

AUTHORITY TO CONSTRUCT ENGINEERING EVALUATION

Reviewed by: _____
Title: APCO EKAPCD
Date: _____

Applicant: **California Portland Cement Co.**

Mailing Address: 9350 Oak Creek Road
Mojave, CA 93501

Contact Name: Olivia Fisher, Env. Manager
Phone Number: 1-661-823-3731

Fax Number: ofisher@calportland.com

Application No.: **1003061B, 077**

Project #: 230526

Location: 9350 Oak Creek Road, Mojave,
Mojave

QS/T/R: SW24/T11N/R14W

Latitude: 35.029660

Longitude: -118.321490

Project Title: Modify Existing Flexibility Crushing System and Install Prime Generator

App. Rec.: 5/26/2023
Deemed Complete: 1/26/2024
180 Days: 7/24/2024

App. Changes: 10/25/2023
Submittal Date: 4/24/2024

Evaluation By: Miguel Sandoval

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I. PROPOSAL:

Calportland Cement Co. is proposing to modify their existing alternative crushing system consisting of an electrically powered crusher, a screen, and supporting conveyors under PTO No. 1003061. Applicant would like flexibility to operate different equipment makes/models under this permit and is proposing to revise equipment description section to include a general number of each type of equipment rather than specific makes/models. A diesel fueled engine up to 173-bhp driving a portable generator to provide supplemental power for new crushing system under ATC 1003076 is also proposed. There are no kindergarten through 12-grade schools within 1000-feet of the unit; therefore, a school notice in accordance with California Health and Safety Code

Section 42301.6 is not required. Additionally, in accordance with Rule 210.1, new units will be evaluated for Best Available Control Technology (BACT) and offset requirements.

II. APPLICABLE RULES and REGULATIONS:

- A. Rule 201 - Permits Required (Amended 05/02/96)
Any person building, altering, or replacing any equipment, the use of which may cause the issuance of air contaminants or the use of which may eliminate or reduce or control the issuance of air contaminants, shall first obtain authorization for such construction from the APCO. An Authority to Construct (ATC) shall remain in effect until the permit to operate the equipment for which the application was filed is granted, denied, or canceled.
- B. Rule 208.2 - Criteria for Finding of No Significant Environmental Impact [California Environmental Quality Act (CEQA)] (Amended 1/8/98)
Establishes criteria by which a project under review by EKAPCD can be found to have no potential for causing a significant environmental impact, and, thus, be granted a general rule exemption pursuant to Section 15061(b)(3) of the State CEQA Guidelines.
- C. Rule 210.1 - New and Modified Stationary Source Review (Amended 07/11/96)
a) Provide for pre-construction review of new and modified stationary sources of affected pollutants to insure emissions will not interfere with the attainment of ambient air quality standards.
b) Insure that appropriate new and modified sources of affected pollutants are constructed with Best Available Control Technology, and
c) Provide for no significant net increase in emissions from new and modified stationary sources for all non-attainment pollutants and their precursors.
- D. Rule 401 - Visible Emissions (Amended 11/29/93)
A person shall not discharge into the atmosphere emissions as dark or darker than Ringelmann 1 or 20% opacity for more than 3 minutes in any one hour.
- E. Rule 404.1 - Particulate Matter Concentration (Adopted 4/18/72)
A person shall not discharge from any single source operation, the construction or modification of which commenced after the adoption of this rule, particulate matter in excess of 0.1 grains per cubic foot of gas at standard conditions.
- F. Rule 405 - Particulate Matter Emission Rate (Amended 05/1/97)
Emission Limits must not exceed corresponding Process Weight Rate.
- G. Rule 407 - Sulfur Compounds (Adopted 04/18/72)
A person shall not discharge into the atmosphere sulfur compounds, which would exist as a liquid or gas at standard conditions, exceeding in concentration at the point of discharge: 0.2 percent by volume calculated as sulfur dioxide (SO₂).
- H. Rule 419 - Nuisance (Adopted 4/18/72)
A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public or which endanger the comfort, repose, health or safety of any such persons or the public or which cause or have a natural tendency to cause injury or damage to business or property
- I. Rule 423 – National Emissions Standards for Hazardous Air Pollutants (40 CFR 63 Subpart

ZZZZ: National Emissions Standards for Reciprocating Internal Combustion Engines
(Amended 01/13/11)

Establishes national emission and operating limitations for hazardous air pollutants (HAP) emitted from stationary reciprocating internal combustion engines (RICE) located at a major and area sources of HAP emissions. Requirements to demonstrate initial and continuous compliance with limitations are also established.

- J. Rule 427 – Stationary Piston Engine (Oxides of Nitrogen) (Amended 11/01/01)
This rule shall apply to all rich-burn, lean-burn, and diesel engine of more than 50 rated brake horsepower.
- K. California Code of Regulation (CCR), Title 17, Section 93115
Airborne Toxic Control Measure (ATCM) for stationary compression ignition engine.

III. **EQUIPMENT SCHEMATIC:**

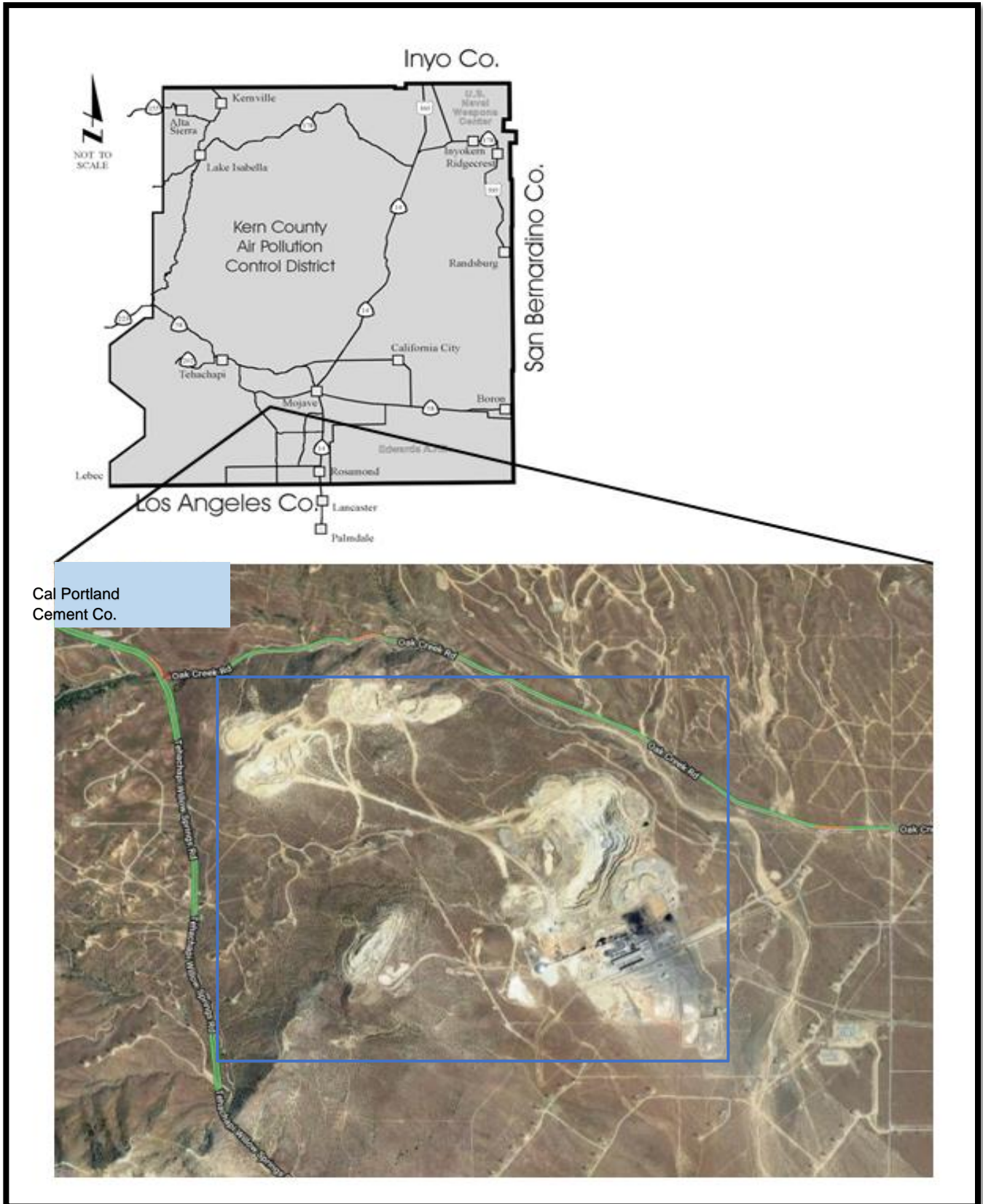


Figure 1: General Vicinity Map

IV. EQUIPMENT LISTING:

1003061B:

Portable Crushing and Screening Operation including up to the following equipment:

- A. ~~Vibrating Feeder and Tapered Loading Hopper, 36 in. X 12 ft. with 20.0-hp electric motor;~~
- B. ~~Model 3036 Telsmith Horizontal Shaft Impact Crusher with 75.0-hp electric motor;~~
- C. ~~Under-Crusher Conveyor, 30 in. with 5.0-hp electric motor;~~
- D. ~~Value-King Double-Deck Vibrating Screen, 4 ft. X 12 ft. with 15.0-hp electric motor;~~
- E. ~~Closed-Circuit Conveyor, 18 in. with 5.0-hp electric motor;~~
- F. ~~Side Transfer Conveyor, 18 in. with 5.0-hp electric motor;~~
- G. ~~Side Transfer Product Conveyor, 36 in. with 10.0-hp electric motor;~~
- H. ~~Radial Stacker, 36 in. X 80 ft. with 15.0-hp electric motor;~~
- I. ~~Under-Screen Conveyor, 42 in. with 15.0-hp electric motor; and~~
- J. ~~Product Conveyor, 36 in. X 60 ft. with 15.0-hp electric motor.~~

1. Vibrating feed and loading hopper with electric motor rated up to 20-hp.
2. Vibrating screen with electric motor rated up to 15-hp.
3. Crusher with electric motor rated up to 75-hp.
4. Six (6) conveyor belts driven by electric motors totaling 65-hp.

1003076:

Generator set, driven by EPA Certified Tier 4, diesel fueled piston engine with turbocharger, after cooler, and rated up to 173-bhp.

V. ENGINEERING ANALYSIS:

1003061B:

Calportland Cement Co. is proposing to modify their existing portable crushing system permit consisting of an electrically powered crusher, a screen, and supporting conveyors under PTO No. 1003061. Applicant would like flexibility to operate different equipment makes/models under this permit and is proposing to revise equipment description section to include a general list of the total number of each equipment type rather than specific makes/models. Calportland is not proposing to increase permitted emission or electric horsepower rating. Therefore, potential to emit shall remain the same.

1003077:

A diesel fueled engine up to 173-bhp driving a portable generator to provide supplemental power for new crushing system is also proposed. New crushing system was previously permitted under PTO 1003077. Combustion of diesel fuel generates criteria air pollutants: particulate matter of 10 microns or less (PM₁₀), volatile organic compounds (VOC), carbon monoxide (CO), oxides of sulfur (SO_x) and oxides of nitrogen (NO_x). PM₁₀, VOC, NO_x, and CO emissions will be calculated using Airborne Toxic Control Measure (ATCM) emission limits for proposed engine rating category. SO_x emissions would be obtained by performing a mass balance calculation using engine average fuel use and sulfur concentration.

Airborne Toxic Control Measure for Stationary Compression Ignition Engine (ATCM)

In accordance with Title 17, California Code of Regulations section 93115, non-road new stationary prime diesel engine must comply the following:

- 1) CARB diesel fuel or alternative diesel fuel that has been verified for use
- 2) Tier 4 Non-Road Engine Certification Standard for a 2015+ model year engine between 175-bhp and 750-bhp

2014+ model year engine between 175-bhp and 750-bhp are required not to exceed the following emissions limits:

| | | |
|-----------------|------|----------|
| PM | 0.01 | g/bhp-hr |
| NO _x | 0.30 | g/bhp-hr |
| NMHC | 0.14 | g/bhp-hr |
| CO | 2.6 | g/bhp-hr |

Proposed engine model (Tier 4) has been certified according to **CARB certificate** U-R-022-0214, certification data is summarized below:

| | | |
|-----------------|------|----------|
| PM | 0.01 | g/bhp-hr |
| NO _x | 0.21 | g/bhp-hr |
| NMHC | 0.01 | g/bhp-hr |
| CO | 0.02 | g/bhp-hr |

Based on the certification data above, the proposed 173-bhp diesel engine meets Federal and State requirements. Applicant will required to maintain an EPA certified Tier 4 engine complying with ATCM requirements. Additional requirements for a prime use engine shall be incorporated into the Authority to Construct (ATC).

A. Toxic Emission Screening Health Risk Assessment:

1003061B,

Calportland is not proposing to increase permitted toxic emissions or electric horsepower rating. Therefore, an increase in health risk to the community at large is not expected.

1003077:

Combustion of diesel fuel generates toxic air contaminants. Initially, a “Prioritization Score” is obtained to determine if a more refined screening risk assessment will be required. The prioritization score was based on: diesel PM emission rate, OEHHA Risk Factors, emission release height of less than 20 meters, and a distance of approximately 3,000 meters from the nearest offsite receptor. Standard CAPCOA Method Prioritization for diesel piston engine is as follows:

| Standard CAPCOA Method | | | |
|-------------------------|--------------------------|------------------------------|---------------------|
| | Emissions Potency Method | Dispersion Adjustment Method | Project Designation |
| Non-Carcinogenic Scores | 0.00011 | 0.00011 | Low Priority |
| Carcinogenic Scores | 0.03700 | 0.03691 | Low Priority |

Based on the above carcinogenic and non-carcinogenic scores (see Attachment A for details), emissions from the 173-bhp engine do not pose a significant risk to the community at large. Therefore, a more refined risk assessment is not required.

B. Offsets:

Potential to Emit (1003061B, 077):

| | PM ₁₀ | SO _x | NO _x | VOC | CO |
|----------------|------------------|-----------------|-----------------|-------|-------|
| lb/day | 0.137 | 0.044 | 1.911 | 0.068 | 0.205 |
| tons/yr | 0.012 | 0.004 | 0.167 | 0.006 | 0.018 |

NSR Balance and SSPE for California Portland Cement are the following:

| | NSRB | NSRB | SSPE | SSPE | NSRB |
|-------------------|------------------|-----------------|-----------------|--------|-----------|
| Pollutant: | PM ₁₀ | SO _x | NO _x | VOC | CO |
| lb/day: | 1,236.04 | 8,870.58 | 12,370.58 | 532.76 | 62,155.53 |

| | | | | | |
|-----------------|--------|----------|----------|-------|----------|
| tons/yr: | 206.00 | 1,618.84 | 2,253.27 | 96.82 | 2,434.75 |
|-----------------|--------|----------|----------|-------|----------|

Pursuant to Rule 210.1, Subsection III.B, a new or modified stationary source shall provide Offsets when calculated pursuant to Subsection IV(D) equals or exceeds the following trigger levels: 15 tons/yr for PM10; 27 tons/yr for SOx; 25 tons/yr for VOC and 25 tons/yr for NOx. Based on Current NSRB and SSPE for Cal Portland, Offsets are required for PM10 and NOx. The applicant will be required to provide contemporaneous offsets prior to issuance of Permit to Operate. The following table shows the required offset:

| | Emission Increase (ton/yr) | Offset Ratio | ERC Required |
|-------------|-----------------------------------|---------------------|---------------------|
| PM10 | 0.01 | 1.2 | 0.01 |
| SOx | 0.00 | | 0.00 |
| NOx | 0.17 | | 0.20 |
| VOC | 0.00 | | 0.00 |

Applicant will utilize internal Emission Reduction Credits (ERC) to offset PM10 emission increase. Applicant is also proposing to offset NOx emission increase with ERCs that will be transferred from their Oro Grande facility located within Mojave Desert Air Quality Management District (MDAQMD) jurisdiction. This constitutes an Inter-District offset transition, hence, a public notice along with CARB and EPA review will be conducted in accordance with Rule 210.1.

VI. BACT DETERMINATION:

1003061B:

An increase in permitted emissions is not proposed for this modification. Therefore, Best Available Control Technology (BACT) is not required.

Diesel Generator Engine:

BACT (Best Available Control Technology) is required for new stationary prime-use Diesel-fueled engine in accordance with Rule 210.1, Section III.A. BACT for a prime-use diesel fueled engine shall be the following:

| Pollutant | Control Technology |
|------------------------|--|
| PM₁₀ | Visible emissions no greater than Ringelmann ¼ or 5% opacity once normal operating temperature is achieved. Maximum PM emissions not to exceed 0.01 g/bhp-hr (Proposed engine certified at 0.01 g/bhp-hr) |
| SOx | Fuel satisfying CARB reformulated diesel specifications |
| NOx | Maximum NOx emissions not to exceed 0.30 g/bhp-hr (Proposed engine certified at 0.21 g/bhp-hr) |
| VOC | Crankcase ventilation exhausting to engine air inlet, or 90% efficient control device for crankcase VOC emissions; VOC emissions not to exceed 0.14 g/bhp-hr (Proposed engine certified at 0.01 g/bhp-hr) |
| CO | Not required |

VII. CEQA DETERMINATION:

EASTERN KERN APCD PERMITS - CEQA COMPLIANCE
Instructions for Checklist

This form is designed to be used by the permit application processing engineer in implementing requirements of the California Environmental Quality Act (CEQA) for District permitting activities when the District is the lead or responsible agency under CEQA. The District is generally a responsible agency for portions of development projects requiring District permits. The District is a commenting agency for other parts of a project, such as, indirect source emissions and vehicle trips. Most District permits are considered exempt from CEQA (see District List of Exempt Projects). In most cases the environmental document prepared by the lead agency is adequate for the District permitting action. Certain District permit modifications may require supplemental CEQA documents.

CEQA compliance for a project subject to District permit requirements includes two steps:

- A. Determining what CEQA-related information, if any, is required from the applicant to deem the application complete (this may also be identified at the pre-application stage, if there is one¹).
- B. Determining and documenting CEQA compliance for each permit application prior to granting a permit by completing the attached form.

The following instructions correspond to the questions on the form:

- B.2. Projects subject to District permits often also require a land use or other permit from other agencies. The permit engineer should check the application or request from the applicant information regarding what other agencies will be requiring permits for the project and who the "Lead Agency" will be. District permit processing should begin as soon as adequate information is available to deem the application complete, even if the lead agency has not completed the environmental document (Govt. Code ' 65941 (b), amended 1993), and if the applicant so requests (Govt. Code ' 65951, amended 1993).
- B.3. For District permits that do not fall under the preceding case, the engineer shall receive from the applicant a signed and dated environmental questionnaire (Initial Study checklist).
- C.2. As a "responsible agency" under CEQA, the Control Officer shall consider information contained in the lead agency's final EIR or ND prior to granting the District permit. Acting on behalf of the Control Officer, the engineer shall review the ND or EIR and adopt any mitigation measures for air quality impacts or project alternatives over which the District has regulatory discretion.
- C.3. If any component of the project is not listed, and if exceptions to these exemptions provided in the form are true, then the project cannot be considered exempt. In making a recommendation to issue the District permit, the permit engineer shall review the environmental questionnaire provided by the applicant to establish the project has no potential for resulting in a significant adverse environmental impact to any environmental media (see Initial Study form). The study shall also demonstrate the project will not contribute to significant cumulative impacts and will not have significant impact itself. Although no further action is required under CEQA, the applicant may request a Notice of Exemption to be filed, to reduce the statute of limitations from 180 days to 30 days, on challenges to the decision the project is exempt from CEQA.

¹ *Preapplication under PRC ' 21080.1(b) amended 1993-at the request of the applicant the lead agency must provide for pre-application consultation on the environmental document.*

EASTERN KERN APCD PERMITS -- CEQA COMPLIANCE CHECKLIST

Completeness Review Form

This form shall be completed by the permit application engineer for all Authority to Construct permit applications. The completed form shall be included in the Engineering Evaluation File.

A. General Information

Application Number: 1003061B, 077
Applicant Name: California Portland Cement Co.
Project Description: Modify Existing Flexibility Crushing System and Install Prime Generator

B. Determination of Completeness

Check the corresponding action to be taken to determine the application is complete for CEQA purposes and fill in blanks where appropriate.

1. Ministerial Exemption

This permit application is not subject to CEQA because the evaluation is a ministerial action conducted using fixed standards and objective measurements. No discretion or judgment is required in granting of this permit.

2. Project Was Exempted by or is Subject to Negative Declaration or EIR by Another Agency

This permit application was exempted by or is subject to a ND or EIR prepared (or under preparation) by another agency. The District has received the necessary information indicating another agency is acting as the Lead Agency. Therefore, the application shall be deemed complete for CEQA purposes.

3. All Other Permits

The District has received from the applicant, a completed, signed and dated environmental questionnaire and any other information necessary for preparing a negative declaration or EIR, if required (see Form Instructions B.3.). Therefore, the application shall be deemed complete for CEQA purposes.

C. Final Action

Check the appropriate action taken by the APCO prior to issuing the final permit.

1. Ministerial Action

This permit application is exempt from CEQA because the permit evaluation is a ministerial action. CEQA does not apply to ministerial actions. No further action is necessary.

2. Project Was Exempted by or is Subject to Negative Declaration or EIR by Another Agency

___ This permit application was exempted by or was subject to an EIR or Negative Declaration by another agency. The final action on the District permit was taken only after review and consideration of information in the certified CEQA document by the Control Officer, or authorized District representative of the Control Officer.

3. Exemption

This permit application is exempt from CEQA because the project, as a whole, is listed in the District List of Exempt Projects (specific exemption) under District Guidelines for Implementation of the CEQA and because it can be seen with certainty that the project has no potential for causing a significant adverse environmental impact.

In accordance with Article IV.B of District's CEQA guidelines a notice of exemption may be posted at the applicant's request.

4. Permit is Not Exempt from CEQA

___ This permit was found not to be exempt from CEQA and no other agency will be conducting a CEQA review for the project. The District has prepared and adopted a Negative Declaration/Addendum or certified an EIR for the project. The final action by the District was taken only after information contained in the final EIR or ND was considered and any significant adverse environmental effects were mitigated to the maximum extent feasible.



EASTERN KERN AIR POLLUTION CONTROL DISTRICT

2700 "M" STREET SUITE 302, BAKERSFIELD, CA 93301-2370
 PHONE: (661) 862-5250 • FAX: (661) 862-5251 • www.kemair.org

**ENVIRONMENTAL INFORMATION FORM AND
 INITIAL STUDY EVALUATION**

Applicant: CalPortland Company

Contact: Olivia Fisher

Title: Environmental Manager **Phone:** (661) 823-3731

Project Description: 1 ATC & 1 PTO mod for Portable Crushing Plants; See application report for details.

Environmental Information **Yes** **No** **Maybe**

Will the proposed project with regard to the proposed location:

- | | | | |
|--|--------------------------|-------------------------------------|--------------------------|
| 1. Conflict with the adopted environmental plans and goals of the community? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Have a substantial, demonstrable negative aesthetic effect? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3. Substantially affect a rare or endangered species of animal or plant or the habitat of the species? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 4. Interfere substantially with the movement of any resident or migratory fish or wildlife species? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 5. Substantially diminish habitat for fish, wildlife or plants? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 6. Breach published national, state, or local standards relating to solid waste or litter control? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 7. Substantially degrade water quality or contaminate a public water supply? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 8. Substantially degrade or deplete ground water resources or interfere substantially with ground water recharge? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 9. Disrupt or adversely affect a prehistoric or historic archeological site or a property of historic or cultural significance to a community or ethnic or social group; or a paleontological site except as part of scientific study? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 10. Induce substantial growth or concentration of population? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 11. Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 12. Displace a substantial number of people? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

| <u>Environmental Information</u> | <u>Yes</u> | <u>No</u> | <u>Maybe</u> |
|--|--------------------------|-------------------------------------|--------------------------|
| 13. Encourage activities which result in the use of large amounts of fuel, water or energy? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 14. Use fuel, water or energy inefficiently? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 15. Increase substantially the ambient noise level for adjoining areas? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 16. Cause substantial flooding, erosion or siltation? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 17. Expose people or structures to major geologic hazards? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 18. Extend a sewer trunk line with capacity to serve new development? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 19. Disrupt or divide the physical arrangement of an established community? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 20. Create a potential public health hazard or involve the use, production, or disposal of materials which pose a hazard to people or animal or plant populations in the area affected? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 21. Conflict with established recreational, educational, religious or scientific uses? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 22. Convert prime agricultural land to non-agricultural use or impair the agricultural productivity of prime agricultural land? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 23. Interfere with emergency response or evacuation plans? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 24. Violate any ambient air quality standard, contribute substantially to an existing or projected air quality violation, or expose sensitive receptors to substantial pollutant concentrations? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 25. Emits Greenhouse Gas (GHG) emissions greater than 25,000 tons? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

NOTE: Please attach any pertinent explanatory information.

CERTIFICATION:

I hereby certify the statement furnished above and in attached exhibits present the data and information required for this initial evaluation to the best of my ability, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

Print Signing Authority Name If Different: Joe Yochum

Signature:  **Date:** 23 MAY 23

VIII. EMISSION CALCULATIONS:

1003061B:

An increase in emissions is not proposed for this modification, therefore, recalculation of emissions is not required.

1003077:

A. Assumptions:

1. Engine Rating: 173-bhp
2. Maximum operating hours: 4,200 hrs/yr
3. Maximum daily use: 24 hours
4. Maximum weekly use: 7 days per week
5. Density of fuel: 52.2 lb/ft³
6. Sulfur Content: 0.0015% (15 ppm) (CARB, EPA Fuel Requirement)
7. NMHC + NOx distribution: 95% NOx, 5% NMHC (Bay Area AQMD Policy)
8. Fuel use (maximum: 100% load): 61 lbs/hr (CARB certificate)
1kW= 1.34102 bhp
9. Conversion factors:
0.0353147 ft³/L
7.48052 gal/ft³
453.59 g/lb

B. Emission Factors:

| | PM10 | SOx | NOx | VOC | CO |
|------------------|------------------|--------------------|------------------|------------------|------------------|
| | g/bhp-hr | | g/bhp-hr | g/bhp-hr | g/bhp-hr |
| EF Source | CARB Certificate | Mass Balance | CARB Certificate | CARB Certificate | CARB Certificate |
| | 0.01 | See SOx Cal. Below | 0.21 | 0.01 | 0.02 |

C. Emission Calculations (sample calculations)

PM₁₀:

$$\frac{g \cdot PM_{10}}{hp-hr} \times \frac{1}{453.59} \frac{lb}{g} \times hp = \frac{lb}{hr}$$

$$\frac{lb}{hr} \times 24 \frac{hr}{day} = \frac{lb}{day}$$

$$\frac{lb}{hr} \times \frac{hr}{year} \times \frac{1}{2000} \frac{tons}{lb} = \frac{tons}{year}$$

SOx:

$$\frac{lb(fuel)}{hr} \times \frac{0.0015(S-fuel.content)}{100} \times 2 \left(\frac{SO_2}{S} \right) = \frac{lb}{hr}$$

$$\frac{lb}{hr} \times 24 \frac{hr}{day} = \frac{lb}{day}$$

$$\frac{lb}{hr} \times \frac{hr}{year} \times \frac{1}{2000} \frac{tons}{lb} = \frac{tons}{year}$$

NO_x:

$$\frac{g \cdot NOx}{hp-hr} \times \frac{1}{453.59} \frac{lb}{g} \times hp = \frac{lb}{hr}$$

$$\frac{lb}{hr} \times 24 \frac{hr}{day} = \frac{lb}{day}$$

$$\frac{lb}{hr} \times \frac{hr}{year} \times \frac{1}{2000} \frac{tons}{lb} = \frac{tons}{year}$$

VOC:
$$\frac{g \cdot VOC}{hp-hr} \times \frac{1}{453.59} \frac{lb}{g} \times hp = \frac{lb}{hr}$$

$$\frac{lb}{hr} \times 24 \frac{hr}{day} = \frac{lb}{day}$$

$$\frac{lb}{hr} \times \frac{hr}{year} \times \frac{1}{2000} \frac{tons}{lb} = \frac{tons}{year}$$

CO:
$$\frac{g \cdot CO}{hp-hr} \times \frac{1}{453.59} \frac{lb}{g} \times hp = \frac{lb}{hr}$$

$$\frac{lb}{hr} \times 24 \frac{hr}{day} = \frac{lb}{day}$$

$$\frac{lb}{hr} \times \frac{hr}{year} \times \frac{1}{2000} \frac{tons}{lb} = \frac{tons}{year}$$

D. Potential to Emit calculations (Tabulated):

Proposed Emissions:

| | PM ₁₀ | SO _x | NO _x | VOC | CO |
|-----------|------------------|-----------------|-----------------|-------|-------|
| lb/hr | 0.006 | 0.002 | 0.080 | 0.003 | 0.009 |
| lb/day | 0.137 | 0.044 | 1.911 | 0.068 | 0.205 |
| tons/year | 0.012 | 0.004 | 0.167 | 0.006 | 0.018 |

IX. EMISSION CHANGES:

Emissions change for the emission unit is shown on below:

A. Project Emission Change:

Sum of emissions changes for all emissions units to be included in the NSR Balances (NSRB) and the Stationary Source Potentials to Emit (SSPE).

| | PM ₁₀ | SO _x | NO _x | VOC | CO |
|-----------|------------------|-----------------|-----------------|-------|-------|
| lb/day | 0.137 | 0.044 | 1.911 | 0.068 | 0.205 |
| tons/year | 0.012 | 0.004 | 0.167 | 0.006 | 0.018 |

B. OFFSETS REQUIRED:

| | PM ₁₀ | SO _x | NO _x | VOC | CO |
|---------|------------------|-----------------|-----------------|-------|------|
| lb/day | -0.14 | -0.00 | -1.91 | -0.00 | 0.00 |
| tons/yr | -0.01 | -0.00 | -0.17 | -0.00 | 0.00 |

C. Pre-Project NSR Balances and SSPE:

| | NSRB | NSRB | SSPE | SSPE | NSRB |
|------------------|------------------------|-----------------------|-----------------------|-------------|-------------|
| Pollutant | PM₁₀ | SO_x | NO_x | VOC | CO |
| lb/day | 1,236.04 | 8,870.54 | 12,370.58 | 532.69 | 62,155.32 |
| tons/year | 206.00 | 1,618.84 | 2,253.27 | 96.81 | 2,434.73 |

D. Post-Project NSR Balances and SSPE:

Pre-Project NSR Balance/SSPE + Projects Emissions Change

| | NSRB | NSRB | SSPE | SSPE | NSRB |
|------------------|------------------------|-----------------------|-----------------------|-------------|-------------|
| Pollutant | PM₁₀ | SO_x | NO_x | VOC | CO |
| lb/day | 1,236.04 | 8,870.58 | 12,370.58 | 532.76 | 62,155.53 |
| tons/year | 206.00 | 1,618.84 | 2,253.27 | 96.82 | 2,434.75 |

X. CONCLUSIONS:

1003061B, 077:

A. Rule 210.1 (conclusions based on worst case):

Satisfies requirements of Subsection III.A. (BACT)

Project not subject to Subsection, III.B. (offsets), NSR balance for SO_x < 27 tons/yr and PM₁₀ < 15 tons/yr and SSPE for VOC and NO_x < 25 tons/yr,.

Project subject to Subsection III.B. (offsets),

Project not subject to NSR requirements Sec

B. Rule 210.1A Major New and Modified Stationary Source Review (MNSR)

This Rule sets forth additional requirements for new major stationary sources or major modifications of existing major sources for nonattainment pollutants. The Project does not trigger the following significant emission thresholds: PM, SO_x, NO_x, VOC (15, 40, 25, 25 ton/year respectively). Compliance with Rule 210.1A is not required.

C. Rule 210.4 Prevention of Significant Deterioration

This Rule sets forth additional requirements for new major stationary sources or major modifications of existing major sources for attainment pollutants. The Project does not trigger PSD thresholds. Compliance with Rule 210.4 is not required.

D. Rule 302: Fee for the proposed equipment was determined as follows:

| | <u>Rating</u> | <u>Fee Schedule</u> | <u>First Year Permit Fee</u> |
|-----------------|----------------|---------------------------------------|-------------------------------------|
| 1003061B | <u>175-hp</u> | <u>Schedule 1</u> | <u>No change in rating proposed</u> |
| 1003077 | <u>173-bhp</u> | <u>Schedule 8 (100<bhp>300)</u> | <u>\$309</u> |

According to the table above, applicant shall be assessed a fee of \$309 dollars for the first year of operation and annually thereafter.

1003061B:

E. Rule 401: Applicant is proposing to use wet suppression to control PM₁₀ emissions. Visible emissions are not to exceed 5% opacity for more than 3 minutes in any one hour by BACT requirements. Therefore, visible emissions in excess of 20% opacity are not expected. Compliance with Rule 401 is expected.

- F. Rule 404.1: Emissions will not pass through a stack. Particulate matter emission rate cannot be calculated. Additionally, based on the use of wet suppression and proposed throughput rates, PM emissions from crushing, screening, and conveying operations is not expected to exceed 0.1 grains per cubic foot of gas at standard conditions. Compliance with rule 404.1 is expected.
- G. Rule 405: An increase in process rates or emissions is not proposed for this modification. Therefore, continued compliance with Rule 405 is expected.
- E. Rule 419 and CH&SC 41700: An increase in toxic emissions is not proposed for this modification, hence, a significant increase in health risk to the community at large is not expected. Compliance with Rule 419 and CH&SC 41700 is expected.
- F. Rule 422, Subpart 000: This subpart applies to crushers and belt conveyors used at nonmetallic mineral processing plants. Non-metallic mineral means any mixture of which the majority is any of the following minerals: crushed stone, limestone, dolomite, granite, traprock, sandstone, quartz, quartzite, marl, marble, slate, shale, oil shale, and sell. In accordance with Subpart, metallic mineral plants constructed after 1983, are subject to the following: conveyors and screens shall exhibit visible emissions in excess of 7% opacity. Crushers shall meet an opacity limit of 12 percent. Compliance with 40 CFR Part 60, Subpart 000 is expected.

1003077:

- A. Rule 401: Engine is diesel fueled. In accordance with BACT requirements, visible emissions shall be limited to 5% opacity. Visible emissions of 20% opacity are not expected. Compliance with Rule 401 is expected.

Rule 404.1: Exhaust gas temperature and flow rate were provided by applicant based on manufacturers technical data sheet for engine of similar rating. Particulate matter emission rates (gr/scf) from 173-bhp diesel piston engine are calculated using the equations and assumptions listed below:

| | |
|-----------------------------|------|
| PM emission rate (lb/hr) | 0.01 |
| Exhaust gas flow rate (cfm) | 512 |
| Exhaust temperature : °F | 658 |

1lb= 7000 grains (gr)

$$\frac{lb}{hr} \times \frac{1 hr}{60 min} \times 7000 \frac{grains}{lb} = \frac{grains}{min}$$

$$\frac{ft^3}{min} \times \left(\frac{68^{\circ}F + 459.67}{E - Temp^{\circ}F + 459.67} \right) = scfm$$

$$1 \frac{grains}{min} \times \frac{1 min}{scf} = \frac{grains}{scf}$$

Proposed unit results in an exhaust gas flow rate per unit volume of 0.005 gr/scf which is less than the required 0.1 grains per cubic foot of gas at standard conditions. Compliance with Rule 404.1 is expected.

- B. Rule 407: Sulfur content of diesel fuel shall not exceed 0.0015% (15 ppmv). Given known

combustion principles, SO₂ emission rate shall be less than 0.2% by volume. Compliance with Rule 407 is expected.

- C. Rule 419: A screening health risk assessment was completed for toxic air contaminant emissions from the combustion of diesel fuel. Prioritization scores for carcinogenic and non-carcinogenic (acute and chronic health effects) from diesel engine emissions showed low priority; therefore, a more refined health risk assessment (HRA) was not required. Compliance with Rule 419 is expected.
- D. Rule 423 (40 CFR Part 63, Subpart ZZZZ): In accordance with 40 CFR Part 63 Subpart ZZZZ, section 63.6590, new or reconstructed compression ignition (CI) stationary reciprocating internal combustion engine (RICE) located at a major source or area source of HAP emissions must comply with requirements of 40 CFR Part 60 Subpart IIII to satisfy the requirements of 40 CFR Part 63 Subpart ZZZZ. In accordance with 40 CFR, Ch. I, Subpart U, §1039.101, Table 1 and Table 1 engines shall comply with the following emission limits:

Engines after 2014 model year (Tier 4):

| 56 ≤ kW < 130 (75 ≤ HP < 175) | g/kW-hr (g/bhp-hr) | | | |
|----------------------------------|--------------------|-------------|-------------|-----------|
| | PM-10 | NOx | NMHC | CO |
| | 0.02 (0.01) | 0.40 (0.30) | 0.19 (0.14) | 5.0 (3.7) |

Engine shall be CARB certified Tier 4 final, therefore, engine is expected to satisfy the emissions requirements 40 CFR Part 60 Subpart IIII. Therefore, the proposed engine meet the requirements of 40 CFR Part 63 Subpart ZZZZ.

- E. Rule 427: Generator driven by the 173-bhp diesel engine will be subject to the requirements under section V (NOx Minimization schedule) but exempt from the requirements of section VI (Requirements for Engines 250-bhp or more) and VIII of rule 427. These requirements shall be incorporated into the permit conditions. Compliance with Rule 427 is expected.
- F. CH&SC 41700: Diesel IC engine will not pose a significant health risk to community at large based on prioritization scores. Compliance with CH&SC 41700 is expected.
- G. California Code of Regulation (CCR), Title 17, and Section 93115: ATCM for stationary compression ignition engine requires new engine to comply with current Tier 4 standards for 2014+ model year. Proposed engine is EPA certified Tier 4 and additional requirement for Prime-use engine will be incorporated into ATC. Therefore, proposed engine is expected to comply with ATCM for Stationary Diesel-Fueled Engine.

XI. RECOMMENDATIONS:

Issue Authority to Construct No. 1003061B, 077 with the following conditions:

1003061B:

EQUIPMENT DESCRIPTION: Portable Crushing and Screening Plant, including the following:

1. Vibrating feed and loading hoper with electric motor rated up to 20-hp.
2. Vibrating screen with electric motor rated up to 15-hp.
3. Crusher with electric motor rated up to 75-hp.
4. Six (6) conveyor belts driven by electric motors totaling 65-hp.

OPERATIONAL CONDITIONS:

1. Monthly throughput rate to this crusher shall not exceed 55,300 tons. (Rule 210.1)
2. Wet suppression shall be used during material loading, screening, conveying, crushing, and transferring, to minimize particulate matter emission resulting from operation. (Rule 210.1)
3. Visible emissions from portable crusher shall not exceed 12% opacity or ¼ Ringelmann for 3 minutes in any one-hour. (Rule 210.1 & Rule 422 Subpart OOO)
4. Visible emissions from screening units, and conveyors shall not exceed 7% opacity or ¼ Ringelmann for 3 minutes in any one-hour. (Rule 210.1 & Rule 422 Subpart OOO)
5. Owner/operator shall perform monthly periodic inspections to check that water is flowing to discharge spray nozzles in the wet suppression system, and shall initiate corrective action within 24 hours if water is not flowing properly. (Rule 422, Subpart OOO)
6. Drop heights shall be kept at a minimum to limit visible emissions. (Rule 209)
7. Owner/operator shall utilize one or more Reasonably Available Control Measures (RACM) to minimize fugitive dust emissions from any active operations, including unpaved roads. (Rule 402)
8. Equipment shall be maintained according to manufacturer's specifications to ensure compliance with emissions limitations. (Rules 209 and 210.1)
9. Crushing operation may be used for processing recycled kiln brick or raw materials for clinker production process. (Rule 210.1)
10. Crushed kiln brick shall not be stockpiled uncovered outside. (Rule 210.1)
11. Equipment breakdowns resulting in non-compliance with any emission limitations shall be reported pursuant to Rules 111 and 422. (Rules 111 and 422)
12. Compliance with all operational conditions shall be verified by appropriate record keeping, including records of operational data needed to demonstrate compliance. Such records shall be kept on site in readily available format. (Rule 427)
13. No emission resulting from use of this equipment shall cause injury, detriment, nuisance, annoyance to or endanger comfort, repose, health or safety of any considerable number of persons or public. (Rule 419 and CH&SC Sec 41700)
14. Air Pollution Control Officer (APCO) or any authorized representative shall have access to and copies of any record required to be kept under terms and conditions of permit. Furthermore, such persons shall have access to inspect any equipment, operation or method required in this permit, and to sample, or require sampling, of emissions from source. (Rule 107)
15. Total equipment rating shall not exceed 175-hp without prior District approval. (Rule 210.1)

STATE OF CALIFORNIA AIR TOXICS HOT SPOTS REQUIREMENTS:

Facility shall comply with California Health and Safety Code Sections 44300 through 44384. (Rule 208.1)

COMPLIANCE TESTING REQUIREMENTS:

Should inspection reveal conditions indicative of non-compliance, compliance with any emission limitations shall be verified within 60 days of District request. Test results shall be submitted to the District within 30 days after test completion. (Rule 108.1 and 209)

EMISSION LIMITS:

Maximum emissions rate of each air contaminant from this emission unit shall not exceed following limits:

Particulate Matter (PM₁₀):

Crushing, Screening, Transfer, and Loading
Emissions:

1.31 lb/hr
5.97 lb/day
1.09 ton/yr

(Emissions limits established pursuant to Rule 210.1 unless otherwise noted)

Compliance with maximum daily emission limits shall be verified by source operator (with appropriate operational data and recordkeeping to document maximum daily emission rate) each day source is operated and such documentation of compliance shall be retained and made readily available to District for period of five years. (Rule 210.1)

1003077:

EQUIPMENT DESCRIPTION: Generator Set Driven by Diesel Piston Engine, including the following equipment and design specifications:

Generator set, driven by EPA Certified Tier 4, diesel fueled piston engine with turbocharger, after cooler, and rated up to 173-bhp.

DESIGN CONDITIONS:

- a. Engine shall be equipped with turbocharger and charge air cooler. (Rule 210.1 BACT Requirement)
- b. Elapsed time meter shall be installed and maintained indicating cumulative hours of engine operating time. (Rule 210.1)
- c. Engine shall be equipped with a permanently affixed placard readily available for inspection with the following engine information: brake horsepower, make, model, serial number, and Tier number. (Rule 210.1)

OPERATIONAL CONDITIONS:

1. Total hours of operation shall not exceed 4,200 hours per year without prior District approval. (Rule 210.1)
2. Fuel for diesel piston engine shall conform to California Air Resources Board standards for reformulated diesel fuel (low sulfur content, 0.0015% by weight). (Rule 210.1 BACT Requirement)
3. Visible emissions from engine exhaust after engine has reached normal operating temperature shall not be more than 5% opacity or Ringelmann No. ¼ for more than 3 minutes in any one hour. (Rule 210.1 BACT Requirement)
4. Exhaust gas particulate matter concentration shall not exceed 0.1 gr/ft³ of gas at standard conditions. (Rule 404.1)
5. Engine shall comply with applicable requirements specified in the ATCM for stationary diesel-fueled engines. (Title 17, CCR §93115 - 93115.15)
6. Equipment shall be maintained according to the manufacturer's specifications to ensure compliance with emission limitations. (Rules 210.1, 423 Subpart ZZZZ)
7. Operation of this equipment shall be conducted in compliance with all data, operating locations, and specifications submitted with application under which this permit is issued. (Rule 210.1)
8. Operating record of this equipment shall be maintained in format approved in writing by District kept for a minimum of two years, and made available upon request of District personnel. Record shall include, at minimum, days and hours of operation, amount of fuel oil supplied to this engine, date(s) fuel was supplied, and engine check(s) including: air filters, fuel filters, oil filters, engine oil, exhaust system, coolant, and spark plugs (if so equipped).

- (Rule 210.1).
9. Permittee shall maintain an engine service log demonstrating compliance with Section V of Rule 427 for at least two years and make such log readily available to District personnel upon request. (Rule 427)
 10. In the event that the NO_x minimization maintenance schedule conflicts with a requirement of the manufacturer, defer to the manufacturer's requirement. (Rule 210.1)
 11. Compliance with all operational conditions shall be verified by appropriate record keeping, including records of operational data needed to demonstrate compliance. Such records shall be kept on site in readily available format. (Rule 210.1)
 12. No emission resulting from use of this equipment shall cause injury, detriment, nuisance, annoyance to or endanger comfort, repose, health or safety of any considerable number of persons or public. (Rule 419 and CH&SC §41700)

SPECIAL CONDITIONS:

- aa. Prior to implementation of this Permit to Operate (PTO), applicant shall provide offsets in tons/year for the following amounts (PM₁₀: 0.01). This includes the appropriate offset ratio 1.2:1. (Rule 210.1)
- bb. Owner/operator shall notify District at least two (2) days prior to equipment arriving on-site. Owner/operator shall provide equipment make, model, and horsepower rating. (Rule 210.1)

STATE OF CALIFORNIA AIR TOXICS HOT SPOTS REQUIREMENTS:

Facility shall comply with California Health and Safety Code Sections 44300 through 44384. (Rule 208.1)

COMPLIANCE TESTING REQUIREMENTS:

Should inspection reveal conditions indicative of non-compliance, compliance with any emission limitations shall be verified within 60 days of District request. Test results shall be submitted to the District within 30 days after test completion. (Rule 108.1 and 209)

EMISSION LIMITS:

Maximum emissions rate of each air contaminant from this emission unit shall not exceed following limits:

| | |
|--|-----------------------------------|
| <u>Particulate Matter (PM₁₀):</u> | 0.01 gm/bhp-hr (CARB Certificate) |
| | 0.01 lb/hr |
| | 0.14 lb/day |
| | 0.01 ton/yr |
| <u>Sulfur Oxides (SO_x as SO₂):</u> | 2E-3 lb/hr |
| | 0.04 lb/day |
| | 4E-3 ton/yr |
| <u>Oxides of Nitrogen (NO_x as NO₂):</u> | 0.21 gm/bhp-hr (CARB Certificate) |
| | 0.08 lb/hr |
| | 1.91 lb/day |
| | 0.17 ton/yr |

| | |
|--|-----------------------------------|
| <u>Volatile Organic Compounds (VOC):</u> (as defined in Rule 210.1) | 0.01 gm/bhp-hr (CARB Certificate) |
| | 3E-3 lb/hr |
| | 0.07 lb/day |
| | 0.01 ton/yr |

| | |
|--------------------------------|-----------------------------------|
| <u>Carbon Monoxide:</u> | 0.02 gm/bhp-hr (CARB Certificate) |
| | 0.01 lb/hr |
| | 0.20 lb/day |
| | 0.02 ton/yr |

(Emissions limits established pursuant to Rule 210.1 unless otherwise noted)

Compliance with maximum daily emission limits shall be verified by source operator (with appropriate operational data and recordkeeping to document maximum daily emission rate) each day source is operated and such documentation of compliance shall be retained and made readily available to District for period of three years. (Rule 210.1)

Attachment A

Screening Health Risk Assessment

| | |
|------------------------|--------------------------------|
| Facility: | California Portland Cement Co. |
| ATC Number: | 1003061B, 077 |
| Project Number: | 230526 |

| Inputs | lb/hr | lb/yr | Assumption |
|--|----------|----------|--|
| Diesel Particulate Matter (PM) | 3.81E-03 | 1.60E+01 | Diesel PM from Diesel-Fired Internal Combustion Engine contains most of toxic pollutants and only Diesel PM emission will be used to calculate the facility's prioritization scores. |
| Annual hours of operation (hr/yr): | | 4200 | |
| *Engines expected to be on site for less than 180 days *combined horsepower rating for total of 4,320 hrs | | | |

| Substances | CAS# | LB/HR | LB/YR |
|--|------|----------|----------|
| Particulate Emissions from Diesel Engine | 9901 | 3.81E-03 | 1.60E+01 |

References:

| Diesel Particulate Matter Emission Rate | | Please provide the information requested below | |
|---|------------|---|-------|
| Bhp | g/bhp-hr | Annual hours of operation (hr/yr): | 4,200 |
| 173.0 | 1.0000E-02 | Days of operation per week: | 7 |
| | | Hours of operation per day: | 12 |
| | | Emissions release height (m): | 2 |
| | | Distance to nearest off-site work receptor (m): | 3,000 |
| | | Distance to nearest residential receptor (m): | 3,000 |

*g/bhp-hr is obtained from Manufacturer's emission statements or ARB's emission certificates.
1 bhp = 0.7457 kW

| Enter the Max Hourly and Annual Emissions in the yellow highlighted columns below | | | | CAPCOA Method | | | | | | | | | | |
|---|--------------------------|------------------------------|--------------------------|------------------------------|----------|------------|----------|------------|------------------------------|----------|------------|-------------------------|----------|-------------|
| Substance | Chemical Abstract Number | Max Hourly Emissions (lb/hr) | Annual Emissions (lb/yr) | Emissions and Potency Method | | | | | Dispersion Adjustment Method | | | | | Cancer Risk |
| | | | | Average Hourly (lb/hr) | Acute HQ | Chronic HQ | Acute HQ | Chronic HQ | Max of Acute or Chronic | Acute HQ | Chronic HQ | Max of Acute or Chronic | | |
| PARTICULATE EMISSIONS FROM DIESEL-FUELED E | 9901 | 3.81E-03 | 1.60E+01 | 0.00381 | 0.00E+00 | 7.63E-04 | 0.00E+00 | 1.14E-01 | 1.14E-01 | 0.00E+00 | 1.91E-03 | 1.91E-03 | 4.81E-03 | |

| Standard CAPCOA Method | | | |
|-------------------------|--------------------------|------------------------------|---------------------|
| | Emissions Potency Method | Dispersion Adjustment Method | Project Designation |
| Non-Carcinogenic Scores | 0.00011 | 0.00011 | Low Priority |
| Carcinogenic Scores | 0.03700 | 0.03691 | Low Priority |

| Emissions & Potency Equations | | | | | | | | |
|---|--------------------------------------|---------------|---------------|---|-----------------|-----------------|----------|------------------------------------|
| Non-Carcinogenic | | | | Carcinogenic | | | | |
| $TS = \{\sum^t (E_t)/(P_t)\}(RP)(A)$ | | | | $TS = \{\sum^c (E_c)(P_c)\}(RP)(1.7 * 10^3)$ | | | | |
| Dispersion Adjustment Equations | | | | | | | | |
| Non-Carcinogenic | | | | Carcinogenic | | | | |
| $TS = \sum^t (E_{t,h}/P_t)(D_h)(RP_h)(A)$ | | | | $TS = \{\sum^c (E_{c,h})(P_c)(D_h)(RP_h)\}(28)$ | | | | |
| Emissions Potency Method | | | | | | | | |
| Calculated Prioritization Score for Receptors at Given Distance R (m) | | | | | | | | |
| Non-Carcinogenic Score | 1.14E-01 | 2.86E-02 | 4.58E-03 | 1.26E-03 | 3.43E-04 | 2.29E-04 | 1.14E-04 | |
| Carcinogenic Score | 3.70E+01 | 9.25E+00 | 1.48E+00 | 4.07E-01 | 1.11E-01 | 7.40E-02 | 3.70E-02 | |
| Dispersion Adjustment Method | | | | | | | | |
| Calculated Prioritization Score for Receptors at Given Distance R (m) | | | | | | | | |
| Non-Carcinogenic Score | | | | | | | | |
| H < 20 | 1.14E-01 | 2.86E-02 | 4.58E-03 | 1.26E-03 | 3.43E-04 | 2.29E-04 | 1.14E-04 | |
| 20 ≤ H < 45 | 1.14E-01 | 9.73E-02 | 2.52E-02 | 7.32E-03 | 2.06E-03 | 1.03E-03 | 6.87E-04 | |
| H ≥ 45 | 1.14E-01 | 1.14E-01 | 1.03E-01 | 4.58E-02 | 1.49E-02 | 7.55E-03 | 4.81E-03 | |
| Carcinogenic Score | | | | | | | | |
| H < 20 | 3.69E+01 | 9.23E+00 | 1.48E+00 | 4.06E-01 | 1.11E-01 | 7.38E-02 | 3.69E-02 | |
| 20 ≤ H < 45 | 5.54E+00 | 4.71E+00 | 1.22E+00 | 3.54E-01 | 9.97E-02 | 4.98E-02 | 3.32E-02 | |
| H ≥ 45 | 6.15E-01 | 6.15E-01 | 5.54E-01 | 2.46E-01 | 8.00E-02 | 4.06E-02 | 2.58E-02 | |
| Table of CAPCOA Method Adjustment Factors | | | | | | | | |
| Release Height (m) | Receptor Proximity Factors for R (m) | | | | | | | Dispersion Adjustment Factor for H |
| | R < 100 | 100 ≤ R < 250 | 250 ≤ R < 500 | 500 ≤ R < 1000 | 1000 ≤ R < 1500 | 1500 ≤ R < 2000 | R ≥ 2000 | |
| H < 20 | 1 | 0.25 | 0.04 | 0.011 | 0.003 | 0.002 | 0.001 | 60 |
| 20 ≤ H < 45 | 1 | 0.85 | 0.22 | 0.064 | 0.018 | 0.009 | 0.006 | 9 |
| H ≥ 45 | 1 | 1 | 0.9 | 0.4 | 0.13 | 0.066 | 0.042 | 1 |

Attachment B

NSR Balance and SSPE

| California Portland Cement Co. | | | PM-10 | | SOx | | NOx | | VOC | | CO | |
|---|------------|--|-----------|---------|-----------|----------|-----------|----------|----------|---------|----------|---------|
| PTO/ATC No. | Issue Date | Project Description | lb/day | tons/yr | lb/day | tons/yr | lb/day | tons/yr | lb/day | tons/yr | lb/day | tons/yr |
| 1003001A | 11/15/1978 | Primary Crushing Operation | 182.06 | 33.23 | | | | | | | | |
| '002&'003 | | Crushing/Screening and Drying Operations | | | | | | | | | | |
| '005-'009 | | Kiln #1, #2, #3, #4 retrofitted with Fabric Collectors | | | | | | | | | | |
| '011-'015 | | Clinker Coolers | | | | | | | | | | |
| 1003016 | 11/15/1978 | Clinker Storage | 69.82 | 12.74 | | | | | | | | |
| 1003019 | | 5,000-gal UST GDF | | | | | | | | | | |
| 1003021A | 11/15/1978 | Sampling System | 142.56 | 26.02 | | | | | | | | |
| 1003022 | 11/15/1978 | Limestone Storage and Reclaim System | 98.88 | 18.05 | | | | | | | | |
| 1003023 | 11/15/1978 | Additives System | 117.60 | 9.04 | | | | | | | | |
| 1003024 | 11/15/1978 | Roller Mill System | 96.97 | 14.62 | | | | | | | | |
| 1003025 | 11/15/1978 | Homogenizing and Kiln Feed System | 83.28 | 15.20 | | | | | | | | |
| 1003026 | 11/15/1978 | Pyroprocessing System | 1,183.01 | 215.00 | 14,783.97 | 2,698.07 | 12,475.65 | 2,276.81 | 440.16 | 80.33 | 4,400.35 | 803.06 |
| 1003027 | 11/15/1978 | Clinker Cooling System | 614.16 | 112.08 | | | | | | | | |
| '028-'031 | | Varieties of Projects | | | | | | | | | | |
| 1003032 | 6/17/1987 | 2,100-kW Gen Set w/ 1566-bhp Diesel Engine | | | | | | | | | | |
| 1003033 | 6/17/1987 | 2,100-kW Gen Set w/ 1578-bhp Diesel Engine | | | | | | | | | | |
| 1003020A | 6/27/1980 | 5,000-gal AST GDF | | | | | | | 1.12 | 0.20 | | |
| 1003001B | 11/15/1980 | Revise Conditions of Approval | | | | | | | | | | |
| 022A-027A | 11/15/1980 | Renew the permits | | | | | | | | | | |
| 1003017A | 9/30/1983 | Add Two New Fabric Collectors | 82.29 | 15.02 | | | | | | | | |
| 1003018A | 12/14/1984 | Packhouse Loading Operation | 856.58 | 156.33 | | | | | | | | |
| '026B, C, F | | Modification of Pyroprocessing System | | | | | | | | | | |
| 1003026D | 3/12/1985 | Increase HC & CO Emissions Limits | | | | | | | 82.80 | 15.11 | 828.00 | 151.11 |
| 1003026E | 7/25/1985 | Revise Kiln Emission Limitations | | | | | | 8,040.00 | 1,467.00 | | | |
| 1003017B | 7/25/1985 | Add Fabric Collector to Existing Conveyors | | | | | | | | | | |
| '018B&C | 2/24/1986 | Add Fabric Collectors to Existing Packhouse | | | | | | | | | | |
| 1003021B | 9/23/1988 | Modification of Sampling System | | | | | | | | | | |
| 1003034 | 11/3/1988 | Add Shredded Tire as Authorized Fuel | | | | | | | | | | |
| 1003010A | 9/6/1989 | Add Petroleum Coke As Authorized Fuel | | | | | | | | | | |
| 1003026H | 9/26/1989 | Add Petroleum Coke As Authorized Fuel | | | | | | | | | | |
| 1003032A | 2/8/1990 | Modify compliance testing requirements | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1003033A | 2/8/1990 | Modify compliance testing requirements | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1003004A | 1/30/1990 | Add New Finish Mill | | | | | | | | | | |
| Total Adjustments, Projects Deemed Complete Before 08/19/1991 | | | 3,527.21 | 627.33 | 14,783.97 | 2,698.07 | 20,515.65 | 3,743.81 | 524.08 | 95.64 | 5,228.35 | 954.17 |
| Rule 210.1 (NSR) 8/19/1991 Rule Change Adjustments | | | -3,527.21 | -627.33 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total Emissions After 08/19/1991 Adjustments | | | 0.00 | 0.00 | 14,783.97 | 2,698.07 | 20,515.65 | 3,743.81 | 524.08 | 95.64 | 5,228.35 | 954.17 |
| 1003024B | 5/26/1992 | Addition of Approved Metals to Silos | | | | | | | | | | |
| 1003026I | 2/2/1994 | Modification of Coal Supply System | | | | | | | | | | |
| '035-'041 | | Varieties of Projects | | | | | | | | | | |
| 1003042 | 9/8/1992 | 70-bhp Gasoline Piston Engine w/ Welder | | | | | | | | | | |
| 1003043 | 9/8/1992 | Piston Engine | | | | | | | | | | |
| 1003044 | 9/8/1992 | 80.5-bhp Diesel Engine w/ Compressor | | | | | | | | | | |
| 1003045 | 9/8/1992 | 168-bhp Diesel Engine w/ Compressor | | | | | | | | | | |
| '046-'047 | 9/8/1992 | Piston Engines | | | | | | | | | | |
| 1003048 | 9/8/1992 | 95-bhp Diesel Engine | | | | | | | | | | |
| 1003049 | 9/8/1992 | 95-bhp Diesel Engine w/ HP Washer | | | | | | | | | | |
| 1003050 | 9/8/1992 | Piston Engine | | | | | | | | | | |
| 1003051 | 9/8/1992 | Vacuum Truck w/ 165-bhp Diesel Engine | | | | | | | | | | |
| 1003052 | 9/8/1992 | Piston Engine | | | | | | | | | | |
| 1003053 | 9/8/1992 | 180-bhp Propane Kiln Engine | | | | | | | | | | |
| 1003017C | 1/11/1993 | Mod. of Finish Mill #4: Replace Dust Collector | | | | | | | | | | |
| 1003017D | 3/3/1993 | Replace Fabric Collector for Finish Mill #1,2,3,5 | | | | | | | | | | |
| 1003055 | 9/10/1993 | Finish Grinding Operation #2 | 82.29 | 15.02 | | | | | | | | |
| 1003056 | 9/10/1993 | Finish Grinding Operation #3 | 82.29 | 15.02 | | | | | | | | |
| 1003057 | 9/10/1993 | Finish Grinding Operation #4 | 82.29 | 15.02 | | | | | | | | |
| 1003058 | 9/10/1993 | Finish Grinding Operation #5 | 82.29 | 15.02 | | | | | | | | |
| 1003016A | 5/23/1994 | Mod. of Clinker Storage: Replace Dust Collector | | | | | | | | | | |
| 1003054 | 6/8/1993 | Bulk Clinker Truck Loadout Operation | | | | | | | | | | |
| 026J - M | | Modifications of Pyroprocessing System | | | | | | | | | | |
| '059A-C | | Finish Grinding Operation #6 | | | | | | | | | | |
| 1003001C | 7/28/1994 | Modification of Primary Crusher: Lime Control | | | | | | | | | | |
| 1003060 | | Degreaser | | | | | | | | | | |
| 1003061 | 5/15/1995 | Portable Crushing Operation | 5.97 | 1.09 | | | | | | | | |
| 1003062 | 1/7/1997 | Paint Spray Booth | | | | | | | | | | |
| 1003020B | 3/20/1998 | Change GDF Dispensers to Balance Ph. II | | | | | | | | | | |
| 1003063 | 3/26/1999 | Quarry Drill No. 1 | | | | | | | | | | |
| 1003064 | 3/26/1999 | Quarry Drill No. 2 | | | | | | | | | | |
| 1003010B | 3/9/2000 | Modification of Coal Supply System | 0.04 | 0.01 | | | | | | | | |
| 1003016B | 3/9/2000 | Clinker Storage Increased by 20% | 17.45 | 3.18 | | | | | | | | |
| 1003018D | 3/9/2000 | Install Oxygen Injection System to Packhouse | | | | | | | | | | |
| 1003021C | 3/9/2000 | Modification of Sampling System | 0.00 | 0.05 | | | | | | | | |
| 1003022B | 3/9/2000 | Modification of Lime Storage & Reclaim System | 0.00 | 0.98 | | | | | | | | |
| 1003023B | 3/9/2000 | Install Oxygen Injection Sys. to Additives Sys. | 0.00 | 1.65 | | | | | | | | |
| 1003024D | 3/9/2000 | Set up Emissions for Roller Mill System | 0.00 | 1.99 | | | | | | | | |

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