

**EASTERN KERN AIR POLLUTION CONTROL DISTRICT
TECHNICAL SUPPORT DOCUMENT FOR
CALIFORNIA PORTLAND CEMENT COMPANY
2016 TITLE V PERMIT RENEWAL NO: 1003-V-2000**

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APPLICATION RECEIVED FROM: **CALIFORNIA PORTLAND CEMENT COMPANY
9350 OAK CREEK ROAD
MOJAVE, CALIFORNIA 93501**

PLANT SITE LOCATION: **9350 Oak Creek Road
Mojave, California 93501**

SECTION/TOWNSHIP/RANGE: **NE24/T11N/R14W**

APPLICATION PROCESSED BY: **Wunna Aung, Air Quality Engineer I**

APPLICATION REVIEWED BY: **Glen Stephens, Air Pollution Control Officer**
Date: _____

NATURE OF BUSINESS: **Portland Cement Manufacturing**

SIC CODE: **3241**

RESPONSIBLE OFFICIAL: **Ronald DuMond**
TITLE: **Plant Manager**
TELEPHONE NUMBER: **(661) 823-3700**

FACILITY CONTACT PERSON: **Brian Males**
TITLE: **Environmental Manager**
TELEPHONE NUMBER: **(661) 823-3731**

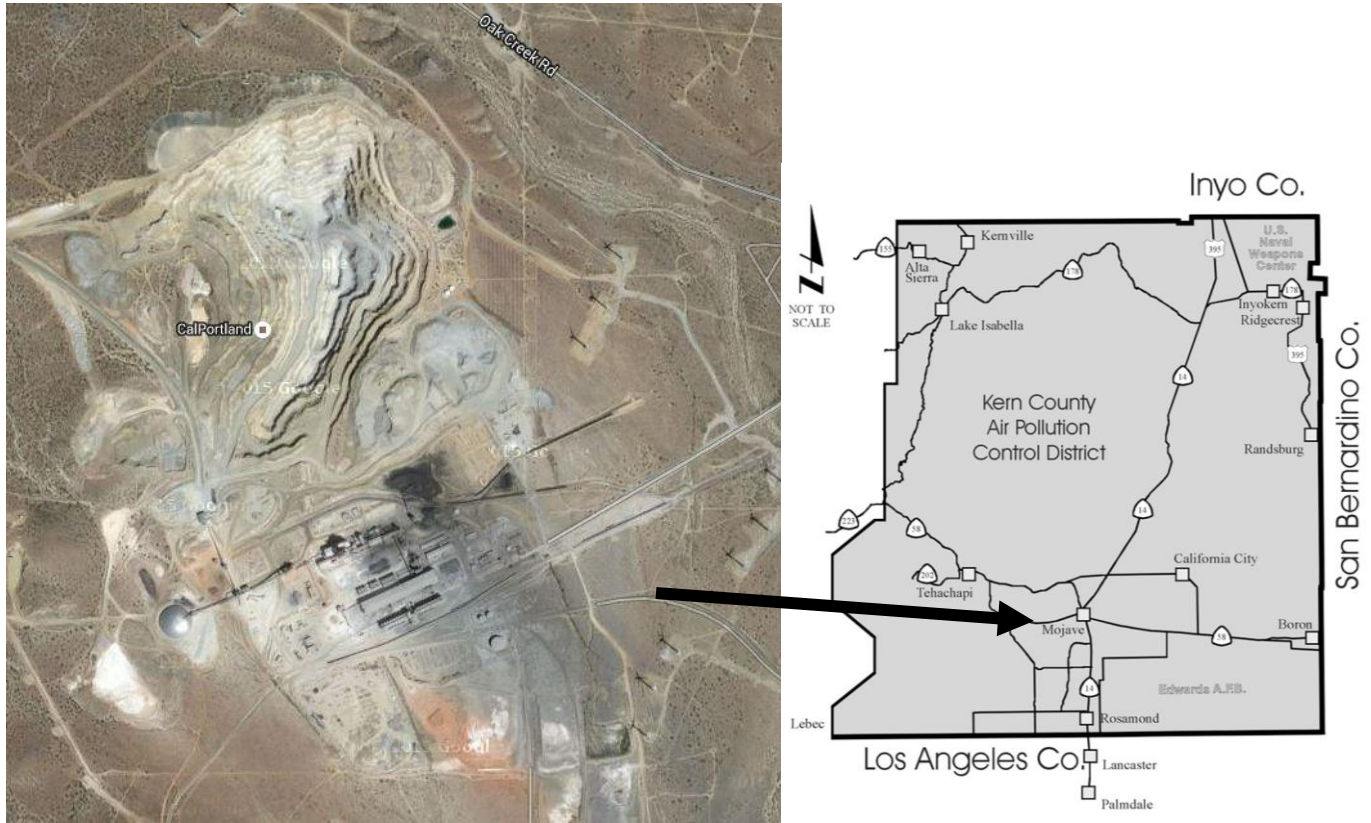
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I. INTRODUCTION

This Technical Support Document (TSD) pertains to California Portland Cement Company's 2016 Title V renewal of Permit No. 1003-V-2000. Renewal of Permit No. 1003-V-2000 allows California Portland Cement Company to continue operation of a limestone quarry and a dry process cement kiln operation following the requirements of Eastern Kern Air Pollution Control District's (District) Rule 201.1, Permit to Operate for Sources Subject to Title V of the Federal Clean Air Act Amendments of 1990.

II. FACILITY LOCATION:



III. BACKGROUND:

Pursuant to District Rule 201.1, Permit to Operate for Sources Subject to Title V (Title V) of the Federal Clean Air Act Amendment of 1990, a Federal Part 70 Permit Renewal has been issued to California Portland Cement Company. District issued the initial Federal Part 70 Title V Permit to Operate to California Portland Cement Company in 2001.

California Portland Cement Company applied for a Title V Permit renewal in 2005 and 2010. District issued the first and second Title V Permit renewal in 2006 and 2011. Upon review of California Portland Cement Company's 2016 Title V renewal application, District found that no significant modifications have occurred to the facility in the past 5 years. District staff made minor revisions to the facility's previous Title V Permit which includes NSPS and NESHAP requirements.

On January 8, 2016, Eastern Kern Air Pollution Control District (District) published a public notice for California Portland Cement Company's proposed draft Title V renewal permit that allowed a 30-day public review period. District also submitted a copy of the proposed draft permit to EPA for the required 45-day review which began on January 8, 2016.

<u>App. Rec.:</u>	09/28/2015	
<u>60-Days:</u>	11/27/2015	
<u>Req. Info. (Deem Incomplete):</u>	NA	
<u>Deemed Complete:</u>	10/28/2015	
<u>Current Title V Permit Expiration:</u>	03/29/2016	
<u>Facility 45-Day Review:</u>	Start: 11/11/2015	End: 12/28/2015
<u>EPA 45-Day Review:</u>	Start: 01/08/2016	End: 02/22/2016
<u>30 Day Public Notice:</u>	Start: 01/08/2016	End: 02/08/2016

IV. FACILITY DESCRIPTION

The plant consists of a limestone quarry and a dry process cement kiln operation. The cement kiln produces clinker which is used to make cement. The kiln system functions as a counter-current heat exchanger and is composed of two basic sections: the preheater/precalciner tower and the rotary kiln. The preheater/precalciner tower is a tall structure and includes cyclones (stages) and a precalciner section where a percent of the total fuel in the kiln is burned. The rotary kiln is sloped and rotates to move the feed stock from the upper end of the kiln down to the discharge end. Fuels that are not burned at the precalciner are burned at the kiln discharge end. The primary fuel is petroleum coke, but the system has the capability to burn natural gas, tire-derived fuel (TDF) and diesel fuel as well. The combustion gases produced are drawn up the kiln length and into the preheater/precalciner tower by the induced draft fan. As the feed material moves down the system, it undergoes several reactions at different temperatures; drying of residual moisture, dehydration of clay minerals, calcination, and clinkerization.

The drying of residual moisture is the removal of free moisture from the raw materials. The dehydration reaction is the removal of bound water from the compounds. The calcination reaction is the breakdown of carbonates to the oxides plus carbon dioxide. The clinkerization reaction is the conversion of the oxides to calcium silicates, calcium aluminates, and calcium alumino-ferrites.

The combustion gases in the rotary kiln reach a peak flame temperature of approximately 3,500° F and gradually cool as they progress up the kiln. The gases are cooled by a water spray at the conditioning tower, upstream of the fabric filter baghouse. The gases then pass through the air pollution control device before exhausting to the atmosphere.

The fuels enter the kiln at the burner. The raw feed enters at the top of the tower and cascades through the stages, contacting the hot gases from the kiln and precalciner countercurrently. The calcined materials enter the kiln at the upper end of the kiln (opposite the burner). The primary fuel of the kiln is petroleum coke. The coke is a solid material obtained from various sources in the region. It is pulverized onsite and air-conveyed to the burners.

The raw feed to the kiln is a mixture of limestone, shale, clay, silica, and iron. The raw materials are mined onsite or imported from offsite. The raw materials are crushed, pulverized,

and mixed to the desired concentrations in the raw feed that produce the proper clinker quality. The raw feed is transferred to the kiln by a system of bucket elevators and airslide conveyors.

Clinker is produced from the kiln and passes through a clinker cooler before being stockpiled. Clinker is ground into a fine powder and mixed with appropriate portions of imported gypsum and other materials to become product cement. The product is stored in silos before being loaded into the customer's delivery trucks.

The exhaust gases leaving the kiln are cooled by a water spray in the conditioning tower. The quantity of water sprayed is determined by the temperature of the gases entering the baghouse. The baghouse inlet temperature is set to the desired value in the control room and the computer control system automatically adjusts the water spray rate to achieve the set point temperature. The dust is collected in the baghouse and returned to the raw material feed stream. Differential pressure indicators are used on the dust collectors for leak detection along with water and dust suppressant sprays to control dust emissions. Furthermore, all conveyors used to transfer the kiln dust are covered.

The exit gases are drawn by a system of induced draft (ID) fans, and pass either through the roller mill and/or the baghouse. The clean exhaust from the baghouse is released to the atmosphere. The dust that is collected from the bags is returned to the raw material feed stream. The baghouse is used only by the kiln and roller mill exhaust gases.

Several parameters are monitored continuously at various locations in the kiln system. These are temperature, combustion gas flow, gas chemical composition (NO_x, CO, O₂) and fuel rates. The combustion gas flow is monitored by direct measurement of pressure drop across a multiple orifice pitot tubes and gas temperature.

The Continuous Emission Monitoring System (CEMS) consists of a sample probe, heated sample line, sample chiller/condenser and emissions monitors for NO_x, CO, SO_x, VOC and opacity. The plant does not have CEMS for PM. The sample probe is located on the gas exhaust stack at the 6th level of the preheater/precalciner tower. All monitors are located inside an environmentally controlled enclosure. The opacity meter is located on the gas exhaust stack at the 4th level of the preheater/precalciner tower.

V. POTENTIAL EMISSIONS

Tables 1 and 2 below list California Portland Cement Company's total plant-wide (stationary-source) emissions.

Table 1

Criteria Pollutant Emissions (tons per year)					
Pollutants:	PM ₁₀	SO _x	NO _x	HC	CO
Potential Emissions:	778.86	2702.59	3817.96	87.08	830.36
Pre-Modification Emissions:	773.82	2702.59	3817.96	87.08	830.36

Table 2 (Reported for year 2014. Numbers below are in units of short tons)

Greenhouse Gas Emissions (tons per year)							
Pollutants:	CO ₂	CH ₄	N ₂ O	HFCs	PFCs	SF ₆	Total
Emissions:	1,136,033	94.6	13.8	N/A	N/A	N/A	
*GWP:	1	21	310	**	**	23,900	
CO ₂ e (tpy)	1,136,033	1,986	4,271	N/A	N/A	N/A	1,142,290

Greenhouse Gases:

Carbon dioxide (CO₂), Nitrous oxide (N₂O), Methane (CH₄), Hydrofluorocarbons (HFCs), Perfluorocarbons (PFCs), and Sulfur Hexafluoride (SF₆).

*Global Warming Potential (GWP): The capacity to heat the atmosphere, calculated as the ratio of the time-integrated radiative forcing from the instantaneous release of 1 kilogram (kg) of a substance relative to that of 1 kg of CO₂. GWP shall be calculated according to the factors for a 100-year time horizon, as stated in 40 CFR Part 98 Subpart A Table A-1 (Global Warming Potentials).

**GWP varies based on each pollutant.

VI. EQUIPMENT LISTING:

Emission Unit

Description of Source

001	Primary Crushing Operation
004	D-3 Finish Mill
010	Coal Supply System
016	Clinker & Additive Storage Operation
017	Finish Grinding Operation #1
018	Packhouse & Loading Facilities
020	Aboveground Gasoline Storage & Dispensing System

021	Sampling System
022	Limestone Storage & Reclaim System
023	Additives System
024	Roller Mill System
025	Homogenizing & Kiln Feed System
026	Pyroprocessing System
027	Clinker Cooling System
032	Standby Piston Engine with Generator
033	Standby Piston Engine with Generator
042	Piston Engine with Welder
044	Piston Engine with Compressor
045	Piston Engine with Washer
051	Vacuum Truck
053	Kiln Engine
054	Bulk Clinker Truck Loadout Operation
055	Finish Grinding Operation #2
056	Finish Grinding Operation #3
057	Finish Grinding Operation #4
058	Finish Grinding Operation #5
059	Finish Grinding Operation #6
061	Portable Crushing Plant
062	Paint Spray Operation
063	Quarry Drill #1
064	Quarry Drill #2
065	Finish Mill System
066	Sweeper #1
068	Vacuum Truck
069	Portable Crushing Operation
070	Concrete Batch Plant
071	Concrete Storage Guppy
072	Vacuum Truck

VII. APPLICABLE FEDERAL REQUIREMENTS:

Sources are subject to the most recently Board approved version of an adopted rule. Most of the rules this facility is subject to are part of the State Implementation Plan (SIP) and a few are considered “local only” meaning that it is not part of the SIP. In some instances a current rule will differ from those in the SIP due to a revision. This is called a SIP gap and happens when EPA has not yet acted on a SIP submittal.

Enforcement of a rule awaiting SIP approval should guarantee compliance with its SIP approved counterpart. This is because the pending rule will be at least as stringent as the SIP rule. The table below lists all rules and regulations this facility is subject to. Rules listed as “Local Only” or “SIP Pending” are not federally enforceable. SIP approved rules list their approval date along with the current revision date, thus making them federally enforceable.

<u>District Rule</u>	<u>Title and Description Conditions</u>
Rule 107	<p><u>Inspections</u></p> <p>Inspections shall be made by the enforcement agency for the purpose of obtaining information necessary to determine whether air pollution sources are in compliance with applicable rules and regulations, including authority to require record keeping and to make inspections and conduct tests of air pollution sources.</p>
Rule 108 SIP Approved 2004	<p><u>Stack Monitoring</u></p> <p>Upon the request of and as directed by the Control Officer, the owner of a source operation shall provide, install, operate and maintain continuous monitoring equipment on such operations as directed. The owner shall maintain, calibrate, and repair the equipment and shall keep the equipment operating at design capabilities.</p>
Rule 108.1 SIP Approved 2001	<p><u>Source Sampling</u></p> <p>Upon the request by the Control Officer, the owner of any source operation that emits or may emit air contaminants, for which emission limits have been established, shall provide the necessary and proper facilities for source sampling.</p> <p>The applicable test method, if not specified in the rule, shall be conducted in accordance with Title 40 CFR, Subpart 60, Appendix A – Reference Methods, except particulate matter (PM₁₀) for compliance with Rule 210.1 requirements shall be conducted in accordance with Title 40 CFR, Subpart 51, Appendix M, Method 201 or 201A. Where no test method exists in the preceding references for a source type source sampling shall be conducted in accordance with California Air Resources Board (CARB) approved methods.</p>
Rule 111 SIP Approved (1980) Revised 1996	<p><u>Equipment Breakdown</u></p> <p>An occurrence which constitutes a breakdown condition, and which persists only until the end of the production run or 24-hours, whichever is sooner (except for continuous monitoring equipment, for which the period shall be 96-hours), shall constitute a violation of any applicable emission limitation or restriction prescribed by these Rules and Regulations; however, no enforcement action will be taken if the owner or operator demonstrates to the Control Officer that a breakdown condition exists and the proper requirements are met.</p>

Rule 114
SIP Approved
1999

Severability

If any provision, clause, sentence, paragraph, section or part of these regulations or application thereof to any person or circumstance shall for any reason be adjudged by a court of competent jurisdiction to be unconstitutional or invalid, such judgment shall not affect or invalidate the remainder of this regulation and the application of such provision to other persons or circumstances, but shall be confined in its operation to the provision, clause, sentence, paragraph, section or part thereof directly involved in the controversy in which such judgment shall have been rendered and to the person or circumstance involved, and it is hereby declared to be the intent of the Eastern Kern Air Pollution Control Board that these Regulations would have been issued in any case had such invalid provision or provisions not been included.

Rule 201.1
Title V Rule
Revised 2012

Permit Fees

Annually on the anniversary of issuance of a Permit to Operate, the permittee shall pay a renewal fee as prescribed in Rule 301. Fees collected pursuant to Rule 201.1, Section VIII.B. shall supplement applicable Rules 301 and 301.3 fee requirements.

Payment of Supplemental Fee

An owner or operator, or his designee, shall pay an annual supplemental fee for a permit to operate pursuant to Rule 201.1 as determined by the calculation method in Subsection VIII.B.3., to provide a District-wide fee rate of \$25 per ton of fee-based emissions (CPI-adjusted) for all facilities subject to Rule 201.1, unless Rule 201.1 VIII.B.2. applies.

Compliance with Permit Conditions

- A. Permittee shall comply with all permit conditions;
- B. Permit does not convey any property rights or any exclusive privilege;
- C. Non-compliance with any permit condition shall be grounds for permit termination, revocation and reissuance, modification, enforcement action or denial of permit renewal;
- D. Permittee shall not use "need to halt or reduce a permitted activity in order to maintain compliance" as a defense for non-compliance with any permit condition;
- E. Pending permit action or notification of anticipated non-compliance does not stay any permit condition; and
- F. Within a reasonable time period, permittee shall furnish any information requested by the APCO, in writing, for purpose of determining: 1) compliance with the permit, or 2) whether or not cause exists for a permit or enforcement action.

Emergency Provisions

- A. The permittee shall comply with the requirements of Rule 111 and the emergency provisions contained in all permit streamlining requirements imposed in accordance with Subsection VI.J. all District-only rules which apply in accordance with Subsection VI.K.1. and all applicable federal requirements not subsumed by such permit streamlining requirement(s) or District-only rules;
- B. Within two weeks of an emergency event, an owner or operator of the source shall submit to the District a properly signed, contemporaneous log or other relevant evidence which demonstrates that:
 - 1) An emergency occurred;
 - 2) The permittee can identify the cause(s) of the emergency;
 - 3) The facility was being properly operated at the time of the emergency;
 - 4) All steps were taken to minimize the emissions resulting from the emergency; and
 - 5) Within two working days of the emergency event, the permittee provided the District with a description of the emergency and any mitigating or corrective actions taken;
- C. In any enforcement proceeding, the permittee has the burden of proof for establishing that an emergency occurred.

Record Keeping

- A. Recording of maintenance of all monitoring and support information associated with all permit streamlining requirements imposed in accordance with Rule 201.1, Subsection VI.J., all District-only rules which apply in accordance with Rule 201.1, Subsection VI.K.1., and all applicable federal requirements not submitted by such permit streamlining requirement(s) or District-only rules, including:
 - 1.) Date, place, and time of sampling;
 - 2.) Operating conditions at time of sampling;
 - 3.) Date, place, and method of analysis; and
 - 4.) Results of analysis;
- B. Retention of records of all required monitoring data and support information for a period of at least five years from the date of sample collection, measurement, report, or application; and
- C. Any other record keeping deemed necessary by the APCO to ensure compliance with all permit streamlining requirements imposed in accordance with Rule 201.1, Subsection VI.J., all District-only rules which apply in accordance with Rule 201.1, Subsection VI.K.1., and all applicable federal requirements not subsumed by such permit streamlining requirement(s) or District-only rules.

Reporting

- A. Any non-conformance with permit requirements, including any attributable to emergency conditions (as defined in Rule 201.1) shall be promptly reported to the APCO and in accordance with Rule 111;
- B. Monitoring report shall be submitted at least every six months identifying any non-conformance with permit requirements, including any previously reported to the APCO;
- C. All reports of non-conformance with permit requirements shall include probable cause of non-conformance and any preventative or corrective action taken;
- D. Progress report shall be made on a compliance schedule at least semi-annually and including:
 - 1) Date when compliance will be achieved,
 - 2) Explanation of why compliance was not, or will not be achieved by the scheduled date, and
 - 3) Log of any preventative or corrective action taken; and
- E. Each monitoring report shall be accompanied by a written statement from the responsible official certifying the truth, accuracy, and completeness of the report.

Referencing of District and Applicable Requirements

Pursuant to Rule 201.1.VII.C. District hereby references the following documents which are clearly identified and available to the District and to the public:

- A. Plant modernization project; and
- B. Each Authority to Construct file for new equipment and each Authority to Construct file to modify existing equipment.

These files contain title, document number, applicant, and date received. Also included in these files are rule citations, engineering evaluations, and final documents all related to the existing permit conditions and emissions limits set forth in this permit.

Right of Entry

The source shall allow entry of District, CARB, or U.S. EPA officials for purpose of inspection and sampling, including:

- A. Inspection of the stationary source, including equipment, work practices, operations, and emission-related activity;
- B. Inspection and duplication of records required by the permit to operate; and
- C. Source sampling or other monitoring activities.

Permit Life

The life of this permit shall be five years from the date of issuance.

Administrative Permit Amendment and Minor Permit Modification

Administrative Permit Amendment and Minor Permit Modification are those actions taken by the District as defined in Rule 201.1.

Applicability of Federally Enforceable Conditions

Federally Enforceable Conditions **do not apply** to the following permit sections: Equipment Descriptions, and any Design Conditions, Operational Conditions, Special Conditions, or Compliance Testing Requirements designated as District only. Federally Enforceable Conditions **shall apply** to Design Conditions, Operational Conditions, Special Conditions, Compliance Testing Requirements, and Emission Limits except as noted above.

Periodic Monitoring

Non-Point

California Portland Cement Company shall conduct testing semi-annually, in accordance with the methodology contained in EPA Method 22 for all non-point sources. This testing will be the basis for determining compliance with the visible emission standard in District Rule 401. If no emissions are observed utilizing Method 22, the non-point source shall be deemed to be in compliance with the visible emission standard. If emissions are observed from any non-point source and that source is not operating under breakdown condition as defined in and allowed for in District Rule 111, National Cement shall conduct testing on that non-point source within 24 hours of the Method 22 testing in accordance with EPA Method 9 to verify compliance with the visible emission standard.

NOTE: This requirement does not apply to fugitive emissions resulting from activities not covered by a permit to operate unless the source is subject to District Rule 210.1 (NSR) requirements.

Rule 201.1

Point

California Portland Cement Company shall conduct testing semi-annually, in accordance with the methodology contained in EPA Method 22 for all point sources. This testing will be the basis for determining compliance with the visible emission standard in District Rule 401. If no emissions are observed utilizing Method 22, the point source shall be deemed to be in compliance with the visible emission standard. If emissions are observed from any point source and that point source is not operating under breakdown condition as defined in and allowed for in District Rule 111, California Portland Cement Company shall conduct testing on that point source:

- A. Within 24 hours of the Method 22 testing in accordance with EPA Method 9 to verify compliance with the visible emission standard. If compliance is not documented:
- B. Within 30 days of the Method 9 testing in accordance with EPA Method 5 or 5D to verify compliance with the requirements of District Rules 404.1, 405, 406 and/or 210.1.

Additional Monitoring

Diesel standby and emergency piston engines do not require opacity monitoring if utilizing California diesel or other low-sulfur, low aromatic fuel. Fuel records shall be kept for verification purposes and an operational log for hours of operation.

All control equipment shall be inspected annually for proper operation. California Portland Cement Company shall maintain all records of control equipment maintenance for a period of five years.

Monitoring shall be the responsibility of the source; however, a visible emissions inspection or Method 9 conducted by a District inspector may be counted as meeting the requirement for the source to conduct same if the information and records generated by the inspector meets the requirements of the permit and a copy of the records are maintained by the source for a period of five years.

Record keeping provisions associated with all monitoring requirements shall include the following information:

- A. Identification of stack or emission point being monitored;
- B. Operational conditions at the time of monitoring;
- C. Records of any monitoring conducted, including records of emission or operational parameter values and the date, place and time of sampling or measurement; and
- D. Where corrective action is triggered, description of the corrective action and the date, time and results of any corrective action.

Rule 201.1**Testing**

California Portland Cement Company shall conduct stack testing annually and at other times as specified by U.S. EPA or the District, in accordance with the methodology outlined in EPA Methods 5-8, 7E, 10, 18 or equivalent, to verify compliance with emission limits and the accuracy of any continuous in-stack monitors. The District and U.S. EPA shall be notified at least 30 days in advance of the testing to allow an observer to be present and the report of results shall be transmitted to the District as soon as they are available. (PSD Permit #SE75-01 and District Rule 210.1)

Monitoring, Testing, Record Keeping Requirements (Applies to EU 026)
(Portland Cement Kilns - Oxides of Nitrogen)

Continuous NOX emissions monitoring system records and clinker production records for the cement kiln shall be maintained at the facility for a period of at least five years and made readily available to District personnel.

Oxides of nitrogen stack testing for purposes of this requirement shall be conducted using EPA Test Method 7E.

Stack gas flow rate testing for purposes of this requirement shall be conducted using EPA Test Method 2.

The following formula shall be used to convert uncorrected observed NOX concentration in ppm to tons per day at standard conditions of 68° F and a gas pressure of 29.92 inches of mercury:

$$\frac{Tons \cdot NOx}{day} = (ppmv \cdot NOx) \times \left(\frac{46 grams}{mole} \right) \times (1.56 \times 10^{-7}) \left(\frac{dscf}{min} \right) \times (0.0120)$$

Rule 209

Conditional Approval

The Control Officer shall issue an Authority to Construct or a Permit to Operate, subject to conditions to insure compliance of the operation of any article, machine, equipment or other contrivance within the standards of Rule 208 and 208.1, in which case the conditions shall be specified in writing. Commencing work under such Authority to Construct or operation under such Permit to Operate shall be deemed acceptance of all conditions so specified. The Control Officer shall issue an Authority to Construct or Permit to Operate with revised conditions upon receipt of a new application, if the applicant demonstrates the article, machine, equipment or other contrivance can be operated within the standards of Rule 208 and 208.1 under the revised conditions.

Rule 210.1

Standards for Authority to Construct

- A. The Permittee may make a change to this permitted facility that is not addressed or prohibited by the federally enforceable conditions of this Part 70 permit without obtaining a Part 70 permit revision if:
- 1) The Permittee has obtained all permits and approvals required by District Rules 201 and 210.1 (unless the change is exempt under District Rule 202);
 - 2) The change is not subject to any requirements under Title IV of the Clean Air Act;
 - 3) The change is not a Title I modification; and
 - 4) The change does not violate an applicable requirement of the Clean Air Act or a federally enforceable term or condition of this permit.
- B. For a change that qualified under this section, the Permittee shall provide contemporaneous written notice to the District and the U.S. EPA (except for a change that is exempt under District Rule 202). This written notice shall describe the change, including the date it was made, and shall contain other information as required to determine new applicable requirements of the Clean Air Act that apply as a result of the change;

- C. Upon satisfying the requirements of paragraph B above, the Permittee may make the proposed change;
- D. Changes that qualify under this section are not subject to the requirements for Part 70 revisions;
- E. The Permittee shall include each off-permit change made under this section in the application for renewal of this Part 70 permit; and
- F. The permit shield(s) provided in this permit do not apply to off-permit changes made under this section.

Rule 210.4

Prevention of Significant Deterioration (PSD)

Source will be subject to District Rule 210.4, Prevention of Significant Deterioration (PSD) if major modifications are made.

All conditions of California Portland Cement Company PSD permit # 78-73 and SE 75-01 continue to apply. See Appendix A, PSD Permit Conditions from California Portland Cement Title V Permit.

Rule 401

Visible Emissions

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.

Rule 404.1

Particulate Matter Concentration - Desert Basin

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.

Rule 405

Particulate Matter - Emission Rate

A person shall not discharge into the atmosphere from any source operation, particulate matter in excess of the limits set forth in the allowable particle emissions based on process weight rate table included in Rule 405.

Rule 406

Process Weight - Portland Cement Kilns

This rule applies because cement kilns were constructed or modified after August 17, 1971. Cement kilns, the construction or modification of which is commenced after August 17, 1971, shall not discharge into the atmosphere particulate matter in excess of the Environmental Protection Agency Standards of Performance. Cement kilns regulated by this Rule are not subject to other process weight Rules.

Rule 407

Sulfur Compounds

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).

- Rule 409 **Fuel Burning Equipment - Combustion Contaminants**
Fuel burning equipment, the construction or modification of which is commenced after August 17, 1971, shall not discharge into the atmosphere particulate matter, sulfur dioxide or nitrogen oxides in excess of U.S. EPA Standards of Performance. Additionally, combustion contaminants at point of discharge shall not exceed 0.1 grain per standard cubic foot of gas calculated to 12 percent of carbon dioxide (CO₂) at standard conditions.
- Rule 410 **Organic Solvents**
A person shall not discharge into the atmosphere more organic materials in any one day from any article, machine, equipment or other contrivance in which any organic solvent or any material containing organic solvent is utilized unless the emissions are controlled or reduced as outlined in the organic solvent rule 410. See District Rule 410 for complete requirements.
- Rule 410.2 **Disposal and Evaporation of Solvents**
A person shall not during any one day disposed of a total of more than 1½ gallons of any photochemically reactive solvent as defined in Section X of Rule 410.2, or of any material containing more than 1½ gallons of any such photochemically reactive solvent into the atmosphere.
- Rule 411 **Storage of Organic Liquids**
A person shall not use equipment to store organic liquids and petroleum distillates with a true vapor pressure greater than 1.5 psia unless provisions are made for controlling organic vapors.
- Rule 412 **Gasoline Transfer into Stationary Storage Containers, Delivery Vessels and Bulk Plants**
A person shall not transfer gasoline into storage or delivery vessels unless provisions are made to recover 95% of the displaced vapors.
- Rule 412.1 **Transfer of Gasoline into Vehicle Fuel Tanks**
No person shall transfer gasoline into vehicle fuel tanks unless CARB-Certified Phase II dispensing equipment is utilized and maintained in correct working order.
- Rule 419 **Nuisance**
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.
- Rule 422 **Federal New Source Performance Standards (NSPS)**
Provisions of Part 60, Chapter 1, Title 40, Code of Federal Regulations, in effect September 5, 1996, are hereby adopted by reference and made a part hereof. All new and modified sources shall comply with standards, criteria and requirements set forth therein.

All applicable requirements of 40 CFR Part 60, Subparts A (General Provisions), Subpart F (Standards of Performance for Portland Cement Plants), Subpart Y (Standards of Performance for Coal Preparation and Processing Plants), Subpart OOO (Standards of Performance for Nonmetallic Mineral Processing Plants), and Subpart IIII (Standards of Performance for Stationary Compression Ignition Internal Combustion Engines) apply to this facility.

Rule 423

National Emission Standards for Hazardous Air Pollutants and Source Categories (NESHAPS)

Provisions of Title 40, Chapter 1, Parts 61 and 63, Code of Federal Regulations, in effect September 5, 1996, are hereby adopted by reference and made a part hereof. All sources of hazardous air pollution shall comply with applicable standards, criteria and requirements set forth herein.

All applicable requirements of 40 CFR Part 61, Subpart M (National Emission Standard for Asbestos) and 40 CFR Part 63, Subpart A (General Provisions); Subpart LLL (National Emission Standards for Hazardous Air Pollutants From Portland Cement Manufacturing Industry); and Subpart ZZZZ (National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines) apply to this facility.

For the purposes of 40 CFR Part 63, Subpart LLL, "Significant Change" is defined as the use by the facility of a fuel or alternate raw material that is a Federally regulated hazardous waste. The normal use of District approved fuels and/or fuel blends and District approved raw materials or raw material blends does not constitute a "significant change" in operation of the facility.

For the purposes of 40 CFR Part 63, Subpart ZZZZ, "Stationary Reciprocating Internal Combustion Engines" You are subject to this subpart if you own or operate a stationary RICE at a major or area source of HAP emissions, except if the stationary RICE is being tested at a stationary RICE test cell/stand.

CAA Section
112(r)(7)

Clean Air Act

Should this stationary source, as defined in 40 C.F.R. section 68.3, become subject to the accidental release prevention regulations in part 68, then the owner or operator shall submit a risk management plan (RMP) by the date specified in section 68.10 and shall certify compliance with the requirements of part 68 as part of the annual compliance certification as required by 40 C.F.R. part 70 or 71.

40 CFR
70.5d

Compliance Certification

The owner/operator shall comply with the following procedures for compliance certification:

- A. Submittal of a compliance certification by the owner or operator to the U.S. EPA and copy to the APCO within 60 days after end of compliance certification period;
- B. Compliance certification period shall begin April 1 of each year and end March 31 of the following year;
- C. Such compliance certification shall identify the basis for each permit term or condition, e.g., specify the emissions limitation, standard or work practice, and a means of monitoring compliance with the term or condition;
- D. Such compliance certification shall include compliance status and method(s) used to determine compliance for the current time period and over entire reporting period; and
- E. Such compliance certification shall include any additional inspection, monitoring or entry requirement promulgated pursuant to Sections 114(a) and 504(b) of the CAA.

Any application form, report, or compliance certification submitted pursuant to these regulations shall contain certification by a responsible official of truth, accuracy, and completeness. This certification and any other certification required under this part shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

40 CFR 82

Protection of Stratospheric Ozone

Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to 40 CFR §82.156. Equipment used during maintenance, service, repair, or disposal of appliances must meet the standards for recycling and recovery equipment in accordance with 40 CFR §82.158.

Persons performing maintenance, service, repair or disposal of appliances must be certified by a certified technician pursuant to 40 CFR §82.161.

PSD Permit

PSD Permit #78-73, SE 75-01

PSD Permit conditions in Appendix A of California Portland Cement Company's Title V permit apply to this facility.

NESHAP Subpart LLL, Portland Cement Manufacturing Industry Compliance Extension

California Portland Cement has been granted one year compliance extension request regarding 40 CFR Part 63 Subpart LLL, HCl compliance limit and Hg compliance limit demonstrations, until September 9, 2016. All other requirements of 40 CFR Part 63, Subpart LLL remain in effect.

VIII. NEW, MODIFIED AND CANCELED EMISSION UNITS:

Only 3 Emission Units have been modified and 3 new Emission Units have been installed at California Portland Cement Company since the previous issuance of Title V permit (March 2011). As described below, all new and modified emission units have been considered minor facility modifications and do not increase plant-wide emissions to an amount that will exceed the daily maximum; therefore, public noticing of each modification was not required.

New and modified emission units has contributed to the following ton per year (ton/yr) for potential to emit in emission: PM₁₀ – 5.04, SO₂ – 0.00, NO₂ – 0.00, VOC – 0.00. Summary of the modified and new emissions units are below.

Modified Units:

<u>Emissions Unit</u>	<u>Modification</u>
020D	<u>Gasoline Storage & Dispensing System</u> was modified by upgrading the existing underground gasoline storage tank vapor recovery system (Phase I) with the California Air Resources Board approved Enhanced Vapor Recovery (EVR) system. <i>No significant change in emissions</i>
044A	<u>Piston Engine with Compressor</u> was modified by replacing with a different engine. <i>No significant change in emissions</i>
059D	<u>Finish Grinding Operation #6</u> was modified by installation of a bin partition, associated conveying equipment and new conveyor dust collector. <i>Potential emission increase ton/yr: PM₁₀ – 0.30</i>

New Units:

<u>Emission Unit</u>	<u>Description</u>
070	<u>Concrete Batch Plant</u> <i>Potential emission increase ton/yr: PM₁₀ – 4.74</i>
071	<u>Concrete Storage Guppy</u> <i>Potential emission increase ton/yr: Emission Included in EU 070</i>
072	<u>Vacuum Truck</u> <i>No significant increase in emissions</i>

Canceled Units:

<u>Emission Unit</u>	<u>Description</u>
043	Piston Engine with Welder

IX. COMPLIANCE:

A summary of Violations filed against California Portland Cement Company based on non-compliance and Variances filed by California Portland Cement Company to maintain compliance are summarized below.

A. Notice of Violations (NOV):

2011 Violations

None

2012 Violations

<u>Violation Date</u>	<u>Compliance Date</u>	<u>Violation Description</u>	<u>NOV Number</u>
12/8/2011	7/5/2012	Failure to notify when PERP in the District for more than 5 days	082112/GRB
9/17/2012	9/12/2012	Rule 201 – Failure to permit an engine	091712/JH

2013 Violations

None

2014 Violations

None

2015 Violations

<u>Violation Date</u>	<u>Compliance Date</u>	<u>Violation Description</u>	<u>NOV Number</u>
8/11/2015	10/29/2015	Rule 422 (NSPS) and Rule 423 (NESHAPS) – Failure to operate and maintain Cooler Opacity CMS	081115/JC

B. Variances:

2011 Variances

None

2012 Variances

<u>Hearing Date</u>	<u>Completion Date</u>	<u>Operation Requiring Variance</u>	<u>Variance Number</u>
7/5/2012	10/3/2012	Pyroprocessing System	12-04(I)
8/22/2012	2/4/2013	Pyroprocessing System	12-04(R)

2013 Variances

None

2014 Variances

None

2015 Variances

None

C. Breakdown**2011 Occurrences**

<u>Date</u>	<u>Equipment Involved</u>	<u>Emission Unit</u>
1/8/2011	H5 Stack NOx Analyzer	1003026
1/12/2011	H5 Stack Opacity Monitor	1003026
2/16/2011	H5 Stack Opacity Monitor	1003026
2/19/2011	H5 Stack Opacity Monitor	1003026
3/15/2011	H5 Stack NOx Analyzer	1003026
3/24/2011	H5 Stack NOx Analyzer	1003026
3/28/2011	H5 Stack NOx Analyzer	1003026
3/29/2011	H5 Stack NOx Analyzer	1003026
4/11/2011	H5 Stack NOx Analyzer	1003026
4/12/2011	H5 Stack NOx Analyzer	1003026
5/6/2011	H5 Baghouse Opacity Monitor	1003026
5/10/2011	H5 Baghouse Opacity Monitor	1003026

5/11/2011	H5 Baghouse Opacity Monitor	1003026
5/12/2011	H5 Baghouse Opacity Monitor	1003027
6/15/2011	H5 Baghouse NOx Analyzer	1003027
8/25/2011	H5 Baghouse Opacity Monitor	1003027
9/13/2011	H5 Baghouse Opacity Monitor	1003027
9/21/2011	H5 Baghouse NOx Analyzer	1003026
9/24/2011	H5 Stack Analyzer	1003027
10/2/2011	NOx Analyzer Failure	1003027
10/29/2011	H5 Baghouse Opacity Monitor	1003026
10/29/2011	H5 Baghouse	1003026
11/1/2011	H5 Baghouse NOx Analyzer	1003026

2012 Occurrences

<u>Date</u>	<u>Equipment Involved</u>	<u>Emission Unit</u>
2/11/2012	H5 Baghouse	1003026
2/15/2012	H2 Opacity Monitor	1003027
4/11/2012	H2 Opacity Monitor	1003027
4/15/2012	H5 Baghouse	1003026
5/23/2012	H2 Opacity Monitor	1003027
6/6/2012	H2 Baghouse Dusting	1003027
6/22/2012	H2 Baghouse Opacity Monitor	1003027
6/27/2012	H2 Baghouse Opacity Monitor	1003027
8/29/2012	Opacity Exceedance	1003027
8/29/2012	H2 Baghouse	1003027
10/15/2012	H5 Stack Analyzer	1003026
11/13/2012	H2 Baghouse Opacity	1003027

2013 Occurrences

<u>Date</u>	<u>Equipment Involved</u>	<u>Emission Unit</u>
4/1/2013	H2 Baghouse Opacity	1003027
4/1/2013	H5 Baghouse Opacity Monitor	1003026
4/9/2013	H5 Baghouse Opacity	1003026
5/7/2013	H5 Baghouse Opacity	1003026
5/8/2013	H5 Analyzers Malfunction	1003027
5/9/2013	H5 Baghouse Opacity	1003026
5/25/2013	H5 Baghouse Opacity	1003026
5/25/2013	H5 Baghouse Opacity	1003026
5/28/2013	H2 Baghouse Opacity	1003027
5/28/2013	H5 Baghouse Opacity	1003026
6/1/2013	H5 Baghouse Opacity	1003026
6/13/2013	H5 Baghouse Opacity	1003026
6/19/2013	Opacity Analyzer Failure	1003026
7/25/2013	H5 Baghouse Opacity	1003026
8/9/2013	H5 Baghouse Opacity Alarm	1003026
8/25/2013	H5 Baghouse Opacity	1003026
9/14/2013	H5 Baghouse Opacity	1003026
9/15/2013	H5 Baghouse Opacity	1003026
9/25/2013	Reject Feed Bin Dust Collector Failed	1003013
9/30/2013	H5 Baghouse Opacity	1003026
10/9/2013	H5 Baghouse Opacity	1003026
10/22/2013	H5 NOx Analyzer	1003026
10/31/2013	H2 Baghouse Opacity	1003027
12/8/2013	H5 Baghouse Opacity	1003026

12/21/2013	H5 Baghouse Opacity	1003026
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2014 Occurrences

<u>Date</u>	<u>Equipment Involved</u>	<u>Emission Unit</u>
3/1/2014	H5 Baghouse Stack Analyzer	1003026
3/9/2014	H5 Baghouse Stack Monitor	1003026
3/10/2014	H5 Baghouse Stack Analyzer	1003026
4/10/2014	H5 Opacity Monitor Failure	1003026
4/10/2014	H2 Baghouse Opacity	1003027
4/14/2014	Opacity Monitor Static Failure	1003026
4/15/2014	Opacity Monitor Static Failure	1003026
5/21/2014	H5 Baghouse Stack Monitor	1003027
5/26/2014	H2 Baghouse Opacity	1003027
5/30/2014	H5 Baghouse Stack Monitor	1003027
6/6/2014	H5 Opacity	1003026
6/7/2014	H5 Baghouse Stack Monitor	1003027
6/20/2014	H2 Baghouse	1003027
7/11/2014	H2 Baghouse Opacity	1003027
7/21/2014	H2 Baghouse Opacity Monitor	1003027
7/22/2014	H2 Baghouse Opacity Monitor	1003027
10/19/2014	H2 Baghouse Opacity Monitor	1003027
11/13/2014	H2 Baghouse Opacity Monitor	1003027
11/22/2014	H2 Baghouse Opacity Monitor	1003027

2015 Occurrences

<u>Date</u>	<u>Equipment Involved</u>	<u>Emission Unit</u>
1/8/2015	H2 Baghouse	1003027

2/4/2015	H2 Baghouse	1003027
2/7/2015	H2 Baghouse	1003027
2/13/2015	H2 Baghouse	1003027
3/7/2015	H2 Baghouse	1003027
3/12/2015	H2 Stack Opacity Monitor	1003027
3/20/2015	H2 Baghouse	1003027
3/22/2015	H2 Stack Opacity Monitor	1003027
3/26/2015	H2 Stack Opacity Monitor	1003027
3/28/2015	H2 Baghouse Opacity Monitor	1003027
3/28/2015	H2 Baghouse Opacity Monitor	1003027
4/2/2015	H2 Baghouse Mechanical Failure	1003027
4/4/2015	H2 Baghouse Opacity Monitor Failure	1003027
4/19/2015	H2 Baghouse Opacity Monitor Failure	1003027
7/18/2015	H2 Opacity Analyzer Failure	1003027
8/5/2015	H5 Baghouse Opacity Monitor	1003026
8/8/2015	H2 Baghouse	1003027
8/20/2015	H2 Opacity Analyzer Malfunction	1003027
9/3/2015	H5 Opacity Analyzer	1003026
9/7/2015	H5 Baghouse Opacity Monitor	1003026
9/29/2015	Opacity Spike	1003027
10/3/2015	H2 Baghouse	1003027
10/5/2015	H5 Baghouse Opacity Monitor	1003026
10/7/2015	H2 Stack Monitor	1003027
10/18/2015	H2 Baghouse	1003027

X. MONITORING AND RECORDKEEPING REQUIREMENTS:

A. Monitoring and Recordkeeping Requirements

The permittee shall conduct routine inspections on all required control equipment. The following monitoring procedures shall be used.

1. Conduct daily visual observations of emission control equipment (excluding kiln and cooler stacks) (Visual observations will be conducted by employees pursuant to standard instructions and reporting procedures.):
 - a. If visual observations detect emissions, conduct EPA Method 22 (opacity/visual emissions readings);
 - b. If visual emissions are confirmed by EPA Method 22, conduct EPA Method 9 (6 minute visual emissions readings) as soon as practicable; and
 - c. Record results of EPA Method 9 compliance monitoring.
2. Conduct semi-annual visible emissions survey EPA Method 22 (excluding kiln and cooler stacks) on all control equipment. Record results for compliance monitoring;
3. Kiln and clinker cooler exhaust stacks will be equipped with continuous monitors/recorder for opacity;
4. Kiln exhaust stack will be equipped with continuous monitors/recorders for nitrogen oxides;
5. Diesel engines listed in this permit will be fired on diesel fuel with sulfur content not to exceed 0.05%;
6. Comply with all applicable opacity and PM limits as specified in 40 CFR 60, Subpart F;
7. Opacity monitor (CEM) will be calibrated, maintained, and operated as directed in 40 CFR 60, Subpart F;
8. Develop and maintain a Startup, Shutdown, and Malfunction Plan was required by 40 CFR Part 63, Subpart A;
9. Comply with all applicable monitoring requirements of 40 CFR Part 63, Subpart LLL;
10. Develop and maintain an Operations and Maintenance Plan as required by 40 CFR Part 63, Subpart LLL; and
11. Comply with monitoring, installation, collection, operation, maintenance notification, reporting, and record requirements of 40 CFR 63, Subpart ZZZZ.

1. Gasoline Storage – Phase I

- a. Compliance with the vapor recovery requirements of District Rule 412 shall be demonstrated using California Air Resources Board (CARB) Method 201.1 or 201.1a upon installation and as directed by the Air Pollution Control Officer;
- b. True vapor pressure shall be determined using Reid vapor pressure ASTM Method No. D-323-82 at storage temperature; and
- c. The test method to determine vapor tightness of delivery vessels shall be EPA Method 27.

Verification that each CARB-certified Phase II Vapor Recovery System meets or exceeds the requirements of tests specified in District Rule 412.1, Subsection V.C. shall be maintained. These test results shall be dated and shall contain the names, addresses, and telephone numbers of person(s) responsible for system installation and testing.

Facility shall be pressure tested to determine proper installation and function before startup, and thereafter as directed by the Control Officer if not consistently operated leak-free or a major modification is implemented.

Tests shall be conducted in accordance with test procedures found in CARB's "Test Procedures for Determination of the Efficiency of Gasoline Vapor Recovery Systems at Service Stations".

2. Coating of Metallic Parts

California Portland Cement Company shall maintain and have available during an inspection:

- a. A current list of VOC containing products in use containing all data necessary to evaluate compliance, including the following information, as applicable:
 - i) Material name and manufacturer's identification;
 - ii) Application method;
 - iii) Material type and specific use instructions;
 - iv) Specific mixing instructions;
 - v) Maximum VOC content of coating as applied, including thinning solvents, hardeners, etc., excluding water and exempt compounds; and
 - vi) Coating composition and density.
- b. Daily coating and solvent use records, including the following information for each:
 - i) Volume used of each component and mix ratio;
 - ii) VOC content in grams/liter (or pounds/gallon) as applied/used; and
 - iii) Volume in liters (or gallons) applied/used.
- c. Capture and control equipment operating records, including:
 - i) Periods of operation corresponding to use records showing control equipment was used as necessary;
 - ii) Key system operating parameters showing operation as required to comply and as intended by manufacturer; and
 - iii) Date performed, and description of all control system maintenance.

Facilities exempt by District Rule 410.4, Subsection III.A. may maintain records on an extended basis provided such records show emissions are less than 15 pounds for the entire extended period.

All records shall be retained and made available for inspection by the Control Officer for at least five years.

B. Additional Recordkeeping Requirements

1. Recording of maintenance of all monitoring and support information associated with all permit streamlining requirements imposed in accordance with Rule 201.1, Subsection V.J., all District-only rules which apply in accordance with Rule 201.1, Subsection V.K.1., and all applicable federal requirement not submitted by such permit streamlining requirement(s) or District-only rules, including:
 - a. Date, place, and time of sampling;

- b. Operating conditions at time of sampling;
 - c. Date, place, and method of analysis; and
 - d. Results of analysis;
- 2. Retention of records of all required monitoring data and support information for a period of at least five years from the date of sample collection, measurement, report, or application; and
- 3. Any other recordkeeping deemed necessary by the APCO to ensure compliance with all permit streamlining requirements imposed in accordance with Rule 201.1, Subsection V.J., all District-only rules which apply in accordance with Rule 201.1, Subsection V.K.1., and all applicable federal requirements not subsumed by such permit streamlining requirement(s) or District-only rules.

XI. REPORTING REQUIREMENTS:

- A. Any non-conformance with permit requirements, including any attributable to emergency conditions (as defined in Rule 201.1) shall be promptly reported to the APCO and in accordance with Rule 111;
- B. Monitoring report shall be submitted at least every six months identifying any non-conformance with permit requirements, including any previously reported to the APCO;
- C. All reports of non-conformance with permit requirements shall include probable cause of non-conformance and any preventative or corrective action taken;
- D. Progress report shall be made on a compliance schedule at least semi-annually and including:
 - 1) Date when compliance will be achieved,
 - 2) Explanation of why compliance was not, or will not be achieved by the scheduled date, and
 - 3) Log of any preventative or corrective action taken; and
- E. Each monitoring report shall be accompanied by a written statement from the responsible official certifying the truth, accuracy, and completeness of the report.