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

B001025

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: APRIL 2027

OWNER OF OPERATOR (Co.#118)

Mitsubishi Cement Corporation
5808 State Highway 18
Lucerne Valley, CA 92356

EQUIPMENT LOCATION (Fac.#1)

Mitsubishi Cement - Cushenbury Plant
5808 Highway 18
Lucerne Valley, CA 92356

Description:
CLINKER PYRO PROCESSING KILN consisting of: Kiln and pre-calciner. 4-RK-1 and 4-SP-1 with a total heat input of 751 MMBtu/hr, and tire-fuel conveying system. Horsepower ratings are converted to Btu ratings using 2550 Btu/hp factor in capacity listing (rating is in units of MMBtu/hr).

EQUIPMENT

Capacity	Equipment Description
0	4-AP-1 Aeration Pad
0	4-AS-1,2 Air Slides
0.1	4-AB-1,4 Air Blowers for 4-AP-1, 4-AS-1,2 (40 total hp)
0	4-AS-4,6,8,10 Air Slides
0.01	4-AB-2 Air Blower for 4-AS-4,6,8 (7.5 hp)
0	4-AS-5,7,9 Air Slides
0.01	4-AB-3 Air Blower for 4-AS-3,5,7,9 (7.5 hp)
0.19	4-AB-5 Clinker Reclaim (Modco) System (75 hp)
0.03	4-RV-1,2 Rotary Valves, 2 @ 7.5 hp ea.
0	4-CY-1-10 Cyclones
0	4-SP-1 Pre-calciner (Suspension Preheater)

Fee Schedule: 8 (f) Rating: 772900930 Btu SIC: 3241 SCC: 30500606 Location/UTM(Km): 514E/3802N

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.

Mitsubishi Cement Corporation
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By: **COPY**
Brad Poiriez
Executive Director

Capacity	Equipment Description
0.03	4-FA-16 Air Seal Fan (15 hp)
751	4-SP-1 and 4-RK-1 Total heat input of 751 MMBtu/hr
2.04	4-RK-1A,1B Motor Drive for Kiln, 2 @ 400 hp ea.
0.1	4-ED-1,2 Emergency Drives, 2 @ 20 hp ea.
0.26	4-FA-19-39 Shell Cooling Fans, 21 @ 5 hp ea.
0.1	4-FA-120-127 Shell Cooling Fans, 8 @ 5 hp ea.
0.02	4-FA-17,18 Kiln Drive Cooling Fans, 2 @ 5 hp ea.
0.06	4-FA-40 Air Seal Cooling Fan (25 hp)
0	7-BU-4 Burner for Kiln
0	7-BU-5 Pre-calciner Coal Burner (stationary)
0	7-BU-6 Pre-calciner Gas Burner (stationary)
0	7-BU-7 Pre-calciner Gas Burner Stabilizer
0.01	7-FA-18 Pre-calciner Primary Fan (7.5 hp)
0.15	7-FA-17 Kiln Primary Air Fan (60 hp)
12.75	4-FA-12,13 Pre-heater Exhaust Fans, 2 @ 2500 hp ea.
0.03	4-FA-14,15 I.D. Motor Cooling Fans, 2 @ 7.5 hp ea.
1.14	4-AC-2,3,4 Air Compressors, 3 @ 150 hp ea.
0.1	4-WP-1,2 Water Pumps, 2 @ 25 hp ea.
0.3	4-WP-3,4 Water Pumps, 2 @ 60 hp ea.
0.38	4-FA-41 Grate Cooler Fan (150 hp)
0.38	4-FA-42 Grate Cooling Fans (150 hp)
1.02	4-FA-43 Rate Cooling Fans (400 hp)
0.76	4-FA-44 Grate Cooling Fans (300 hp)
1.02	4-FA-45 Grate Cooling Fans (300 hp)
0.01	4-FA-50A,B Air Cooling Fans, 2 @ 3 hp ea.
0.19	4-CC-1 Clinker Grate Cooler (75 hp)
0.31	4-BR-1 Clinker Breaker (125 hp)
0.15	4-FA-55 Clinker Breaker Housing Cooling Fan (60 hp)
0.03	4-FA-56 Clinker Breaker Cooling Fan (15 hp)
0.01	4-CD-1 Drag Conveyor (7.5 hp)
0.12	4-DDC-1 Deep Drawn Conveyor (50 hp)
0	4-DA-3A,B Dust Dampers, 2 @ 0.1 hp ea.
0.001	4-DA-54,55,56,57 Dust Dampers, 4 @ 0.1 hp ea.
0.01	4-FA-51,52 Cooling Fans, 2 @ 3 hp ea.
0.1	4-FA-100,101 Air Blower Fans (7.5 and 25 hp)
0.004	4-DAA-5 Dust Dampers @ 0.75 hp
0.004	4-DA-6 Dust Dampers @ 0.75 hp
0	7-LBF-1 Live Bottom Feeder
0	7-BC-10 Belt Conveyor
0	7-SGL-1 Tire Singulators (10 hp)
0	7-BC-10A Belt Conveyor
0	7-BC-11 Belt Conveyor
0	7-LRC-1-18 Roller Conveyers (18 LRC, total 17 hp)
0	7-GA-114,115 Tire Shoot Gates
0	7-WF-5 Weigh Feeder

CONDITIONS:

1. Limestone ore charged to the process shall only be obtained from the Cushenbury or Marble Canyon quarries unless a sulfur analysis of the proposed replacement ore is submitted to the District a minimum of 60 days prior to intended use, and written permission of the APCO is obtained for use of the replacement ore.

2. This equipment shall not be operated unless it is vented to air pollution control equipment operating under valid District permits C001338 (3-DC-10-45), C000984 (4-DC-17-21 & 31-35), C001026 (4-DC-40) under B002137, and C002782 (4-DC-46) under B002137, and C012320 (4-DC-28/29).

3. The daily emissions for each operating day for this kiln system shall be recorded and/or calculated in a manner approved by the District. The data shall be submitted to the District within 30 days of the end of each calendar quarter. The daily emissions of the following pollutants CO, NOx, SOx, and O2 (a diluent gas) shall be monitored using a Continuous Emissions Monitoring System (CEMS). The stack gas flow rate shall be monitored using a Continuous Emission Rate Monitoring System (CERMS), or other District approved method.

4. Daily data shall be maintained for the operation of the kiln which include, but are not limited to, the items listed below. This data shall be kept current and on-site for a minimum of five (5) years and provided to federal, state, and/or District personnel upon request.
a) Hours of operation per day.
b) Dates of major repairs and/or replacements and dates of routine repairs.
c) Type(s) and mass quantity of fuels and fuel supplements being used, and the associated feed rate.

5. NOx emissions from this kiln shall not exceed the following:
a) 2.8 pounds of NOx per ton of clinker produced when averaged over any 30 consecutive day period under all operating conditions other than those specified under section 'b.' below.
b) 3.4 pounds of NOx per ton of clinker produced when averaged over any 30 consecutive day period when this equipment is fired on more than 15% of heat input from any combination of Low-Carbon Fuels or the low-carbon portion of fuel mixtures.
c) 2, 640 tons per year of NOx.
Low-Carbon Fuels are defined as natural gas and carbon-neutral fuels such as but not limited to biomass, and mixtures containing carbon-neutral fuels. Coal is not a Low-Carbon Fuel.
[District Rule 1161 and District Rule 1302(C)(1)(a)]

6. Fuel to the kiln system may include coal, natural gas (Low-Carbon Fuel), and other supplemental fuels as specified below. All emission limitations specified in these conditions apply irrespective of fuel or fuel mixture. This equipment may be fired with supplemental fuels per the specifications listed below:
a) Combustible materials generated at this facility, specifically, lubricants (semi-solids), oil soaked rags, oil soaked sorbent, waste paper, and bags from baghouses at this facility. These materials shall have a combined average daily weight of no more than 550 pounds per day, averaged on a calendar year basis.
b) Tire Derived Fuel (TDF), specifically, any combination of whole tires, chipped tires, or separated portions of tires. The feed rate of TDF being utilized shall not exceed 26% of the total BTU content being fed into the kiln for any single hourly average, or 22% on any 24-hour average basis. The maximum heat value of TDF may be increased up to 70% with the addition of a chipped tire feed system (see B010724) pending a source test to demonstrate no increase in HAPS, criteria pollutants and/or Health Risk. The source test must be completed prior to usage of 50,000 short tons of chipped tires.
c) Biosolids (Low-Carbon Fuel) may be used as a NOx reduction agent and as a supplementary fuel in the Cushenbury plant cement kiln system. The biosolids injection/feed rate shall not exceed 5 tons/hour calculated at zero percent moisture.
d) Wood products (Low-Carbon Fuel), specifically, natural vegetation, and Construction and Demolition (C&D) wood meeting the definition of 40 CFR 241.2 and 241.4. Heat input of all wood materials may be up to 13% of the total BTU feed rate on a 24-hour basis and shall be injected only into either the front end of the kiln or the combustion zone of the pre-heater tower. Compliance with the non-hazardous requirement shall be evidenced by suppliers manifests of non-hazardous wood product fuel supplied and by the retention of the source test demonstrating no increase in criteria or HAP emissions for the specified wood product fuel.
e) Engineered Fuel*, specifically non-hazardous materials processed by Material Recovery Facilities or similar facilities that process nonhazardous waste in which the waste has been further processed to meet the consistent specifications for chlorine content that is not to exceed 5000 ppm based on an annual average from monthly representative load samples. Heat input of all engineered fuels may be up to 20% of the total BTU feed rate on a 24-hour basis and shall be injected only into either the front end of the kiln or the combustion zone of the pre-heater tower. Compliance with the non-hazardous requirement shall be evidenced by suppliers manifests of non-hazardous engineered fuel supplied and by the retention of the source test demonstrating no increase in criteria or HAP emissions for the specified engineered fuel.

*A source test is required for engineered fuel to quantify the emission effects, and a subsequent permit modification will be made to define the fuel parameters for continued use of engineered fuel. This source test is required prior to the introduction of 20,000 short tons, based on a cumulative total for all testing, pursuant to conditions 7 and 8.

7. The emissions effects of engineered fuel, as allowed by condition 6, are to be monitored by Continuous Emissions Monitoring as it is introduced.
a) Testing periods will be identified in the quarterly emission reports, including start and end time, fuel type, and total amount combusted.
b) Records shall be kept for kiln total BTU input during testing periods, based on either laboratory or published BTU contents.
c) NOx, total hydrocarbon, CO, and SOx emissions, based on average emissions during periods of testing, as recorded by the plant CEMS, shall be maintained below the maximum 72-hour average from the previous two years of data during periods without the fuel being tested. Data obtained during periods of testing shall be averaged over the quarter; a minimum of 72 hours of data collection is required for calculating the average. In cases where less than 72 hours is collected in a quarter testing, the data will be combined with the data from previous quarters for averaging purposes.
d) Opacity readings shall be taken per 40 CFR 63.1349(b) for each fuel type.

8. Source testing requirements regarding the use and effects of engineered fuel are summarized:
a) Pursuant to 40 CFR 63 Subpart LLL, the owner/operator shall conduct a dioxin/furan test, using EPA Method 23 and following a District-approved test protocol, inputted at the maximum allowable rate per fuel.
b) If the results of the source test indicate that there is no increase in Health Risk, then no additional source testing will be required other than annual RATA and the dioxin/furans test as required by 40 CFR 63.
c) If the results of the source test indicate that there is an increase in Health Risk, 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 facility 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 facility 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 this rule pending the results of the Health Risk Assessment.

9. This facility shall be maintained in compliance with; NSPS 40 CFR 60 Subparts F, Y and OOO; and 40 CFR 63 Subpart LLL. In the event of conflict between District permit conditions and these Federal requirements, the more stringent requirements shall govern.

10. A facility wide Comprehensive Emission Inventory (CEI) for all emitted criteria and toxic air pollutants must be submitted to the District, in a format approved by the District, upon District request.
[District Rule 107(b), H&S Code 39607 & 44341-44342, and 40 CFR 51, Subpart A]