except during periods of startup and shutdown when the temperature may be exceeded by no more than 10 percent.
[40 CFR 63.1346(a)&(b)]

14. The owner/operator must notify the District according to the following schedule:
(a) Notify MDAQMD of a performance test at least 60 days before the test is scheduled to begin.
(b) Provide MDAQMD with a test plan prior to performance testing.
(c) Submit test report to MDAQMD within 45 days after source test date.
(d) Notify MDAQMD within 48 hours of an exceedance that triggers retesting to establish compliance and new operating limits.
[40 CFR 63.1353(b), 1354(b)]

15. Fuel to the kiln system may include coal, coke, natural gas, and other alternate fuels as specified below. Alternate fuels can only include fuels which can be characterized as non-hazardous secondary materials (NHSMs) following the provisions of 40 CFR 241 Subpart B. This equipment may be fired with alternate fuels per the specifications listed below:
(a) Bags from baghouses at this facility.
(b) Tire Derived Fuel (TDF), specifically, any combination of whole tires, chipped tires, or separated portions of tires.
(c) Biosolids.
(d) Biomass fuels (including, but not limited to, pistachio shells, almond shells, yard clippings, and Construction and Demolition (C&D) wood meeting the definition of 40 CFR 241.2). Compliance with the non-hazardous C&D requirement shall be evidenced by suppliers' written certification that the C&D wood was processed by trained operators in accordance with best management practices (as described in 40 CFR 241.4(a)(5)).
(e) Paper cardboard.
(f) Engineered fuel.

A source test is required for each alternate fuel to ensure continued compliance with 40 CFR 63 Subpart LLL and to quantify the toxic emission rate and effects of each listed toxic pollutants pursuant to the AB2588 Hot Spots EICG Regulation. A subsequent permit modification may be necessary to define the fuel parameters for continued use of each alternate fuel. This source test as listed under Condition 16 is required prior to the introduction of 30,000 short tons for each fuel or when the hours exceed that specified in Condition 21, whichever occurs first.
[District Rule 1302; 40 CFR 63.1348(c)]

16. Source testing requirements regarding the use and effects of alternate fuels in the kiln are summarized as follows:
(a) For engineered fuels, pursuant to 40 CFR 63 Subpart LLL, the owner/operator shall conduct a dioxin/furan test (and HCl per 40 CFR 63 Subpart LLL when HCl emissions are not continuously monitored), using EPA Method 23 and following a District-approved test protocol, inputted at the maximum allowable rate of engineered fuel.
(b) For all other alternate fuels, the owner/operator shall evaluate and report to the District the air toxic emission rates for each alternate fuel, using test requirements specified in 40 CFR 63 Subpart LLL and/or CARB/EPA reference methods, and following a District-approved test protocol, inputted at the maximum feed rate of each alternate fuel. Air toxic pollutants tested shall follow those listed by the AB2588 EICG Regulation for cement manufacturing.
(c) If the results of the toxics emissions assessment pursuant to item "b" above indicate that there is no increase in toxic emissions, then no additional testing will be required other than annual RATA and performance tests required by 40 CFR 63 Subpart LLL.
(d) If the results of the source test indicate that there is an increase in toxic emissions associated with the alternate fuel, the owner operator shall conduct a Prioritization Score analysis pursuant to most recently approved CAPCOA Facility Prioritization Guidelines; the most recently approved OEHHA Unit Risk Factor for cancer potency factors; and the most recently approved OEHHA Reference Exposure Levels for non-cancer acute factors, and non-cancer chronic factors. If all Prioritization Scores indicate that the Kiln is categorized as Low or Intermediate Priority, no further testing or analysis is required for the distinct fuel. If the Prioritization Scores indicate that the Kiln is categorized High Priority, the facility shall conduct a Health Risk Assessment pursuant to District Rule 1320 - NSR for Toxic Air Contaminants and adhere to the requirements and procedures of District Rule 1320 pending the results of the Health Risk Assessment.
[District Rule 1302; 40 CFR 63.1348(c)]

17. During periods of startup and shutdown, the owner/operator:
(a) Must use only clean fuels including natural gas, synthetic natural gas, propane, distillate oil, synthesis gas (syngas), and ultra-low sulfur diesel (ULSD) may be used until the kiln reaches a temperature of 1200 F,
(b) Must have the dry sorbent and activated carbon system turned on and operating once the baghouse inlet reaches 300 F (five minute average). The dry sorbent and activated carbon system can be turned off during shutdown.
(c) Must limit Kiln heat input to a maximum of 4,500 MMBtu/day.
[District Rule 1161; 40 CFR 63.1346(g)]

18. The owner/operator must prepare and follow a District approved site-specific operations and maintenance plan pursuant to 40 CFR 63 Subpart LLL.

[40 CFR 63.1347]

19. Components of the kiln combustion system must be inspected at least once per year in accordance with the procedures specified in the District approved site-specific operations and maintenance plan.
[40 CFR 63.1347]

20. The owner/operator must monitor hourly clinker production by the use of a permanent weigh scale system to measure and record weight rates in tons-mass per hour of the amount of clinker produced and record the daily clinker production rates. Maintain the weigh scale system within 5% accuracy and record of the accuracy of the system on a quarterly basis.
[40 CFR 63.1348(b), 1350(d)]

21. The owner/operator shall repeat required performance testing within 360 hours of initiating any change in operations that may adversely affect compliance with an applicable standard, operating limit, or parametric monitoring value pursuant to 40 CFR 63 Subpart LLL .
[40 CFR 63.1348(c)]

22. The equipment under this permit shall be operated in compliance with applicable requirements of 40 CFR 63 Subpart LLL - National Emission Standard for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry.
[40 CFR Part 63 Subpart LLL]

23. The owner/operator must conduct an initial ammonia source test within 90 days of placing equipment into operation and every 12 months thereafter, according to the procedures in EPA Test Method 320, Measurement of Vapor Phase Organic and Inorganic Emissions by Extractive Fourier Transform Infrared Spectroscopy, or other applicable test methods with prior written approval by the District.

The owner/operator shall conduct all required compliance/certification tests in accordance with the MDAQMD Compliance Test Procedural Manual. Thirty (30) days prior to the compliance/certification tests, the operator shall provide a written test plan for District review and approval. Written notice of the compliance/certification test shall be provided to the District ten (10) days prior to the test so that an observer may be present. A written report with the results of such compliance/certification test shall be submitted to the District within forty-five (45) days after testing.
[District Rules 204 and 1302]

24. Ammonia injection shall only commence when the kiln is operating under normal production levels, as defined under MDAQMD Rule 1161. Ammonia injection will not occur when the kiln is in start-up or shut-down, as defined under MDAQMD Rule 1161.
[District Rule 1320]