

Bay Area Air Quality Management District

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**Permit Evaluation
and
Statement of Basis
for
Minor Revision of**

MAJOR FACILITY REVIEW PERMIT

for

Lehigh Southwest Cement Company

Facility #A0017

Facility Address:

24001 Stevens Creek Boulevard
Cupertino, CA 95014

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May 2011

Application Engineers: Thu Bui
Site Engineer: Thu Bui

Application: 22954

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Title V Statement of Basis

A. Background

This facility is subject to the Operating Permit requirements of Title V of the federal Clean Air Act, Part 70 of Title 40 of the Code of Federal Regulations (CFR), and BAAQMD Regulation 2, Rule 6, Major Facility Review because it is a major facility as defined by BAAQMD Regulation 2-6-212. It is a major facility because it has the “potential to emit” (as defined by BAAQMD Regulation 2-6-218) more than 100 tons per year of several regulated air pollutants oxides of nitrogen, sulfur dioxide and carbon monoxide. It is also a major facility because it has the potential to emit more than 10 tons per year of hydrogen chloride (HCl), a hazardous air pollutant (HAP) or more than 25 tons per year of combined HAPs (HCl, benzene, zylene, toluene, mercury, etc...).

Major Facility Review permits (Title V permits) must meet specifications contained in 40 CFR, Part 70 as delineated in BAAQMD Regulation 2, Rule 6. The permits must contain all “applicable requirements” (as defined in BAAQMD Regulation 2-6-202), including emission limits and standards, monitoring requirements, recordkeeping requirements, and reporting requirements. The permit holders must submit reports of all required monitoring at least every six months and compliance certifications at least every year.

In the Bay Area, State and District requirements are also “applicable requirements” and are included in the permit. These requirements can be federally enforceable or non-federally enforceable. All applicable requirements are contained in Sections I through VI of the permit.

Each facility in the Bay Area is assigned a facility identifier that consists of a letter and a 4-digit number. This identifier is also considered to be the identifier for the permit. The identifier for this facility is A0017.

This application is for a minor revision to the Title V Permit. The purpose of this revision is to include the installation of the activated carbon injection system and the mercury continuous emission monitoring system at the cement kiln (S-154) under NSR application # 22953. The activated carbon injection system will further control emissions of mercury and other air pollutants from Lehigh’s cement.

Lehigh has requested to install a powder activated carbon injection (ACI) system to control mercury (Hg) emissions at the S-154 Kiln. This is a voluntary interim action that is intended to reduce mercury emissions below levels which the District has established for public notification under the Air Toxics Hot Spots Program. Powder activated carbon injection has been utilized in coal fired power plants, but it is new in the cement industry for Hg emission reduction and has shown to be effective in trial runs. The ACI system is a part of Lehigh’s overall efforts to control mercury emissions from their facility. Lehigh will subsequently be making additional modifications, including adding a single stack, to further reduce public exposures to mercury and other toxic air contaminants.

Air Toxics Hot Spots Program (ATHS):

The Air Toxics "Hot Spots" Information and Assessment Act (AB 2588, Connelly, 1987) established a formal regulatory program for site-specific air toxics emissions inventory and health risk quantification that is managed by California air districts. Under this program, a wide variety of industrial, commercial, and public facilities are required to report the types and quantities of toxic substances their facilities routinely release into the air. The goals of the Air Toxics Hot Spots Program are to collect emissions

data, to identify facilities with potential for localized health impacts, to ascertain health risks, to notify nearby residents of risks that are determined to warrant such notification, and to reduce significant risks.

There are five steps to implementing the ATHS program. Guidelines have been developed for all five steps to establish a consistent, science-based, methodology for implementing the program. The five steps are briefly described as follows:

- **Air Toxics Emissions Inventory:** Subject facilities are required to prepare and submit a comprehensive emissions inventory plan followed by a toxics emissions inventory report. Each facility's emissions inventory must be updated on a regular basis (in order to reflect changes in equipment, materials, and production levels at the facility).
- **Prioritization:** Each facility is prioritized for potentially significant health impacts based on the quantity and toxicity of emissions, and the proximity of nearby residents and workers.
- **Health Risk Assessment:** Facilities that are determined to be "high priority" are required to prepare a comprehensive HRA. The air district and Cal/EPA's Office of Environmental Health Hazard Assessment (OEHHA) review the HRA.
- **Public Notification:** If the health risks resulting from the facility's emissions exceed action levels established by the air district, the facility is required to perform notification to all exposed persons regarding the results of the HRA. The BAAQMD has established a cancer risk of 10 in a million and a noncancer Hazard Index of one as ATHS public notification levels.
- **Risk Reduction:** If the health risks resulting from the facility's emissions exceed significance levels established by the air district, the facility is required to conduct an airborne toxic risk reduction audit and develop a plan to implement measures that will reduce emissions from the facility to a level below the significance level within five years. The BAAQMD has established a cancer risk of 100 in a million and a noncancer Hazard Index of ten as ATHS mandatory risk reduction levels.

Lehigh's ATHS Status: Lehigh is in compliance with the ATHS program. At the District's request, Lehigh submitted an updated ATHS emission inventory in 2009. The District reviewed the emissions report and changed the prioritization status of the facility to High Priority. Therefore, Lehigh was required to prepare a comprehensive HRA, which they submitted in September, 2010. The District requested revision of the HRA and Lehigh submitted a revised HRA in March, 2011. The HRA indicates that, based on the emissions represented by the 2011 Production scenario, risk levels are below the thresholds requiring public notification; the 2011 Production scenario represents the implementation of the Activated Carbon Injection system (subject of this application) and an hourly emission rate of 0.064 lb/hr of mercury (approximate 65% reduction from baseline). Preliminary review by District staff indicates that the HRA was prepared according to the Air Toxics Hot Spots Health Risk Assessment Guidelines and represents toxic emissions and risk appropriately. The HRA report will be eligible for final approval after review by the District and OEHHA staff is complete.

Title V Minor Revision:

The applicable requirements for the activated carbon injection system, A-156, will be incorporated into the Title V permit as minor revisions and administrative amendments. Controlling mercury for the purposes of the California "Hot Spots" program is not a federally enforceable requirement and can be incorporated into a Title V permit as an administrative amendment as shown in the excerpt from BAAQMD Regulation 2, Rule 6, Major Facility Review below:

- 2-6-201 Administrative Permit Amendment:** A non-substantive amendment to a major facility review permit. The following amendments are administrative amendments: changes in recordkeeping format that are not relaxations of applicable requirements, the correction of typographical errors, changes in permit format that are not alterations of applicable requirements, changes in source descriptions that are not alterations of applicable requirements, changes in the descriptions of applicable requirements that add detail but do not affect substantive requirements, deletion of requirements containing sunset dates that have passed, the identification of administrative

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changes at a facility (such as a replacement of the facility's responsible official or a change in ownership or operational control of the facility which involves no physical or operational changes to the facility), the deletion of sources, the approval of a District rule into the SIP, the imposition of more frequent emission monitoring requirements, and changes to applicable requirements and related monitoring that are not federally enforceable.

The applicable requirements for the S-168, Activated Carbon Silo, and S-169, Activated Carbon Feed Bin, are federally enforceable and will be incorporated in the Title V permit as minor revisions as defined by BAAQMD Regulation 2-6-215. Minor revisions are defined as revisions that are not administrative amendments or significant permit revisions. The definition of significant permit revisions is shown below:

- 2-6-226 Significant Permit Revision:** Any revision to a federally enforceable condition contained in a major facility review permit that can be defined as follows:
- 226.1 The incorporation of a change considered a major modification under 40 CFR Parts 51 (NSR) or 52 (PSD);
 - 226.2 The incorporation of a change considered a modification under 40 CFR Parts 60 (NSPS), 61 (NESHAPS), or Section 112 of the Clean Air Act (HAP);
 - 226.3 Any significant change or relaxation of any applicable monitoring, reporting or recordkeeping condition;
 - 226.4 The establishment of or change to a permit term or condition allowing a facility to avoid an applicable requirement, including:
 - 4.1 a federally enforceable emission limit assumed in order to avoid classification as a modification under any provision of Title I of the federal Clean Air Act, or
 - 4.2 an alternative hazardous air pollutant emission limit pursuant to Section 112(i)(5) of the Clean Air Act;
 - 226.5 The establishment of or change to a case-by-case determination of any emission limit or other standard;
 - 226.6 The establishment of or change to a facility-specific determination for ambient impacts, visibility analysis, or increment analysis on portable sources; or
 - 226.7 The incorporation of any requirement promulgated by the U. S. EPA under the authority of the Clean Air Act provided that three or more years remain on the permit term.

The revision is not a major modification for NSR or PSD; a modification for NSPS, NESHAPS, or Section 112 of the federal Clean Air Act; a significant change or relaxation of any existing monitoring, recordkeeping, or reporting condition; the establishment or change to a condition to avoid a federally enforceable requirement; a case-by-case determination of a federally enforceable emission limit or standard; a determination of ambient impacts, visibility analysis, or increment analysis on portable sources, or the incorporation of any Clean Air Act requirement. Therefore, the revisions to the Title V permit will not be significant revisions.

This statement of basis will include all proposed changes to the permit in strikeout/underline format. This statement of basis addresses only the proposed changes to the permit. Additional issues were addressed in the documents for the revisions listed below.

This facility received its initial Title V permit on November 5, 2003. Although the current permit expired on October 31, 2008, it continues in force until the District takes final action on the permit renewal. The standard sections of the permit have been updated to include new standard language used in all Title V permits. The proposed permit shows all changes to the existing permit in strikeout/underline format.

Since the initial issuance of the permit, a minor revision pursuant to Application 9687 was issued on May 9, 2006.

Several District applications have been processed. These are being incorporated into the proposed permit renewal pursuant to Application 17947. The details are in the permit evaluation/statement of basis for that application, which can be found on the District's website.

B. Facility Description

The Lehigh Southwest Cement (Lehigh) facility produces Portland cement – a fine gray powder that binds sand and aggregate into concrete. Portland cement is the generic term for hydraulic cement (cement that hardens with the addition of water) used in virtually all concrete. Raw materials used in Portland cement manufacturing are comprised of calcium, silica, alumina, and iron. Although cement can be formed from a wide variety of materials, one of the most common combinations is of limestone, clay and sand. At the Lehigh facility, materials containing these minerals are mined in a quarry, ground to a fine powder, and blended in specific proportions needed for the final cement product. The finely ground mixture of raw materials are heated until partially molten (to temperatures of 2550 to 2750°F) in a cement kiln to produce a pellet-shaped, glass-hard material called clinker. The clinker is then ground with gypsum to an extremely fine powder, Portland cement.

The Portland cement manufacturing process at the Lehigh facility consists of mining and handling of raw materials, raw milling and kiln feed preparation, pyroprocessing, coal and petroleum coke preparation, clinker cooling, and finish milling. The principal operations at Lehigh consist of:

- Quarry Operations
- Primary Storage Piles
- Tertiary Crushing/Preblending
- Raw Milling
- Homogenizing
- Pyroprocessing
- Clinker Storage/Finish Milling
- Finish Product Storage and Load Out
- Fuel Preparation
- Concrete Aggregate Products (Rock Plant)

Primary emissions in the manufacturing of Portland cement at the Lehigh facility are combustion emissions, point-type particulate, and fugitive particulate. Plant operations are monitored and controlled by computer. The real-time computer system monitors feed rates and other parameters to optimize combustion control. Combustion emissions are generated in the pyroprocessing operation. Particulate emissions are generated throughout the facility from numerous stationary and mobile operations.

Baghouses are installed to recover product and control dust emissions from the kiln, mills, clinker cooler, fuel mill, belt conveyor transfer points, bulk unloading stations and at numerous other locations at the facility. Water is sprayed on haul roads and uncovered storage piles to control fugitive dust generation. Facility maintenance activities and practices such as watering of road surfaces and enforcement of the speed limits reduce the quantity of fugitives generated on-site and limit their transport off-site.

C. Permit Content

The legal and factual basis for the permit follows. The permit sections are described in the order presented in the permit.

I. Standard Conditions

This section contains administrative requirements and conditions that apply to all facilities.

Changes to permit

There are no changes to Section I in this action.

II. Equipment

This section of the permit lists all permitted or significant sources. Each source is identified by an S and a number (e.g., S-24).

Permitted sources are those sources that require a BAAQMD operating permit pursuant to BAAQMD Rule 2-1-302.

Significant sources are those sources that have a potential to emit of more than 2 tons per year of a “regulated air pollutant” (as defined in BAAQMD Rule 2-6-222) or 400 pounds per year of a “hazardous air pollutant” (as defined in BAAQMD Rule 2-6-210).

All abatement (control) devices that control permitted or significant sources are listed. Each abatement device having a primary function to reduce emissions is identified by an A and a number (e.g., A-24). If a source is also an abatement device, such as an engine used to control VOC emissions, it will be listed in the abatement device table, but will have an “S” number. An abatement device may also be a source (such as a thermal oxidizer that burns fuel) of secondary emissions. If the primary function of a device is to control emissions, it is considered an abatement (or “A”) device. If the primary function of a device is a non-control function, the device is considered to be a source (or “S”).

The equipment section is considered to be part of the facility description. It contains information that is necessary for applicability determinations, such as fuel types, contents or sizes of tanks, etc. This information is part of the factual basis of the permit.

Each of the permitted sources has previously been issued a permit to operate pursuant to the requirements of BAAQMD Regulation 2, Permits. These permits are issued in accordance with state law and the District’s regulations. The capacities in the permitted sources table are the maximum allowable capacities for each source, pursuant to Standard Condition I.J and Regulation 2-1-403.

Changes to Permit:

- Table II-A; S-168 and S-169 were added for the new activated carbon injection system per NSR # 22593
- Table II-B; A-156 was added for the activated carbon injection system as an abatement device. S-168 and S-169 were added as the silo and bin’s dust collectors

Table II A - Permitted Sources				
Each of the following sources has been issued a permit to operate pursuant to the requirements of BAAQMD Regulation 2, Permits.				
S-#	Description	Make or Type	Model	Capacity
166	Bulk Clinker Rail Car Loadout System	Custom Design		600 tons/hour
<u>168</u>	<u>Activated Carbon Storage Silo</u>	<u>Custom Design</u>		<u>60 tons</u>
<u>169</u>	<u>Activated Carbon Feed Bin</u>	<u>Custom Design</u>		<u>10 tons</u>
171	Kiln Coal System	Raymond	703RS	20 tons/hour

Table II B – Abatement Devices

A-#	Description	Source(s) Controlled	Applicable Requirement	Operating Parameters	Limit or Efficiency
<u>A-156</u>	<u>Activated Carbon Injection System</u>	<u>S-154</u>	<u>BAAQMD Condition 603</u>	<u>Hg CEMs: Sample analysis and testing of materials in and out (in the interim until the Hg CEM is certified by EPA & BAAQMD</u>	<u>261 lbs/yr Hg (12-month rolling ave.): 0.064 lb/hr Hg</u>
<u>A-168</u>	<u>Dust Collector</u>	<u>S-168</u>	<u>BAAQMD 6-1-301, BAAQMD Condition 24899, Part 1</u>	<u>Pressure drop & Visible Inspection</u>	<u>Ringelmann 1 for < 3 min/hr</u>
			<u>BAAQMD 6-1-310</u>	<u>Pressure drop & Visible Inspection</u>	<u>0.15 gr/dscf</u>
			<u>BAAQMD 6-1-311</u>	<u>Source Test every 5 yr</u>	<u>4.10P^{0.67} lb/hr where P is process weight, ton/hr</u>
			<u>BAAQMD Condition 24899, Part 3</u>	<u>Initial & Every 5 Years Source Test</u>	<u>0.0013gr/dscf</u>
<u>A-169</u>	<u>Dust collector</u>	<u>S-169</u>	<u>BAAQMD 6-1-301, BAAQMD Condition 24899, Part 1</u>	<u>Pressure drop & Visible Inspection</u>	<u>Ringelmann 1 for < 3 min/hr</u>
			<u>BAAQMD 6-1-310</u>	<u>Pressure drop & Visible Inspection</u>	<u>0.15 gr/dscf</u>
			<u>BAAQMD 6-1-311</u>	<u>Source Test every 5 yr</u>	<u>4.10P^{0.67} lb/hr where P is process weight, ton/hr</u>
			<u>BAAQMD Condition 24899, Part 3</u>	<u>Initial & Every 5 Years Source Test</u>	<u>0.0013gr/dscf</u>

III. Generally Applicable Requirements

This section of the permit lists requirements that generally apply to all sources at a facility including insignificant sources and portable equipment that may not require a District permit. If a generally applicable requirement applies specifically to a source that is permitted or significant, the standard will also appear in Section IV and the monitoring for that requirement will appear in Sections IV and VII of the permit. Parts of this section apply to all facilities (e.g., particulate, architectural coating, odorous substance, and sandblasting standards). In addition, standards that apply to insignificant or unpermitted sources at a facility (e.g., refrigeration units that use more than 50 pounds of an ozone-depleting compound) are placed in this section.

Unpermitted sources are exempt from normal District permits pursuant to an exemption in BAAQMD Regulation 2, Rule 1. They may, however, be specifically described in a Title V permit if they are considered “significant sources” as defined in BAAQMD Rule 2-6-239.

Changes to permit:

There are no changes to Section III in this action.

IV. Source-Specific Applicable Requirements, Applicable Limits & Compliance Monitoring Requirements

This section of the permit lists the applicable requirements that apply to permitted or significant sources. These applicable requirements are contained in tables that pertain to one or more sources that have the same requirements. The order of the requirements is:

- District Rules
- SIP Rules (if any) are listed following the corresponding District rules. SIP rules are District rules that have been approved by EPA for inclusion in the California State Implementation Plan. SIP rules are “federally enforceable” and a “Y” (yes) indication will appear in the “Federally Enforceable” column. If the SIP rule is the current District rule, separate citation of the SIP rule is not necessary and the “Federally Enforceable” column will have a “Y” for “yes”. If the SIP rule is not the current District rule, the SIP rule or the necessary portion of the SIP rule is cited separately after the District rule. The SIP portion will be federally enforceable; the non-SIP version will not be federally enforceable, unless EPA has approved it through another program.
- Other District requirements, such as the Manual of Procedures, as appropriate.
- Federal requirements (other than SIP provisions)
- BAAQMD permit conditions. The text of BAAQMD permit conditions is found in Section VI of the permit.
- Federal permit conditions. The text of Federal permit conditions, if any, is found in Section VI of the permit.

Section IV of the permit contains citations to all of the applicable requirements. The text of the requirements is found in the regulations, which are readily available on the District or EPA websites, or in the permit conditions, which are found in Section VI of the permit. All monitoring requirements are cited in Section IV.

Previous Section VII: Applicable Limits and Compliance Monitoring Requirements section of the permit has been deleted and combined with Section IV in this Title V permit.

Section IV and Section VII have been combined in this permit. A discussion of monitoring is included in Section VII of this permit evaluation/statement of basis.

Complex applicability determinations in this Title V Permit Renewal

Applicability of 40 CFR, Part 64, Compliance Assurance Monitoring (CAM)

The Compliance Assurance Monitoring (CAM) regulation in 40 CFR, Part 64 was developed to provide assurance that facilities comply with applicable emissions limitations by adequately monitoring control devices. The CAM rule became effective on November 21, 1997. However, most facilities are not affected by CAM requirements until they submit applications for Title V permit renewal. As required, Lehigh has conducted an applicability analysis for CAM as part of this application. The applicable requirements have been incorporated in Table III-General.

CAM applies to a source of criteria pollutant or hazardous air pollutant (HAP) emissions if all the following requirements are met:

- The source is located at a major source for which a Title V permit is required; and
- The source is subject to a federally enforceable emission limitation or standard for a criteria pollutant or HAP; and
- The source uses a control device to comply with the federally enforceable emission limitation or standard; and
- The source has potential pre-control emissions of the regulated pollutant that are equal to or greater than the major source threshold for the pollutant (in BAAQMD, the major source thresholds are 100 tons per year for each criteria pollutant, 10 tons per year for a single HAP, and 25 tons per year for two or more HAPs); and
- The source is not otherwise exempt from CAM.

The applicability of 40 CFR, Part 64, Compliance Assurance Monitoring, was reviewed for the sources at this facility. The detailed Potential to Emit (PTE) Calculations (Attachment 1) and CAM analysis (Attachment 2) are in Appendix D.

- The activated carbon injection system (A-156) is not subject to CAM because it has been installed to comply with a non-federal enforceable requirement.
- Sources S-168 and S-169 are not subject to CAM because they have potential pre-control device emissions that are equal or less than 100 tons per year of particulate matter per Section 64.2(a)(3).

Changes to permit:

- Table IV and Table VII have been combined.
- The description of Section VII has been added to Section IV Source-Specific Applicable Requirements, Emission Limits & Compliance Monitoring Requirements. For periodic monitoring, the frequency of the monitoring has also been shown, either annual (A), quarterly (Q), monthly (M), weekly (W), daily (D), or on an event basis (E). No monitoring (N) has been required if the current applicable rule or regulation does not require monitoring, and the operation is unlikely to deviate from the applicable emission limit based upon the nature of the operation.
- A column for Recordkeeping Protocol, R, has been added to Table IV & Table VII for completeness.
- BAAQMD Regulation 6-1-301 and limit has been corrected to say “for < 3 min/hr.”
- The “type of limit” has been changed to “Opacity” for BAAQMD Regulation 6-1-301, since it is an opacity standard.
- The “type of limit” has been changed to “Filterable Particulate” for BAAQMD Regulation 6-1-310 and 6-1-311, since it is a filterable particulate standard.
- Visible inspection by Method 9 or Method 22 are visible emission observations.

Table IV & Table VII – N (renumbered from Table IV & Table VII – L)
S-154 Precalciner Kiln abated by A-141 and A-142 Dust Collectors, A-171 and A-172 Baghouses, and A-156 Activated Carbon Injection System

- BAAQMD Condition # 603 was assigned to S-154 and added per NSR Application # 22953

Table IV & Table VII- N

**Source-specific Applicable Requirements, Applicable Limits &
Compliance Monitoring Requirements**

**S-154 Precalciner Kiln abated by A-141 and A-142 Dust Collectors, and A-171 and A-172 Baghouses,
and A-156 Activated Carbon Injection System**

Applicable Requirement	Regulation Title or Description of Requirement	Limit	Monitoring Citation	Monitoring & Frequency	Reporting	R	FE
BAAQMD Regulation 1	General Provisions and Definitions (5/2/01)						
1-107	Combination of Emissions						Y
1-520	Continuous Emission Monitoring						Y
1-522	Continuous Emission Monitoring and Recordkeeping Procedures						Y
SIP Regulation6	Particulate Matter and Visible Emissions (12/19/90)						
6-301	Ringelmann Number 1 Limitation	OPACITY Ringelmann 1.0 for < 3 min/hr	BAAQMD Condition # 20751, part 3a for A-141 & A-142; part 3b for A-171 and A-172	Pressure Drop Monitoring P/M P/M for A-141 & A-142; P/Q Visual Inspection (M22) for A-171 and A-172	Once every six months	Y	Y
6-301	Ringelmann Number 1 Limitation	OPACITY Ringelmann 1.0 for < 3 min/hr	BAAQMD condition # 20753, part 2 for A-141 & A-142	Visual Inspection (M9) P/D	Once every six months	Y	Y
6-301	Ringelmann Number 1 Limitation	OPACITY Ringelmann 1.0 for < 3 min/hr	BAAQMD condition # 20753, part 1 for A-171 & A-172	Visual Inspection (M22) P/Q	Once every six months	Y	Y
6-305	Visible Particles						Y
6-310	Particulate Weight Limitation	FILTERABLE PARTICULATE 0.15 gr/dscf	BAAQMD Condition # 11780, part E and # 20751, part 3a	Pressure Drop Monitoring P/M for A-141 & A-142; P/Q for A-171 and A-172	Once every six months	Y	Y
6-311	General Operations	FILTERABLE PARTICULATE 4.10P ^{0.67} lb/hr where P is process weight, ton/hr					Y
6-401	Appearance of Emissions						Y
BAAQMD Regulation 9, Rule	Inorganic Gaseous Pollutants, Sulfur Dioxide (3/15/95)						

Table IV & Table VII- N

**Source-specific Applicable Requirements, Applicable Limits &
 Compliance Monitoring Requirements**

**S-154 Precalciner Kiln abated by A-141 and A-142 Dust Collectors, and A-171 and A-172 Baghouses,
and A-156 Activated Carbon Injection System**

Applicable Requirement	Regulation Title or Description of Requirement	Limit	Monitoring Citation	Monitoring & Frequency	Reporting	R	FE
1							
9-1-300	Standards						Y
9-1-301	Limitations on Ground Level Concentrations	SO2 0.5 ppm continuously for 3 consecutive minutes or 0.25 ppm averaged over 60 consecutive minutes, or 0.05 ppm averaged over 24 hours		CEM C			Y
9-1-302	General Emission Limitations	300 ppm (dry)		CEM C			Y
9-1-304	Fuel Burning (Liquid and Solid Fuels)		BAAQMD Condition # 2786, part A.4 and BAAQMD Condition # 603, part 8	CEM and Fuel Analysis C and Q	Once every six months/quarterly report of fuel analysis	Y	Y
9-1-500	Monitoring and Records						Y
9-1-501	Area Monitoring Requirements						Y
9-1-502	Emission Monitoring Requirements						Y
9-1-600	Manual of Procedures						Y
9-1-602	Sulfur Content of Fuels						Y
9-1-603	Averaging Times						Y
9-1-604	Ground Level Monitoring						Y
9-1-605	Emission Monitoring						Y
BAAQMD Regulation 10	Standards of Performance for New Stationary Sources						
Part 1	Subpart A, General Provision (12/20/95)						N
Part 10	Subpart F, Standards of Performance for Portland Cement Plants (7/18/90)						N
NESHAP, 40 CFR, Part 63 Subpart A	General Provisions (4/20/06)						
63.4	Prohibited Activities and Circumvention						Y
63.6	Compliance with Standards and Maintenance Requirements						Y
63.7	Performance Testing Requirements						Y
63.8	Monitoring Requirements						Y
63.9	Notification Requirements						Y
63.10	Recordkeeping and Reporting Requirements						Y

Table IV & Table VII- N

**Source-specific Applicable Requirements, Applicable Limits &
 Compliance Monitoring Requirements**

**S-154 Precalciner Kiln abated by A-141 and A-142 Dust Collectors, and A-171 and A-172 Baghouses,
and A-156 Activated Carbon Injection System**

Applicable Requirement	Regulation Title or Description of Requirement	Limit	Monitoring Citation	Monitoring & Frequency	Reporting	R	FE
63.12	State Authority and Delegation						Y
NESHAP, 40 CFR, Part 63 Subpart LLL	Portland Cement Manufacturing Industry						
63.1342	Standards: General						Y
63.1343(b)(1)	PM emission limit	PM10 0.30 lb/ton of feed (dry basis) to kiln	63.1349(c)	Periodic Source Test (M5) P/every 5 years for PM10	Every 5 years	Y	Y
63.1343(b)(2)	Opacity	OPACITY < 20%	63.1350(c)(2)	Visual inspection (M9) P/D	Once every six months	Y	Y
63.1343(b)(2)	Opacity	OPACITY < 20%	63.1349(c)	Periodic Source Test (M9) P/every 5 years	Once every six months	Y	Y
63.1343(b)(3)	D/F	8.7E-11 gr/dscf(TEQ); or 1.7E-10 gr/dscf (TEQ) when temperature at inlet ≤ 400°F	63.1349(d)	Periodic Source Test (M23) P/Every 30 months	Once every 30 months	Y	Y
63.1344(a) and (b)	Temperature limit of the gas at the inlet to the particulate matter control device to monitor D/F emissions	Determined by 63.1349(b)(3) & 63.1344(a),(b)	63.1350(f)	Thermo-couple C	Once every six months	Y	Y
63.1344(f)	Good Combustion Practices	Minimize THC from fuel combustion		N			Y
63.1349(a)	Initial Compliance with emission limit						Y
63.1349(b)(1)	Opacity and PM initial and subsequent performance test		63.1349(c)	P/every 5 years for PM10		Y	Y
63.1349(b)(3)	D/F initial and subsequent performance test		63.1349(d)	P/every 30 months		Y	Y
63.1349(c)	PM and opacity periodic performance tests						Y
63.1349(d)	D/F periodic performance tests						Y
63.1349(e)	PM and opacity periodic performance tests for significant changes						Y

Table IV & Table VII- N

**Source-specific Applicable Requirements, Applicable Limits &
 Compliance Monitoring Requirements**

**S-154 Precalciner Kiln abated by A-141 and A-142 Dust Collectors, and A-171 and A-172 Baghouses,
and A-156 Activated Carbon Injection System**

Applicable Requirement	Regulation Title or Description of Requirement	Limit	Monitoring Citation	Monitoring & Frequency	Reporting	R	FE
63.1350(a)	Operations and malfunction (O&M) plan						Y
63.1350(b)	Compliance with operations and maintenance plan						Y
63.1350(c)(2)	Opacity monitoring						Y
63.1350(c)(3)	Compliance with Opacity Limit						Y
63.1350(f)(1) – (f)(5)	Baghouse inlet gas temperature monitoring						Y
63.1350(f)(6)	Thermocouples and/or temperature sensors calibration	Calibration		P/once every 3 months			Y
63.1350(i)	Inspection of components of combustion system	D/F emission limit		P/once every year			Y
63.1350(k)	PM CEM requirement	Pending EPA rulemaking					N
63.1351(a)	Compliance date June 14, 2002						Y
63.1351(c)	Compliance date for Good Combustion Practices for THC emissions Dec. 20, 2007						Y
63.1353(a)	Notification Requirements of Subpart A						Y
63.1353(b)	Notification requirements						Y
63.1354(a)	Reporting Requirements of Subpart A						Y
63.1354(b)	Reporting Requirements						Y
63.1355	Recordkeeping Requirements						Y
63.1358	Implementation and Enforcement						Y
BAAQMD Condition# 603							
Part 1	Abatement requirement (Basis: Cumulative Increase)						Y
Part 2	Throughput Limits (Basis: Cumulative Increase)	Coal: 29 ton/hr Coke: 20 ton/hr Coal/Coke: 4,960,000 MMBTU/year	BAAQMD Condition # 603 Part 10	Record keeping P/D	Quarterly	Y	Y
*Part 5	Hexavalent Chromium emission limit (Basis: Toxics)	1.06 lbs per any consecutive 12 month period	BAAQMD Condition # 603 Part 8	Annual Source Test P/A	Once every six months	Y	N
Part 7	Flow Meter requirement (Basis: Regulation 2-6-503)	4 Flow meters at A-141 and A-142; 2 Flow meters at A-171 and A-172	BAAQMD Condition # 603 Part 10	CEM C	Quarterly	Y	Y
*Part 8	Annual Source Test for trace metals, benzene, HCl, and THC (Basis: Periodic Monitoring, Regulation 1-502)	Trace metals (Sb, As, Be, Cd, total Cr, Cr ⁶⁺ , Cu, Hg, Mn, Ni, P, Pb, Se, V, Zn), benzene,		Annual Source Test P/A	Annual	Y	N

Table IV & Table VII- N

**Source-specific Applicable Requirements, Applicable Limits &
 Compliance Monitoring Requirements**

**S-154 Precalciner Kiln abated by A-141 and A-142 Dust Collectors, and A-171 and A-172 Baghouses,
and A-156 Activated Carbon Injection System**

Applicable Requirement	Regulation Title or Description of Requirement	Limit	Monitoring Citation	Monitoring & Frequency	Reporting	R	FE
		Hydrochloric Acid (HCL) and total hydrocarbon (THC)					
Part 9	Source Test Procedure (Basis: Source test compliance verification and accuracy)			Source Test P/A	Annual	Y	N
Part 10	Record keeping (Basis: Recordkeeping)			Record keeping P/D	Quarterly	Y	Y
Part 11	Use Lime Slurry Injection System to mitigate/maintain HCl Emissions (Basis: Cumulative Increase, NESHAP Subpart LLL)	3 ppmvd	BAAQMD Condition # 603, Part 12	CEM C	Quarterly	Y	Y
Part 12	Install, operate and maintain HCl CEM (Basis: Regulation 2-6-503, NESHAP Subpart LLL)						Y
Part 13a	Recordkeeping (Basis: RACT)			CEM HCl C	Quarterly	Y	Y
<u>*Part 13b</u>	<u>Recordkeeping (Basis: H&S Code 44300 et seq.)</u>			<u>CEM Hg</u> C	<u>Monthly</u>	<u>Y</u>	<u>N</u>
Part 14a	Recordkeeping (Basis: Cumulative Increase)	At least 5 years		CEM HCl C	Quarterly	Y	Y
<u>*Part 14b</u>	<u>RecordKeeping (basis: H&S Code 44300 et seq.)</u>	<u>At least 5 years</u>		<u>CEM Hg</u> C	<u>Monthly</u>	<u>Y</u>	<u>N</u>
Part 15a	Continuous Emission Monitor requirement (Basis: Regulation 1-522, 1-602, Manual of Procedures, Volume V)					Y	Y
<u>*Part 15b</u>	<u>Continuous Emission Monitor requirement (Basis: Regulation 1-522, 1-602, Manual of Procedures, Volume V, &S Code 44300 et seq.)</u>					<u>Y</u>	<u>N</u>
<u>*Part 16</u>	<u>Total Mercury Emission Limits</u>	<u>261 lb/yr (12-month rolling ave.)</u> <u>0.064 lb/hr</u>		CEM C	<u>Monthly</u>	<u>Y</u>	<u>N</u>
<u>*Part 17</u>	<u>Install, Operate & Maintenance CEMs</u>					<u>Y</u>	<u>N</u>
<u>*Part 18</u>	<u>Hg Calculation Using Material Balance during the period waiting for the Hg CEMs certification from EPA. (Basis: H&S Code 44300 et seq.)</u>			<u>Lab Analysis of Inlet & Outlet Materials</u> <u>Monthly</u>	<u>Monthly</u>	<u>Y</u>	<u>N</u>
<u>*Part 19</u>	<u>Reporting Requirement (Basis:</u>				<u>Monthly</u>		<u>N</u>

Table IV & Table VII- N

**Source-specific Applicable Requirements, Applicable Limits &
Compliance Monitoring Requirements**

**S-154 Precalciner Kiln abated by A-141 and A-142 Dust Collectors, and A-171 and A-172 Baghouses,
and A-156 Activated Carbon Injection System**

Applicable Requirement	Regulation Title or Description of Requirement	Limit	Monitoring Citation	Monitoring & Frequency	Reporting	R	FE
	<u>Regulation 1-522)</u>						
<u>*Part 20</u>	<u>Monitoring Plan</u>	<u>Hg CEM</u>				<u>Y</u>	<u>N</u>
BAAQMD Condition # 2786							
Part A1	Sulfur dioxide limitation (Basis: Regulation 2-2-212 cumulative increase)	SO2 Rejection of 90% of the sulfur in the raw feed plus fuel, not requiring 0.6% sulfur coal as the fuel; or 481 lb/hr averaged over the 24 hour day (423 lbs/hr if coal emissions are not monitored)	BAAQMD condition # 2786, part A3	CEM C	Once every six months	Y	Y
Part A3	Continuous SO2 and NOx monitoring requirement (Basis: Cumulative increase)						Y
Part A4	Sulfur Dioxide Determination (Basis: Regulation 2-2-212 cumulative increase)						Y
Part B	Annual Source Test requirement (Basis: Cumulative Increase, Regulation 1-502)			Source Test P/A	Annual	Y	Y
Part B(1)	PM Limit (Basis: Regulation 2-2-212 Cumulative increase)	PM10 36 lb/hr and 0.02 gr/DSCF	BAAQMD condition # 2786 part B & 20751, part 3a	Annual Source Test P/A	Annual	Y	Y
Part C	Test facilities (Basis: Regulation 1-501)						Y
Part D	Production Rates (Basis: Regulation 2-2-212 cumulative increase)	Clinker throughput not to exceed 1.6 million tons/yr	BAAQMD condition #11780, part E (2)	Log/Record Keeping P/D	Once every six months	Y	Y
BAAQMD Condition # 11780							
Part A	Definitions requirement (Basis: CAA Section 182(f) – RACT)						Y
Part B	Production limits (Basis: Regulation 2-2-212 Cumulative Increase)	Clinker throughput not to exceed 1.6 million tons/yr	BAAQMD condition #11780, part E (2)	Log/Record Keeping P/D	Once every six months	Y	Y
Part C(1)	Emission limits (Basis: RACT)	NOx All kiln emission points <1158 lb/hr and <615 ppm averaged for 2 hr	BAAQMD condition #11780, part E	CEM C	Once every six months	Y	Y
Part C(3)	Emission limits (Basis: RACT)	NOx ≤6.4 lb/ton clinker on a 24-hr basis (averaged over 30 days)	BAAQMD condition #11780, part E	CEM/ Record keeping C	Once every six months	Y	Y

Table IV & Table VII- N

**Source-specific Applicable Requirements, Applicable Limits &
 Compliance Monitoring Requirements**

**S-154 Precalciner Kiln abated by A-141 and A-142 Dust Collectors, and A-171 and A-172 Baghouses,
and A-156 Activated Carbon Injection System**

Applicable Requirement	Regulation Title or Description of Requirement	Limit	Monitoring Citation	Monitoring & Frequency	Reporting	R	FE
Part D	Compliance Determination (Basis: Regulation 2-2-212 Cumulative Increase)						Y
Part E	Monitoring records (Basis: Cumulative Increase)						Y
Part F	Manual of procedures (Basis: Regulation 1-522; Manual of Procedures, Volumes IV & V)						Y
BAAQMD Condition #20751							
Part 1	Baghouse Monitoring Requirement (Regulation 2-6-503)						Y
Part 2	Baghouse Pressure Drop Limit (Regulation 2-6-503)		BAAQMD condition # 20751, part 3a (for A-141 and A-142)	Pressure Drop Monitoring P/M (for A-141 and A-142)	Once every six months	Y	Y
Part 2	Baghouse Pressure Drop Limit (Regulation 2-6-503)		BAAQMD condition # 20751, 3b (for A-171 and A-172)	Pressure Drop Monitoring P/Q (for A-171 and A-172)	Once every six months	Y	Y
Part 4	Reporting Pressure Drop Exceedances (Regulation 2-6-501, BAAQMD MOP Volume II, Part 3, §4.7)						Y
Part 5	Annual Inspection (Regulation 2-6-503)						Y
Part 6	Recordkeeping (Regulation 2-6-501)						Y
BAAQMD Condition #20753							
Part 2	Daily EPA Method 9 Visible Emission Monitoring (Regulation 2-6-503)						Y
Part 3	Recordkeeping (Regulation 2-6-501)						Y

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S-168 Activated Carbon Storage Silo abated by A-168 Dust Collector

S-169 Activated Carbon Bin abated by A-169 Dust Collector

- New table, added per NSR A/N 22953 Carbon Activated Injection System

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Source-specific Applicable Requirements, Applicable Limits &
Compliance Monitoring Requirements

S-168 Activated Carbon Storage Silo abated by A-168 Dust Collector
S-169 Activated Carbon Feed Bin abated by A-169 Dust Collector

<u>Applicable Requirement</u>	<u>Regulation Title or Description of Requirement</u>	<u>Limit</u>	<u>Monitoring Citation</u>	<u>Monitoring & Frequency</u>	<u>Reporting</u>	<u>R</u>	<u>FE</u>
<u>BAAQMD Regulation 6, Rule 1</u>	<u>Particulate Matter (12/05/07)</u>						
<u>6-1-301</u>	<u>Ringelmann Number 1 Limitation</u>	<u>OPACITY</u> <u>Ringelmann 1.0 for < 3 min/hr</u>	<u>BAAQMD condition # 24899, Parts 1 & 7</u>	<u>Visual Inspection (M22)</u> <u>P/M</u>	<u>Once every six months</u>	<u>Y</u>	<u>N</u>
<u>6-1-305</u>	<u>Visible Particles</u>						<u>N</u>
<u>6-1-310</u>	<u>Particulate Weight Limitation</u>	<u>FILTERABLE PARTICULATE</u> <u>0.15 gr/dscf</u>	<u>BAAQMD Condition # 24899, Part 2</u>	<u>Pressure Drop Monitoring</u> <u>P/M</u>	<u>Once every six months</u>	<u>Y</u>	<u>N</u>
<u>6-1-311</u>	<u>General Operations</u>	<u>FILTERABLE PARTICULATE</u> <u>4.10P^{0.67} lb/hr where P is process weight, ton/hr</u>	<u>BAAQMD Condition # 24899, Part 9</u>	<u>Source Test Initial</u> <u>P/once every 5 yrs</u>	<u>Once every 5 yrs</u>	<u>Y</u>	<u>N</u>
<u>6-1-401</u>	<u>Appearance of Emissions</u>						<u>N</u>
<u>6-1-601</u>	<u>Particulate Matter, Sampling, Sampling Facilities, Opacity Instruments and Appraisal of Visible Emissions</u>						<u>N</u>
<u>SIP Regulation 6</u>	<u>Particulate Matter and Visible Emissions (09/04/98)</u>						
<u>6-301</u>	<u>Ringelmann Number 1 Limitation</u>	<u>OPACITY</u> <u>Ringelmann 1.0 for < 3 min/hr</u>	<u>BAAQMD Condition # 24899, Parts 1 & 7</u>	<u>Visual Inspection (M22)</u> <u>P/M</u>	<u>Once every six months</u>	<u>Y</u>	<u>Y</u>
<u>6-305</u>	<u>Visible Particles</u>						<u>Y</u>
<u>6-310</u>	<u>Particulate Weight Limitation</u>	<u>FILTERABLE PARTICULATE</u> <u>0.15 gr/dscf</u>	<u>BAAQMD Condition # 24899, Part 2</u>	<u>Pressure Drop Monitoring</u> <u>P/M</u>	<u>Once every six months</u>	<u>Y</u>	<u>Y</u>
<u>6-311</u>	<u>General Operations</u>	<u>FILTERABLE PARTICULATE</u> <u>4.10P^{0.67} lb/hr where P is process weight, ton/hr</u>	<u>BAAQMD Condition # 24899, Part 9</u>	<u>Source Test Initial</u> <u>P/once every 5 yrs</u>	<u>Once every 5 yrs</u>	<u>Y</u>	<u>Y</u>
<u>6-401</u>	<u>Appearance of Emissions</u>						<u>Y</u>
<u>6-601</u>	<u>Particulate Matter, Sampling, Sampling Facilities, Opacity Instruments and Appraisal of Visible Emissions</u>						<u>Y</u>

Table IV & Table VII- P-2
Source-specific Applicable Requirements, Applicable Limits &
Compliance Monitoring Requirements

S-168 Activated Carbon Storage Silo abated by A-168 Dust Collector
S-169 Activated Carbon Feed Bin abated by A-169 Dust Collector

<u>Applicable Requirement</u>	<u>Regulation Title or Description of Requirement</u>	<u>Limit</u>	<u>Monitoring Citation</u>	<u>Monitoring & Frequency</u>	<u>Reporting</u>	<u>R</u>	<u>FE</u>
<u>NESHAP, 40 CFR, Part 63 Subpart A</u>	<u>General Provisions (4/20/06)</u>						
63.1	<u>Applicability</u>						<u>Y</u>
63.2	<u>Definitions</u>						<u>Y</u>
63.3	<u>Units and Abbreviations</u>						<u>Y</u>
63.4	<u>Prohibited Activities and Circumvention</u>						<u>Y</u>
63.5	<u>Preconstruction review and notification requirements</u>						<u>Y</u>
63.6	<u>Compliance with Standards and Maintenance Requirements</u>						<u>Y</u>
63.7	<u>Performance Testing Requirements</u>						<u>Y</u>
63.8	<u>Monitoring Requirements</u>						<u>Y</u>
63.9	<u>Notification Requirements</u>						<u>Y</u>
63.10	<u>Recordkeeping and Reporting Requirements</u>						<u>Y</u>
63.12	<u>State Authority and Delegation</u>						<u>Y</u>
<u>BAAQMD Condition #16109</u>							
Part 5	<u>Truck limits (Basis: 2-2-212)</u>	<u>70,000 total cement, hydrated lime and powdered activated carbon trucks per year</u>	<u>BAAQMD Condition # 24626, part 6</u>	<u>Record Keeping</u> <u>P/M</u>		<u>Y</u>	<u>Y</u>
Part 6	<u>Recordkeeping (Basis: Cumulative Increase)</u>			<u>Record Keeping</u> <u>P/M</u>		<u>Y</u>	<u>Y</u>
<u>BAAQMD Condition # 24626</u>							
Part 5	<u>Truck limits (Basis: 2-2-212)</u>	<u>290 hydrated lime trucks, 70,000 total cement, hydrated lime and powdered activated carbon trucks per year</u>	<u>BAAQMD Condition # 24626, part 6</u>	<u>Record Keeping</u> <u>P/M</u>		<u>Y</u>	
<u>BAAQMD Condition #24899</u>							
Part 1	<u>Ringelmann 1.0 limitation (Basis: BACT, Regulation 6-1, Regulation 1-301)</u>	<u>Ringelmann 1.0 for < 3 min/hr</u>	<u>BAAQMD Condition # 24899, part 2</u>	<u>Pressure Drop Monitoring</u>		<u>Y</u>	<u>Y</u>

Table IV & Table VII- P-2
Source-specific Applicable Requirements, Applicable Limits &
Compliance Monitoring Requirements

S-168 Activated Carbon Storage Silo abated by A-168 Dust Collector
S-169 Activated Carbon Feed Bin abated by A-169 Dust Collector

<u>Applicable Requirement</u>	<u>Regulation Title or Description of Requirement</u>	<u>Limit</u>	<u>Monitoring Citation</u>	<u>Monitoring & Frequency</u>	<u>Reporting</u>	<u>R</u>	<u>FE</u>
				P/M			
Part 2	Abatement with manometer (Basis: 6-1-301, 6-1-310, 6-1-311, Regulation 2-1-403)			Pressure Drop Monitoring P/M			Y
Part 3	Outlet grain loading limit (Basis: Regulation 2-2-212 cumulative increase)	0.0013 gr/dscf	BAAQMD Condition # 24899, part 9	Source Test P/5 yrs	Initial & once every 5 yrs	Y	Y
Part 4	Throughput rate limit (Basis: Regulation 2-2-212 cumulative increase)	5,800 tons/yr	BAAQMD Condition # 24899, part 6	Record Keeping P/M	Annual	Y	Y
Part 5	Truck limits (Basis: to avoid cumulative increase of PM10)	100 activated carbon trucks per year, 70,000 total cement, hydrated lime and powdered activated carbon trucks per year	BAAQMD Condition # 24899, part 6	Record Keeping P/M		Y	Y
Part 6	Recordkeeping (Basis: Cumulative Increase)			Record Keeping P/M		Y	Y
Part 7	Baghouse Inspection Requirement (Basis: Regulation 2-1-403)	Pressure drop between 0.5" – 8" H ₂ O		Inspection P/M		Y	Y
Part 8	Recordkeeping requirement for inspection (Basis: Regulation 1-441)			Record Keeping P/M		Y	Y
Part 9	Source test requirement (Basis: Regulation 1-441)	Initial & once every 5 yrs		Source Test Initial P/5 yrs	Initial & once every 5 yrs	Y	Y
Part 10	Source Test Procedure (Basis: Cumulative Increase)			Source Test P/5 yrs	Initial & once every 5 yrs	Y	Y

V. Schedule of Compliance

A schedule of compliance is required in all Title V permits pursuant to BAAQMD Regulation 2-6-409.10 which provides that a major facility review permit shall contain the following information and provisions:

“409.10A schedule of compliance containing the following elements:

- 10.1 A statement that the facility shall continue to comply with all applicable requirements with which it is currently in compliance;

- 10.2 A statement that the facility shall meet all applicable requirements on a timely basis as requirements become effective during the permit term; and
- 10.3 If the facility is out of compliance with an applicable requirement at the time of issuance, revision, or reopening, the schedule of compliance shall contain a plan by which the facility will achieve compliance. The plan shall contain deadlines for each item in the plan. The schedule of compliance shall also contain a requirement for submission of progress reports by the facility at least every six months. The progress reports shall contain the dates by which each item in the plan was achieved and an explanation of why any dates in the schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.”

Since the District has not determined that the facility is out of compliance with an applicable requirement, the schedule of compliance for this permit contains only sections 2-6-409.10.1 and 2-6-409.10.2.

The BAAQMD Compliance and Enforcement Division has conducted a review of compliance over the past year and there is no evidence of on-going non-compliance and recurring pattern of violations that would warrant consideration of a Title V permit compliance schedule. The compliance report is contained in Appendix A of this permit evaluation and statement of basis.

VI. Permit Conditions

The Major Facility Review permit contains conditions that are derived from previously issued District Authorities to Construct (A/C) or Permits to Operate (P/O). Permit conditions may also be imposed or revised as part of the annual review of the facility by the District pursuant to California Health and Safety Code (H&SC) § 42301(e), through a variance pursuant to H&SC § 42350 et seq., an order of abatement pursuant to H&SC § 42450 et seq., or as an administrative revision initiated by District staff. After issuance of the Title V permit, permit conditions will be revised using the procedures in Regulation 2, Rule 6, Major Facility Review.

When necessary to meet Title V requirements, additional monitoring, recordkeeping, or reporting has been added to the permit.

Each permit condition is identified with a unique numerical identifier, up to five digits.

All changes to existing permit conditions that are proposed in this action are clearly shown in “strike-out/underline” format in the proposed permit. When the permit is issued, all “strike-out” language will be deleted and all “underline” language will be retained, subject to consideration of comments received.

Changes to permit:

- Condition # 603 was modified per NSR Application # 22953 to add the installation of the activated carbon injection system and CEMs to reduce the mercury emissions
- Condition # 24899 was added to add the storage silo and the feed bin of activated carbon as part of the carbon injection system under NSR Application # 22953
- Conditions # 24626 and 16109 were modified to limit the transport trucks to the same allowable number as before the project

Condition # 603

S-154 Calciner Kiln

S-171 Kiln Fuel Mill System

S-172 Precalciner Fuel Mill System

Amended by A/N 15398, A/N 18535, A/N 21753 and A/N 22953

Any condition that is preceded by an asterisk is not federally enforceable.

1. The Owner/Operator shall not operate the pneumatic system from trucks to storage unless it is vented to a dust collection system. The S-171 Kiln Mill System shall be abated by A-171 Dust Collector, and the S-172 Precalciner Mill shall be abated by the A-172 Dust Collector. (Basis: Regulation 2-2-212 Cumulative Increase)
2. The owner/operator of S-171 and S-172, shall not exceed the following usage limits in the Pre-calciner and Kiln (S-154):
Operation with 100 % coal at maximum 29 tons/hr; or
Operation with 100% Petroleum Coke at maximum 20 tons/hr

The Owner/Operator may use any combination of coal and petroleum coke other than specified above, provided that the owner/operator can demonstrate that the total fuel consumption does not exceed 4,960,000 MMBTU/yr (1,600,000 tons/yr clinker x 3.1 MMBtu/ton).

For calculation purposes, the coal's heat content is assumed to be 25 MMBTU/ton and coke's heat content is assumed to be 29 MMBTU/ton. The values may change depending on each shipment received.
(Basis: Cumulative Increase).
3. Deleted, (inappropriate PSD analysis trigger level for lead per Regulation 2-2-306)
4. Deleted, (inappropriate PSD analysis trigger level for beryllium per Regulation 2-2-306)
- *5. The Owner/Operator of S-154 shall not exceed 1.06 pounds of hexavalent chromium per any consecutive 12-month. (Basis: Toxics)
6. Deleted, (Part 8 replaces quarterly composition analysis of coke)
7. The Owner/Operator of S-154, S-171 and S-172 shall calibrate, maintain, and operate District-approved continuous volumetric flow meters on 4 of the 32 kiln (S-154) exhaust dust collectors (A-141, A-142) and on the fuel grinding mills exhaust dust collectors (A-171 and A-172) as suggested by the manufacturer's recommendation. (Basis: Regulation 2-6-503)
- *8. The Owner/Operator of S-154 shall conduct a source test at the exhausts of Dust Collectors (A-141, A-142, A-171 and A-172) at least once per calendar year to demonstrate subsequent compliance with Part 5. The test should be conducted with the raw mill on and the raw mill off. The Owner/Operator shall also test for trace metals contents (Sb, As, Be, Cd, Cr⁺⁶, total Cr, Cu, Hg, Mn, Ni, P, Pb, Se, V, Zn), benzene, Hydrochloric Acid (HCl) and total hydrocarbon (THC) at least once per calendar year. The Owner/Operator shall submit the source test results to the District Source Test Section and Engineering Divisions no later than 60 days after the source test. Lehigh may use the same concentrations from A-141 and A-142 if repeated source tests demonstrate that the concentrations from A-171 and A-172 are lower than the concentrations from A-141 and A-142. (Basis: Periodic Monitoring, Regulation 1-502)
9. The Owner/Operator shall obtain approval for all source test procedures from the District's Source Test Manager prior to conducting any tests. The Owner/Operator shall comply with all applicable testing requirements for continuous emissions monitors as approved by the District's Source Test Manager. The Owner/Operator shall notify the

District's Source Test Manager, in writing, of the source test protocols and projected test dates at least 7 days prior to testing. (Basis: Source test compliance verification and accuracy)

10. The owner/operator shall maintain daily records (calendar day), in a District approved log, for: (1) the amount of coke and coal usage, each separately (2) the coke's heat content and the coal's heat content. The daily throughput of fuel used and daily average volumetric flow rates shall be submitted to the District once each quarter. All records shall be retained for a period of at least five years from the date of entry. This log shall be kept on site and made available to District staff upon request. (Basis: Recordkeeping)
11. The owner / operator shall operate A-154 Lime Slurry Injection System so as to mitigate / maintain HCl emissions from S-154 to the applicable Federal NESHAPs HCl standard. (Basis: Cumulative increase, revised NESHAP Subpart LLL. (Effective upon adoption of the revised NESHAP Subpart LLL and its compliance date).
12. The owner/operator of the Lime Slurry Injection system (A-154) shall install, operate and maintain District approved continuous hydrochloric acid (HCl) emission monitors at the exhausts of Dust Collectors (A-141, A-142, A-171 and A-172) as suggested by the manufacturer's recommendation. Lehigh must apply and obtain EPA's approval before using the HCl monitor's concentrations at the exhaust of A-141 and A-142 to calculate the mass flow of HCl emissions at the exhaust of A-171 and A-172. (Basis: Regulation 2-6-503, NESHAP Subpart LLL). (Effective upon adoption of the revised NESHAP Subpart LLL and its compliance date).
- 13a. The owner/operator shall maintain hourly continuous emission monitoring records for the monitoring system in a form suitable for inspection and approved by the APCO and the EPA administrator. Such records shall include, but are not limited to: (Basis: RACT)
 - (i) The continuous emission monitoring measurements for HCl expressed in ppm;
 - (ii) The date, time, and duration of any start-up, shutdown or malfunction in the operation of any of the kiln systems or the emission monitoring equipment; and,
 - (iii) The results of performance testing, evaluation, calibration, checks, adjustments, and maintenance of the continuous emission monitoring system.
- *13b. The owner/operator shall maintain hourly continuous emission monitoring records for the monitoring system in a form suitable for inspection and approved by the APCO and the EPA administrator. Such records shall include, but are not limited to:
 - (i) The continuous emission monitoring measurements for mercury expressed in ppm (1-hour average);
 - (ii) The production rates of clinker (tons/hr and tons/month);
 - (iii) The emission rates of Hg in lb/hr (for each hour of the month, the maximum 1-hour average during month, rolling 3-hr average, and rolling 30-day average) and lb/yr (30-day rolling average and 12-month rolling average);
 - (iv) The date, time, and duration of any start-up, shutdown or malfunction in the operation of any of the kiln systems or the emission monitoring equipment; and,
 - (v) The results of performance testing, evaluation, calibration, checks, adjustments, and maintenance of the continuous emission monitoring system.(Basis: H&S Code 44300 et seq.)

- 14a. The owner/operator shall maintain the HCl CEMS records at the facility for at least five years. These records shall be made available to the APCO or the EPA Administrator upon request. (Basis: Cumulative Increase)
- *14b. The owner/operator shall maintain the mercury (Hg) CEMS records at the facility for at least five years. These records shall be made available to the APCO or the EPA Administrator upon request. (Basis: H&S Code 44300 et seq.)
- 15a. The HCl Continuous Emission Monitor System (CEMs) must meet the requirements of District Manual of Procedures, Volume V, Continuous Emission Monitoring, Policy and Procedures. (Basis: Regulation 1-522, 1-602; Manual of Procedures, Volume V)
- *15b. The mercury Continuous Emission Monitor System (CEMs) must meet the requirements of District Manual of Procedures, Volume V, Continuous Emission Monitoring, Policy and Procedures. (Basis: Regulation 1-522, 1-602; Manual of Procedures, Volume V, H&S Code 44300 et seq.)
- *16. The owner/operator of S-154, S-171 and S-172 shall not emit more than 261 lbs/yr (12-month rolling average) and 0.064 lb/hr (3-hour rolling average) of total mercury during normal operation. These mercury limits may be revised based on a new stack or other modifications that Lehigh will be making, which could affect the Health Risk Analysis results. (Basis: H&S Code 44300 et seq.)
- *17. The owner/operator of the Activated Carbon Injection System (A-156) shall install, operate and maintain District approved continuous mercury (Hg) emission monitors at the exhausts of Dust Collectors (A-141 and A-142) as suggested by the manufacturer's recommendation. (Basis: H&S Code 44300 et seq.)
- *18. During the period of waiting for mercury CEMs certification from EPA, the owner/operator of S-154, S-171 and S-172 shall not emit more than 0.064 lb/hr of total mercury on a 30 days rolling average during normal operation. The owner/operator shall perform a mass balance calculation (In = Out) to determine the mercury compliance. The following equation should be used:
- Total Hg (air) = total feed Hg (Pre-Blend Limestone + Iron + Bauxite + Coke) – total product Hg (KMDC dust to Finish Mills)
- The sample of raw materials (Iron, Bauxite and coke) shall be taken once a week. The weekly composites of each raw material shall be analyzed for Hg by a certified laboratory once a month.
- The sample of KMDC dust to Finish Mill and Pre-Blend Limestone shall be taken every day. The daily composites of KMDC dust and Pre-Blend Limestone shall be analyzed for Hg by a certified laboratory once a week.
- (Basis: H&S Code 44300 et seq.)
- *19. During the interim, the owner/operator shall report all Hg results to the District within 30 days at the close of the month reported on when using material balance to demonstrate compliance.

When the mercury CEMs is operational, the owner/operator shall report the CEMs readings and calculations to the District according to Part 13b within 30 days at the close of the month reported on. (Basis: Regulation 1-522)

*20. The owner/operator of the Hg CEMs must submit a monitoring plan to the District for approval. All operating parameters must be specified within 90 days of CEMs startup. (Basis: H&S Code 44300 et seq.)

COND# 24626

For S-167 Lime Bin, abated by A-167 dust collector

Amended by A/N 22953

1. The owner/operator shall ensure visible particulate emissions from S-167 shall not exceed Ringelmann 1.0 for more than 3 minutes in any hour or result in fallout on adjacent property in such quantities as to cause a public nuisance per Regulation 1-301. (Basis: BACT, Regulation 6, Rule 1, Regulation 1-301)
2. The owner/operator shall ensure all of the particulate emissions emitted from S-167 flow under negative pressure to Dust Collector A-167. The owner/operator shall equip this Baghouse with a District approved manometer for measuring the pressure drop across the Baghouse. Each manometer shall be checked for proper operation at least once every month. (Basis: Regulation 6-1-301, 6-1-310, 6-1-311, Regulation 2-1-403)
3. The owner/operator shall ensure the outlet grain loading for Baghouse A-167 does not exceed 0.0013 grain/dscf. (Basis: Regulation 2-2-212 Cumulative Increase)
4. The owner/operator shall ensure the total throughput of powder lime at S-167 does not exceed 5,800 tons in any calendar year. (Basis: Regulation 2-2-212 Cumulative Increase)
5. The owner/operator shall not exceed 290 hydrated lime delivery trucks in any consecutive 12 month period and the total amount of cement trucks, hydrated lime and powdered activated carbon trucks shall not exceed 70,000 trucks in any consecutive 12 months period. (Basis: To Avoid Cumulative Increase of PM10)
6. To determine compliance with the above parts, the owner/operator shall maintain the following records and provide all of the data necessary to evaluate compliance with the above parts, including the following information:
 - a. Total monthly hours of operation.
 - b. The monthly hours of operation shall be totaled on a yearly basis.
 - c. The total monthly throughput of lime.
 - d. Total monthly number of truck for lime delivery and their delivery times.All records shall be retained on-site for five years, from the date of entry, and made available for inspection by District staff upon request. These recordkeeping requirements shall not replace the recordkeeping requirements contained in any applicable District Regulations. (Basis: Cumulative Increase)
7. The owner/operator shall inspect Baghouse, A-167 monthly to ensure proper operation. The following items shall be checked:
 - a. The pressure drop across the baghouse shall be checked monthly. The pressure drop shall be no lower than 0.5 inches of water and no greater than 8 inches of water.

- b. The baghouse exhaust shall be checked monthly for evidence of particulate breakthrough. If breakthrough is evident from plume observations, dust buildup near the stack outlet, or abnormal pressure drops, the filter bags shall be checked for any tears, holes, abrasions, and scuffs, and replaced as needed.
 - c. All hoppers shall be discharged in a timely manner to maintain compliance with 6(a) above.
 - d. The pulsejet, shaker cleaning system shall be maintained and operated at sufficient intervals to maintain compliance with 6(a) above.
(Basis: Regulation 2-1-403)
8. In order to demonstrate compliance with the above permit conditions, the following records shall be maintained in a District approved log. These records shall be kept on site and made available for District inspection for a period of at least five years from the date on which a record is made.
 - a. Records of all inspections and all maintenance work including bag replacement for the baghouse. Records of each inspection shall consist of a log containing the date of inspection and the initials of the personnel that inspects the baghouses.
(Basis: Regulation 1-441)
9. Not later than 60 days from the startup of A-167, and once every five years thereafter, the owner/operator shall conduct an initial District approved source tests to determine compliance with the limit in Part 3. The owner/operator shall submit the source test results to the District staff no later than 60 days after the source test. (Basis: BACT, Cumulative Increase)
10. The owner/operator shall obtain approval for all source test procedures from the District's Source Test Section prior to conducting any tests. The owner/operator shall comply with all applicable testing requirements as specified in Volume V of the District's Manual of Procedures. The owner/operator shall notify the District's Source Test Section, in writing, of the source test protocols and projected test dates at least 7 days prior to testing. (Basis: Cumulative Increase)

COND# 24899

For S-168 Activated Carbon Storage Silo, abated by A-168 Dust Collector
For S-169 Activated Carbon Feed Bin, abated by A-169 Dust Collector

1. The owner/operator shall ensure visible particulate emissions from S-168, S-169, A-168 and A-169 shall not exceed Ringelmann 1.0 for more than 3 minutes in any hour or result in fallout on adjacent property in such quantities as to cause a public nuisance per Regulation 1-301. (Basis: BACT, Regulation 6, Rule 1, Regulation 1-301)
2. The owner/operator shall ensure S-168 and S-169 are abated by A-168 and A-169, respectively, at all times when in operation. The owner/operator shall equip A-168 and A169, Dust Collectors, with a District approved manometer for measuring the pressure drop across the Dust Collector. Each manometer shall be checked for proper operation at least once every month. (Basis: Regulation 6-1-301, 6-1-310, 6-1-311, Regulation 2-1-403)

3. The owner/operator shall ensure the outlet grain loading for Dust Collector A-168 and A-169 does not exceed 0.0013 grain/dscf each. (Basis: Regulation 2-2-212 Cumulative Increase)
4. The owner/operator shall ensure the total throughput of powdered activated carbon at S-168 and/or S-169 does not exceed 2,000 tons in any calendar year. (Basis: Regulation 2-2-212 Cumulative Increase)
5. The owner/operator shall not exceed 100 powdered activated carbon delivery trucks in any consecutive 12 month period and the total amount of cement, hydrated lime and powdered activated carbon trucks shall not exceed 70,000 trucks in any consecutive 12 months period. (Basis: To Avoid Cumulative Increase of PM10)
6. To determine compliance with the above parts, the owner/operator shall maintain the following records and provide all of the data necessary to evaluate compliance with the above parts, including the following information:
 - a. Total monthly hours of operation.
 - b. The monthly hours of operation shall be totaled on a yearly basis.
 - c. The total monthly throughput of activated carbon.
 - d. Total monthly number of truck for powder activated carbon delivery and their delivery times.

All records shall be retained on-site for five years, from the date of entry, and made available for inspection by District staff upon request. These recordkeeping requirements shall not replace the recordkeeping requirements contained in any applicable District Regulations. (Basis: Cumulative Increase)
7. The owner/operator shall inspect Dust Collector, A-168 and A-169 monthly to ensure proper operation. The following items shall be checked:
 - a. The pressure drop across the baghouse shall be checked monthly. The pressure drop shall be no lower than 0.5 inches of water and no greater than 8 inches of water.
 - b. The baghouse exhaust shall be checked monthly for evidence of particulate breakthrough. If breakthrough is evident from plume observations, dust buildup near the stack outlet, or abnormal pressure drops, the filter bags shall be checked for any tears, holes, abrasions, and scuffs, and replaced as needed.
 - c. All hoppers shall be discharged in a timely manner to maintain compliance with 6(a) above.
 - d. The pulsejet, shaker cleaning system shall be maintained and operated at sufficient intervals to maintain compliance with 6(a) above.

(Basis: Regulation 2-1-403)
8. In order to demonstrate compliance with the above permit conditions, the following records shall be maintained in a District approved log. These records shall be kept on site and made available for District inspection for a period of at least five years from the date on which a record is made.
 - a. Records of all inspections and all maintenance work including bag replacement for the dust collector. Records of each inspection shall consist of a log containing the date of inspection and the initials of the personnel that inspects the dust collectors.

(Basis: Regulation 1-441)
9. Not later than 60 days from the startup of A-168 and A-169, and once every five years thereafter, the owner/operator shall conduct an initial District approved source tests to determine compliance with the limit in Part 3. The owner/operator shall submit the source

test results to the District staff no later than 60 days after the source test. (Basis: BACT, Cumulative Increase)

10. The owner/operator shall obtain approval for all source test procedures from the District's Source Test Section prior to conducting any tests. The owner/operator shall comply with all applicable testing requirements as specified in Volume V of the District's Manual of Procedures. The owner/operator shall notify the District's Source Test Section, in writing, of the source test protocols and projected test dates at least 7 days prior to testing. (Basis: Cumulative Increase)

COND# 16109

For S-17 Clinker Transfer (6-BC-3, 6-BC-6, 6-BC-7), S-45 West Silo Top Cement Distribution Tower, S-46 Middle Silo Top Cement Distribution Tower, S-47 East Silo Top Cement Distribution Tower, S-48 Bulk Cement Loadout Tanks #1 and #2, S-49 Bulk Cement Loadout Tank #28, S-50 Bulk Cement Loadout Tank #29, S-54 Cement Packer #1, S-55 Cement Packer #2, and S-167 Lime Bin

Amended by A/N 21753 and A/N 22953

1. The owner/operator shall ensure visible particulate emissions from each source S-17, S-45, S-46, S-47, S-48, S-49, S-50, S-54, S-55, S-56 do not exceed Ringlemann 0.5 or result in fallout on adjacent property in such quantities as to cause a public nuisance per Regulation 1-301. (Regulation 1-301, BACT)
2. The owner/operator shall ensure all of the particulate emissions emitted from the handling of cement for the sources identified in part #1 flow under negative or positive pressure to the corresponding baghouse (s) (A-420 through A-436). (Regulation 2-2-212 Cumulative increase, BACT)
3. The outlet grain loading for each baghouse shall not exceed 0.006 grains/dscf. (Cumulative Increase, Regulation 2-2-301.1 BACT))
4. Deleted (Source test requirement has been met).
5. The owner/operator of S-48, S-49, S-50, S-54, S-55, S-167 and S-168 shall not load cement out and deliver hydrated lime and powdered activated carbon more than its percent maximum throughput of current trucks, a maximum of 70,000 cement /hydrated lime/powdered activated carbon trucks loaded/unloaded to capacities (limited by current law on cement trucks maximum tonnage and this facility's cap on cement production), in any consecutive twelve month period. (Regulation 2-2-212, Cumulative increase)

6. The owner/operator shall maintain in, a District approved log, monthly records of the total number of cement trucks loaded, hydrated lime and powdered activated carbon trucks received and unloaded, the total amount of cement loaded out in the cement trucks and the total amount of hydrated lime and powdered activated carbon unloaded. These records shall be retained for a period of at least five years. The logs shall be kept on site and made available to District staff upon request.
(Cumulative Increase)

VII. Applicable Limits and Compliance Monitoring Requirements

This section was deleted and combined with Section IV.

The combined Section IV and VII of the permit is a summary of numerical limits and related monitoring requirements for each source. The summary includes a citation for each monitoring requirement, frequency of monitoring, and type of monitoring. The applicable requirements for monitoring are specified in Table IV & VII.

VIII. Test Methods

This section of the permit lists test methods that are associated with standards in District or other rules. It is included only for reference. In most cases, the test methods in the rules are source test methods that can be used to determine compliance but are not required on an ongoing basis. They are not “applicable requirements” as defined by Regulation 2-6-202.

If a rule or permit condition requires ongoing testing, the requirement will also appear in Section IV of the permit.

Changes to Permit

There are no changes to Section VIII in this action.

VIII. Permit Shield:

Changes to permit:

This action proposes no changes to permit shields.

IX. Glossary

Changes to permit:

- Added definition of Recordkeeping, R: The owner/operator shall keep the records onsite for at least five years and shall make the records available to District staff upon request.
- Added definition of CARB E.O. = California Air Resources Board Executive Order

X. Revision History

Changes to permit:

- Application 22954 (NSR # 22953), Minor Revision was added

XII. State Implementation Plan

Changes to permit:

This section has been deleted. The address for EPA's website is now found in Sections III and IV.

D. Alternate Operating Scenarios:

No alternate operating scenario has been requested for this facility.

E. Compliance Status:

The owner certified that all equipment identified in this revision will comply with applicable requirements on April 27, 2011. There is no evidence of on-going non-compliance and no recurring pattern of violations that would warrant consideration of a Title V compliance schedule.

F. Differences between the Application and the Proposed Permit:

None.

APPENDIX A
BAAQMD COMPLIANCE REPORT

COMPLIANCE & ENFORCEMENT DIVISION

Inter-Office Memorandum

October 5, 2010

TO: BRIAN BATEMAN – DIRECTOR OF ENGINEERING *BB*

FROM: KELLY WEE – DIRECTOR OF ENFORCEMENT *KW*

SUBJECT: REVIEW OF COMPLIANCE RECORD OF:

LEHIGH SOUTHWEST CEMENT CO.- PERMANENTE PLANT, SITE #A0017

Background

This review was initiated as part of the District evaluation of an application by Lehigh Southwest Cement Co. - Permanente Plant for a Title V Permit Renewal. It is standard practice of the Compliance and Enforcement Division to undertake a compliance review in advance of a renewal of a Title V Permit to Operate. The purpose of this review is to assure that any non-compliance problems identified during the prior six-year permit term have been adequately addressed by returning the facility to compliance, or, if non-compliance persists, that a schedule of compliance is properly incorporated into the Title V permit compliance schedule. In addition, the review checks for patterns of recurring violation that may be addressed by additional permit terms. Finally, the review is intended to recommend, if necessary, any additional permit conditions and limitations to improve compliance.

Compliance Review

Staff reviewed Lehigh Southwest Cement Co. – Permanente Plant Annual Compliance Certifications for July 1, 2004 to June 30, 2010 and found no ongoing non-compliance and no recurring pattern of violations. Facts surrounding the most recent violations suggest that additional monitoring or permit conditions might improve compliance.

Staff conducted a compliance review of 23 Notices of Violation (NOVs) issued to Lehigh Southwest Cement Co. from July 1, 2004 through June 30, 2010. While the cement manufacturing facility received a number of violations over this 6 year period, for facilities as large, complex, and heavily regulated as a cement manufacturing facility within the Bay Area Air Quality Management District's jurisdiction, violations are likely to occur. It is important to note that all of the violations associated with the NOVs were in compliance at the time of this review; furthermore, the District's analysis of the NOVs for the 6year period indicated that there is no ongoing violation or pattern of recurring violation that would require a compliance schedule.

REVIEW OF COMPLIANCE RECORD OF:
LEHIGH SOUTHWEST CEMENT CO. – PERMANENTE PLANT SITE #A0017

October 5, 2010
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Understanding how the District handles the violations associated with the NOV's is important to understanding how the District evaluated the facility's compliance status. Whenever the District discovers a violation, it begins a two-step process. The first step is to end the violation and bring the alleged violator back into compliance. Once compliance is achieved, the second step is to proceed with penalty assessment. It is District policy to not proceed with penalty assessment until compliance has been achieved. If a facility has not achieved compliance in a timely fashion, the District proceeds with additional enforcement action. The vast majority of Notice of Violation penalties are resolved through settlement negotiations.

The results of the District's compliance review are shown in Table I. As stated above, the violations associated with the 23 NOV's were in compliance at the time of this review. In 91% of the violations, compliance was achieved prior to or within 1 day of issuance of the NOV. In the remaining 9% of the violations, the violations achieved compliance after issuance but did not represent ongoing violation that would require a compliance schedule in a Title V permit. There were multiple violations at two of the sources but causal analysis indicated different causes for the violations and there was no recurrent pattern, the prevention of which might be addressed by new monitoring or other permit conditions for these sources. Of the 23 NOV's issued, 13% of the violations resulted from the facility self-reporting, pursuant to Title V requirements. Several recent visible emissions violations might have been prevented had improved plans been in place to self-monitor compliance. Based on this review and analysis of all the violations for the 6-year period, the Compliance and Enforcement Division has concluded that no schedule of compliance is necessary for the Title V permit as the record showed that the violations returned to compliance, were intermittent or did not indicate on-going non-compliance, there was no pattern of recurring violation, and the facility was in compliance at the time of this review. However, future compliance could be improved and particulate matter emissions reduced by the addition of a facility-wide permit condition requiring a fugitive dust control plan for sources not already subject to the operation and maintenance plan required under NESHAPS for Portland Cement Facilities, and a permit condition to require periodic performance tests for sources abated by dust collectors not currently subject to these requirements.

The violation details associated with the 23 Notices of Violation (25 violations) are summarized here and detailed in Table 1.

Emissions Violations

- Six (6) visible emissions violations occurred on the Clinker Handling System (Source #165) for unrelated reasons such as polyester bag problems, damaged Kevlar skirting, a damaged access door gasket, and excessive dust accumulation around the source.
- One visible emissions violation occurred at the Clinker Handling System during an emergency diversion of clinker.

REVIEW OF COMPLIANCE RECORD OF:

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- One visible emissions violation occurred at the Kiln Mill dust collectors (A#141/A#142) from 2 broken bags.
- One visible emissions violation occurred at the Clinker Cooler (Source #161) during a startup after a power outage shutdown, which resulted in fine raw clinker material flushing from the precalcining tower through the kiln into the Clinker Cooler.
- One excess emission violation occurred at the kiln (Source #154) for NOx limits for a two-hour period.
- One permit condition throughput violation occurred at the Rock Plant for excessive combined throughput of aggregate at several sources.
- One visible emissions violation occurred at the Preblend Dome (Source #132) when wind blew fugitive emissions through door openings, while a front loader drove into and out of the dome.
- One visible emissions violation occurred at the roll press mill (Source #230) when fine clinker dust overloaded the dust collection system, resulting in clogged dust collector bags.
- One visible emissions violation occurred at the kiln baghouse when a detached plume formed above baghouse.
- One visible emissions violation occurred at the rock plant belt conveyor turning point when dry materials were being processed without water spray abatement to prevent excessive dust.
- One visible emissions violation occurred between the primary and secondary crushers when dry materials were dumped into the upstream rock hopper without water spray abatement to prevent excessive dust.

Administrative Violations

- One violation occurred for failure to maintain quarterly manometer readings on the Cement Packers (Source #54/55).
- One violation occurred for missing visible emission inspection forms.
- One violation occurred for missing visible emission, pressure drop and surface moisture condition records.
- One violation occurred for missing visible emission inspection forms, pressure drop records, and late Title V deviation reporting.
- Two violations occurred for late reporting of Reportable Compliance Activity (RCA)¹: for a NOx excess and late reporting of an inoperative monitor.
- Two violations occurred for failure to submit Title V deviation reports as required in their Title V permit.

Permit Violations

¹ Reportable Compliance Activity (RCA) is the reporting of compliance activities involving a facility or company as outlined in District Regulations 1, 8-28, 9-1&2, and State Law. Reporting covers breakdown relief, continuous emission monitoring excesses, ground level monitoring excesses, parametric monitoring excesses, inoperative monitors, and pressure relief device releases.

BAACMD Notices of Violation
 Lehigh Southwest Cement Co.-Permanente Plant (Site #A0017)
 July 1, 2004 - June 30, 2010
 TABLE 1

V#	S#	Occur	Issued	Reg	Violation Comments	Compliance Achieved	Basis for no compliance schedule
A48540	55	7/11/2002	9/25/2007	2-6-307	No quarterly manometer reading usage record.	9/25/2007	This administrative violation was for missing quarterly manometer readings for cement bag packing machines for 13 quarters. Compliance was achieved following staffing changes and the quarterly manometer recordkeeping resumed.
A11835	203	8/12/2004	7/21/2005	2-1-307	Condition ID #1720.3 - 4,200 Tons/Day	8/19/2004	This violation occurred when combined throughput at several sources at the Rock Plant exceeded the permit condition limit of 4,200 tons/day for 4 days. Compliance was achieved within 7 days and combined throughputs remain below the amount limited by the permit condition.
A48536	141	11/1/2005	1/25/2007	2-6-307	Missing visible emission records for 12 sources	10/30/2006	This administrative violation was for missing visible emission inspection forms for 12 sources over an 11-month period caused by staffing changes and turnovers. The violation was identified and self-reported by the facility. Compliance was achieved when the facility resumed maintaining daily visible emission inspection forms, instituted additional quality assurance and control procedures, and incorporated new procedures into personnel objectives.
A47925	N/A	5/9/2006	5/24/2006	6-301	Exceeded Ringelmann 1 visible emission.	6/11/2006	This violation of excessive dust emissions occurred during an emergency diversion from the main clinker bucket conveyor. Compliance was achieved within two days by expediting repairs of the main clinker bucket conveyor so that emergency diversion was no longer necessary.
A48527	165	8/10/2006	8/22/2006	2-6-307	Visible Emission Ringelmann 1.5 thru 3 for 14.5 Minutes	8/11/2006	This violation of excessive dust emissions occurred due to an abatement device problem involving polyester bags in the baghouse. Compliance was achieved within 1 day when the polyester bags in the baghouse were replaced with Teflon bags and adjustments were made to airflow dampers.
A48528	165	8/21/2006	8/22/2006	2-6-307	Visible Emission Ringelmann 1.5 thru 3 for 15.25 Minutes	8/22/2006	This violation occurred at the Clinker Handling System bucket conveyor and was caused by fine clinker material sticking to the side of the buckets. Compliance was achieved within 1 day when the fine material deposited at the ground adjacent to the bucket turnaround point was cleaned up. The facility incorporated new inspection procedures into the Operation & Maintenance plan and enhanced housekeeping around the source. This violation was unrelated to a previous violation at this source.
A48529	165	9/18/2006	9/25/2006	2-6-307	Non-Compliance Major Facility Visible Emission Exceeding Ringelmann 1.5 thru 3 for 15 Minutes	9/25/2006	This violation occurred at the Clinker Handling System bucket conveyor and was caused by damaged Kevlar skirting on the outside of the bucket conveyor. It was corrected within 7 days when the damaged Kevlar skirting on the outside of the bucket conveyor was replaced. Skirting inspection was added to the inspection check list and enhanced inspection details were added to newly designed compliance software that has since been implemented at the facility.

July 1, 2010

July 1, 2004 - June 30, 2010

Lehigh Southwest Cement Co.-Permanente Plant (Site #A0017)
TABLE 1

BAAQMD Notices of Violation

V#	S#	Occur	Issued	Reg	Violation Comments	Compliance Achieved	Basis for no compliance schedule
A48534	165	5/18/2006	12/1/2006	2-6-307	Covers 4 NOV issued Bel. 5/18/06 to 9/18/06	12/1/2006	This administrative violation was for failure to submit 10 and 30-day deviation reports as required in the Title V permit, resulting from the issuance of NOV's A48525, A48527, A48529. The violation was corrected on the date that the NOV was issued when the required reports were submitted.
A48543	350	1/6/2006	2/22/2008	2-6-307	Missing visible emission, pressure drop and surface wet condition monitoring records at 70 sources	2/22/2008	This administrative violation was for missing visible emission inspection forms, pressure drop readings and surface moisture condition monitoring for 70 sources over a 12-month period, caused by staffing changes and turnovers. The violation was identified and self-reported by the facility. Compliance was achieved when the facility resumed maintaining the visible emission inspection forms, pressure drop and surface moisture condition records and instituted additional quality assurance and control procedures.
A48541	165	8/20/2007	9/25/2007	2-6-307	Visible Emission > Ringelmann 1	8/25/2007	This violation of excessive dust emissions occurred at the Clinker Handling System when the access door gasket developed a gap. Compliance was achieved within 5 days when the gasket and casing at the access door were repaired.
A48550	154	11/1/2007	7/31/2008	2-6-307	Missing visible emission and pressure drop records at 20 sources & failure to notify deviation	8/8/2008	This administrative violation was for missing visible emission inspection forms and pressure drop readings for 20 sources over a 6-month period and late deviation reporting, caused by staffing changes and turnovers. The violation was identified and self-reported by the facility. Compliance was achieved when the facility resumed maintaining the visible emission inspection forms, pressure drop records and instituted additional quality assurance and control procedures.
A48545	154	1/30/2008	5/22/2008	2-6-307, 1-522.7	NOx excess of 821 ppm (limit=615ppm) and late reporting of indicated excesses	5/22/2008	This violation occurred for 2 hours of excessive NOx emissions from the kiln, as recorded on the continuous emission monitor. Compliance was achieved when NOx emissions dropped below the level limited by the permit condition. The administrative violation was related to the late reporting of the NOx excess.
A50005	new 607	10/16/2008	11/20/2008	2-1-301, 2-1-302	Moisture content <5% therefore permit req'd	1/13/2009	This violation was for no Authority to Construct or Permit to Operate unpermitted stockpiles. Compliance was achieved when a permit application was filed and the permit issued.
A50006	154	10/11/2008	2/4/2009	1-522.4	Failure to report equipment inoperational	10/20/2008	This administrative violation was for the late reporting of an inoperative NOx continuous emission monitor.
A50008	154	3/5/2009	4/7/2009	2-6-307	Exceed Ringelmann 1 visible emission	3/5/2009	This violation of excessive dust emissions occurred due to an abatement device problem involving 2 fiberglass bags in the baghouse. Compliance was achieved the same day when the bags were replaced with new ePTFE membrane bags. Prior to restarting the unit, all bags in that compartment were fully inspected and prioritized for June 2009 replacement.

BAAQMD Notices of Violation
 Lehigh Southwest Cement Co.-Permanente Plant (Site #A0017)
 TABLE 1
 July 1, 2004 - June 30, 2010

V#	S#	Occur	Issued	Reg	Violation Comments	Compliance Achieved	Basis for no compliance schedule
A50009	165	3/5/2009	4/7/2009	2-6-307	Exceeded Ringelmann 1 visible emission	3/5/2009	This violation of excessive dust emissions occurred for a short period at the clinker cooler bucket elevator discharge point the day that kiln operations resumed after a 2-1/2 month shutdown. Compliance was achieved during the investigation when the violation ended.
A50010	161	3/23/2009	4/7/2009	2-6-307	Exceeded Ringelmann 1 visible emission	3/23/2009	This violation of excessive dust emissions occurred when operations restarted following a power outage shutdown which resulted in fine, raw clinker material flushing from the precalcining tower through the kiln into the clinker cooler. Compliance was achieved when the fine materials were flushed through the process.
A50011	165	3/28/2009	4/7/2009	2-6-307	Exceeded Ringelmann 1 visible emission	3/27/2009	This violation of excessive dust emissions occurred when the wind entrained fine clinker dust that had accumulated around the conveyor system. Compliance was achieved when plant personnel removed the accumulated material, watered down the immediate area and instituted enhanced housekeeping procedures.
A50013	132	8/27/2009	9/8/2009	2-6-307	Exceeded Ringelmann 1 visible emission	8/27/2009	This violation of excessive dust emissions occurred when the wind blew fugitive emissions through door openings on the Preblend Dome while a front loader drove into and out of the dome. Compliance was achieved when the operation stopped.
A50014	230	11/16/2009	12/17/2009	2-6-307	Exceeded Ringelmann 1 visible emission	11/19/2009	This violation of excessive dust emissions occurred when fine clinker dust overloaded the dust collection system, resulting in clogged dust collector bags. Compliance was achieved when the roll press mill was immediately shut down and new bags were installed.
A50016	154	3/28/2010	4/26/2010	2-6-307	Exceeded Ringelmann 1 visible emission	4/26/2010	This violation of excessive visible emissions occurred when a detached plume formed above the kiln baghouse by a chemical process. Compliance was achieved the following day. A lime slurry injection system was permitted and installed and is expected to reduce compounds causing any detached plume formation.
A50019	383	5/25/2010	6/29/2010	2-6-307	Exceeded Ringelmann 1 visible emission	5/25/2010	This violation of excessive visible emissions occurred at the rock plant belt conveyor turning point when dry raw materials were not sufficiently moist to prevent excessive dust. Compliance was achieved when the water sprayer was turned on.
A50020	202	6/3/2010	6/29/2010	2-6-307	Exceeded Ringelmann 1 visible emission	6/3/2010	This violation of excessive visible emissions occurred between the primary and secondary crushers when dry raw materials were dumped into the upstream hopper without water spray abatement. Compliance was achieved when the water sprayer at the hopper was turned on.

APPENDIX B

GLOSSARY

ACT

Federal Clean Air Act

APCO

Air Pollution Control Officer

ARB

Air Resources Board

BAAQMD

Bay Area Air Quality Management District

BACT

Best Available Control Technology

Basis

The underlying authority which allows the District to impose requirements.

CAA

The federal Clean Air Act

CAAQS

California Ambient Air Quality Standards

CAM

Compliance Assurance Monitoring per 40 CFR, Part 64

CAPCOA

California Air Pollution Control Officers Association

CEM

Continuous Emission Monitor

CEQA

California Environmental Quality Act

CFR

The Code of Federal Regulations. 40 CFR contains the implementing regulations for federal environmental statutes such as the Clean Air Act. Parts 50-99 of 40 CFR contain the requirements for air pollution programs.

CO

Carbon Monoxide

Cumulative Increase

The sum of permitted emissions from each new or modified source since a specified date pursuant to BAAQMD Rule 2-1-403, Permit Conditions (as amended by the District Board on 7/17/91) and SIP Rule 2-1-403, Permit Conditions (as approved by EPA on 6/23/95). Cumulative increase is used to determine whether threshold-based requirements are triggered.

District

The Bay Area Air Quality Management District

EPA

The federal Environmental Protection Agency.

Excluded

Not subject to any District regulations.

Federally Enforceable, FE

All limitations and conditions which are enforceable by the Administrator of the EPA including those requirements developed pursuant to 40 CFR, Part 51, subpart I (NSR), Part 52.21 (PSD), Part 60 (NSPS), Part 61 (NESHAPs), Part 63 (MACT), and Part 72 (Permits Regulation, Acid Rain), including limitations and conditions contained in operating permits issued under an EPA-approved program that has been incorporated into the SIP.

FP

Filterable Particulate as measured by BAAQMD Method ST-15, Particulate.

HAP

Hazardous Air Pollutant. Any pollutant listed pursuant to Section 112(b) of the Act. Also refers to the program mandated by Title I, Section 112, of the Act and implemented by 40 CFR, Part 63.

Major Facility

A facility with potential emissions of: (1) at least 100 tons per year of regulated air pollutants, (2) at least 10 tons per year of any single hazardous air pollutant, and/or (3) at least 25 tons per year of any combination of hazardous air pollutants, or such lesser quantity of hazardous air pollutants as determined by the EPA administrator.

MFR

Major Facility Review. The District's term for the federal operating permit program mandated by Title V of the Federal Clean Air Act and implemented by District Regulation 2, Rule 6.

MOP

The District's Manual of Procedures.

NAAQS

National Ambient Air Quality Standards

NESHAPS

National Emission Standards for Hazardous Air Pollutants. See in 40 CFR, Parts 61 and 63.

NMHC

Non-methane Hydrocarbons (Same as NMOC)

NMOC

Non-methane Organic Compounds (Same as NMHC)

NO_x

Oxides of nitrogen.

NSPS

Standards of Performance for New Stationary Sources. Federal standards for emissions from new stationary sources. Mandated by Title I, Section 111 of the Federal Clean Air Act, and implemented by 40 CFR, Part 60 and District Regulation 10.

NSR

New Source Review. A federal program for pre-construction review and permitting of new and modified sources of pollutants for which criteria have been established in accordance with Section 108 of the Federal Clean Air Act. Mandated by Title I of the Federal Clean Air Act and implemented by 40 CFR, Parts 51 and 52 and District Regulation 2, Rule 2. (Note: There are additional NSR requirements mandated by the California Clean Air Act.)

Offset Requirement

A New Source Review requirement to provide federally enforceable emission offsets for the emissions from a new or modified source. Applies to emissions of POC, NO_x, PM₁₀, and SO₂.

Phase II Acid Rain Facility

A facility that generates electricity for sale through fossil-fuel combustion and is not exempted by 40 CFR, 72 from Titles IV and V of the Clean Air Act.

POC

Precursor Organic Compounds

PM

Particulate Matter

PM10

Particulate matter with aerodynamic equivalent diameter of less than or equal to 10 microns

PSD

Prevention of Significant Deterioration. A federal program for permitting new and modified sources of those air pollutants for which the District is classified "attainment" of the National Air Ambient Quality Standards. Mandated by Title I of the Act and implemented by both 40 CFR, Part 52 and District Regulation 2, Rule 2.

PTE

Potential to Emit as defined by BAAQMD Regulation 2-6-218

SIP

State Implementation Plan. State and District programs and regulations approved by EPA and developed in order to attain the National Air Ambient Quality Standards. Mandated by Title I of the Act.

SO₂

Sulfur dioxide

THC

Total Hydrocarbons (NMHC + Methane)

Title V

Title V of the federal Clean Air Act. Requires a federally enforceable operating permit program for major and certain other facilities.

TOC

Total Organic Compounds (NMOC + Methane, Same as THC)

TPH

Total Petroleum Hydrocarbons

TRMP

Toxic Risk Management Plan

TSP

Total Suspended Particulate

VOC

Volatile Organic Compounds

Units of Measure:

bhp	=	brake-horsepower
btu	=	British Thermal Unit
cu. ft.	=	cubic foot
cfm	=	cubic feet per minute
dscf	=	dry standard cubic foot
dscfm	=	dry standard cubic foot per minute
g	=	gram
gal	=	gallon
gpm	=	gallons per minute
gr	=	grain
hp	=	horsepower
hr	=	hour
lb	=	pound
in	=	inch
max	=	maximum
m ²	=	square meter
min	=	minute
mm	=	million
MMbtu	=	million btu
MMcf	=	million cubic feet
ppmv	=	parts per million, by volume
ppmw	=	parts per million, by weight
psia	=	pounds per square inch, absolute
psig	=	pounds per square inch, gauge
scfm	=	standard cubic feet per minute
tpy	=	tons per year
yr	=	year

Appendix C
NSR permit Evaluations

EVALUATION REPORT
Lehigh Southwest Cement Company
Application #22953- Plant #17

24001 Stevens Creek Blvd.
Cupertino, CA 95014

I. BACKGROUND

Lehigh Southwest Cement Company has applied for an Authority to Construct/Permit to Operate for the following equipment:

- A-156 Activated Carbon Injection System to abate S-154 Calciner Kiln**
- S-168 Activated Carbon Storage Silo, 60 tons capacity, abated by A-168 Dust Collector, Dustex, 750 scfm or equivalent equipment**
- S-169 Activated Carbon Feed Bin, 10 tons capacity, abated by A-169 Dust Collector, Dustex, 300 scfm**

Lehigh has requested to install a powder activated carbon injection (ACI) system to control mercury (Hg) emissions at the S-154 Kiln. This is a voluntary interim action that is intended to reduce mercury emissions below levels which the District has established for public notification under the Air Toxics Hot Spots Program. Powder activated carbon injection has been utilized in coal fired power plants, but it is new in the cement industry for Hg emission reduction and has shown to be effective in trial runs. The ACI system is a part of Lehigh's overall efforts to control mercury emissions from their facility. Lehigh will subsequently be making additional modifications, including adding a single stack, to further reduce public exposures to mercury and other toxic air contaminants.

In September 2010, Lehigh performed a series of tests through the Temporary Permit to Operate pursuant to Application #22335 to determine the effectiveness of carbon sorbent on reducing mercury emissions. Different doses of powdered activated carbon were pneumatically added at various rates into the exhaust gas stream of the kiln/mill dust collector (KMDC). Lehigh tracked the sorbent impact by using a continuous mercury monitor. In addition, mill feeds, products and internal dust circulation were sampled to better understand the effect of mercury dust recycling along with the effect of activated carbon injection on overall mercury emissions reductions.

Lehigh concluded that: (1) using the ACI combined with recycling the KMDC dust to the finish mills are practical methods to reduce Lehigh's mercury in the flue gas emissions. (2) the activated carbon when circulated from the baghouse to the preheater tower and back again, maintains a portion of its mercury adsorption capacity. The high temperature tolerance allows the amount of fresh activated carbon to be reduced. (3) the baghouse dust shows an increase in mercury concentration; thus indicating the mercury is captured and retained by the activated carbon.

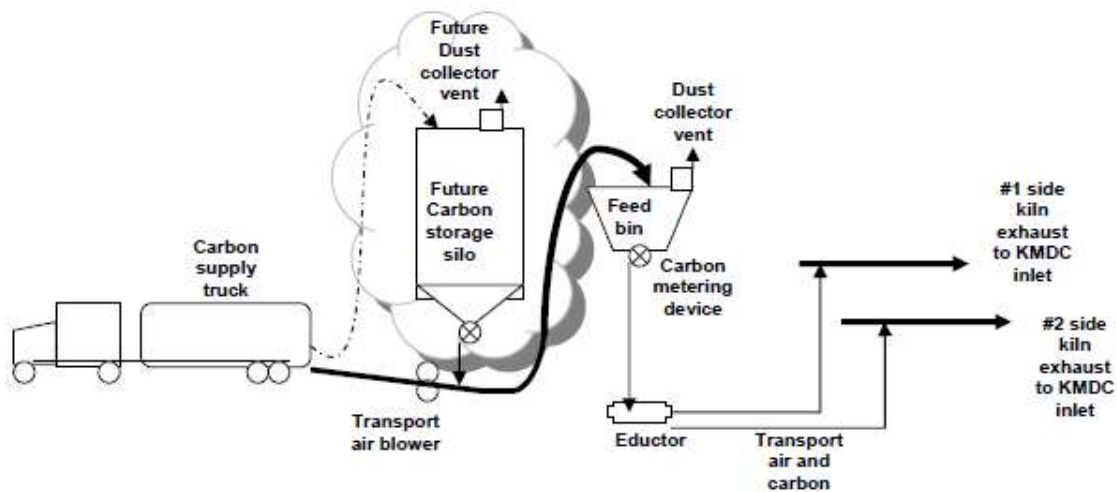
The activated carbon in powder form will be trucked into Lehigh and stored in S-168 Silo, which will be abated by a dedicated Dust Collector, A-168. The A-168 will only operate to abate the particulate matter emissions from unloading the product from the transit trucks and transferring it to the silo. From the silo, the activated carbon will be transferred to the new Feed Bin (S-169) to be abated by Dust Collector (A-169). The A-169 will only operate to abate the transfer of material from the silo to S-169. The feed bin will be equipped with a metering apparatus, which will use a gravimetric feeder to deliver a measured amount of

activated carbon to an eductor. The eductor will receive its transport air from a low pressure blower and will deliver the activated carbon into the injection lances arrays set up at various locations along the duct work leading to Kiln Mill Dust Collectors, A-141 and A-142.

The eductor will supply two separate activated carbon deliveries, up to 250 lbs/hr of activated carbon each, one for each side of the Kiln's process. The maximum amount of carbon consumed would be 2,000 tons of activated carbon per year. This would be an equivalent of 100 delivery trucks per year, assuming each truck has 20 tons capacity. This ACI project will not increase truck traffic beyond the allowable permitted limit. Currently, Condition 16109, Part 5, limits Lehigh to operate no more than 70,000 hydrated lime and cement trucks per year. Condition 16109, Part 5 will be modified to include the powdered activated carbon trucks, hydrated lime and cement trucks in the total of 70,000 trucks.

Mercury in plant flue gas exists in three forms: 1) Elemental (gas phase), 2) Oxidized (gas phase), 3) Particulate (adsorbed on particulate matter). The basic concept of sorbent control is to enhance the conversion from gas phase to particulate phase and then remove the particulate bound mercury along with dust. Activated carbon is a form of carbon that is processed to make it extremely porous to provide a large surface area for adsorption. The flue gas laden with mercury must be brought into physical contact with the powdered activated carbon where it becomes attached by mass transfer and then collected at the plant's particulate dust collector. It was found that the ACI works effectively when the temperature is below 300°F. The mercury removal efficiencies using ACI range from 50-60%. The ACI combined with recycling the KMDC dust to the finish mills can reduce the mercury emissions by approximately 70-80%.

Diagram of Activated Carbon Injection System



This application will not result in emission increases of PM10 from the dust entrainment from truck travel on dry paved roads within the plant from the levels already allowed.

Lehigh has submitted a minor revision application to its TV permit under application #22954 concurrently with this application.

The applicable requirements for these sources will be incorporated into the Title V permit as minor revisions and administrative amendments. Controlling mercury for the purposes of the California "Hot Spots" program is not a federally enforceable requirement and can be

incorporated into a Title V permit as an administrative amendment as shown in the excerpt from BAAQMD Regulation 2, Rule 6, Major Facility Review below:

2-6-201 Administrative Permit Amendment: A non-substantive amendment to a major facility review permit. The following amendments are administrative amendments: changes in recordkeeping format that are not relaxations of applicable requirements, the correction of typographical errors, changes in permit format that are not alterations of applicable requirements, changes in source descriptions that are not alterations of applicable requirements, changes in the descriptions of applicable requirements that add detail but do not affect substantive requirements, deletion of requirements containing sunset dates that have passed, the identification of administrative changes at a facility (such as a replacement of the facility's responsible official or a change in ownership or operational control of the facility which involves no physical or operational changes to the facility), the deletion of sources, the approval of a District rule into the SIP, the imposition of more frequent emission monitoring requirements, and changes to applicable requirements and related monitoring that are not federally enforceable.

The applicable requirements for the S-168, Activated Carbon Silo, and S-169, Activated Carbon Feed Bin, are federally enforceable and will be incorporated in the Title V permit as minor revisions as defined by BAAQMD Regulation 2-6-215. Minor revisions are defined as revisions that are not administrative amendments or significant permit revisions. The definition of significant permit revision is shown below:

2-6-226 Significant Permit Revision: Any revision to a federally enforceable condition contained in a major facility review permit that can be defined as follows:

- 226.1 The incorporation of a change considered a major modification under 40 CFR Parts 51 (NSR) or 52 (PSD);
- 226.2 The incorporation of a change considered a modification under 40 CFR Parts 60 (NSPS), 61 (NESHAPS), or Section 112 of the Clean Air Act (HAP);
- 226.3 Any significant change or relaxation of any applicable monitoring, reporting or recordkeeping condition;
- 226.4 The establishment of or change to a permit term or condition allowing a facility to avoid an applicable requirement, including:
 - 4.1 a federally enforceable emission limit assumed in order to avoid classification as a modification under any provision of Title I of the federal Clean Air Act, or
 - 4.2 an alternative hazardous air pollutant emission limit pursuant to Section 112(i)(5) of the Clean Air Act;
- 226.5 The establishment of or change to a case-by-case determination of any emission limit or other standard;
- 226.6 The establishment of or change to a facility-specific determination for ambient impacts, visibility analysis, or increment analysis on portable sources; or
- 226.7 The incorporation of any requirement promulgated by the U. S. EPA under the authority of the Clean Air Act provided that three or more years remain on the permit term.

The revision is not a major modification for NSR or PSD; a modification for NSPS, NESHAPS, or Section 112 of the federal Clean Air Act; a significant change or relaxation of any existing monitoring, recordkeeping, or reporting condition; the establishment or change to a condition to avoid a federally enforceable requirement; a case-by-case determination of a federally enforceable emission limit or standard; a determination of ambient impacts, visibility analysis, or increment analysis on portable sources, or the incorporation of any Clean Air Act requirement. Therefore, the revisions to the Title V permit will not be significant revisions.

II. EMISSION CALCULATIONS

Activated Carbon Storage Silo (S-168) and Dust Collector (A-168)

The Dust Collector has a guaranteed performance of 0.0013 gr/dscf from its vendor, Dustex Corporation.

A-168 PM10 Annual Emissions:

Max. Annual PM10 emissions = 0.0013 gr/dscf x 1 lb/7000 grain x 750 ft3/min x 30 min/truck x 100 truck/yr = 0.42 lbs/yr

A-168 PM10 Daily Emissions:

Maximum Daily PM₁₀ emissions = 0.0013 gr/dscf x 1 lb/7000 grain x 750 ft3/min x 30 min/truck x 3 truck/day = 0.0125 lbs/day

Activated Carbon Feed Bin (S-169) and Dust Collector (A-169)

The Dust Collector has a guaranteed performance of 0.0013 gr/dscf from its vendor, Dustex Corporation.

A-169 PM10 Annual Emissions:

Max. Annual PM10 emissions = 0.0013 gr/dscf x 1 lb/7000 grain x 300 ft3/min x 30 min/transfer x 400 transfer/yr = 0.67 lbs/yr

A-169 PM10 Daily Emissions:

Maximum Daily PM₁₀ emissions = 0.0013 gr/dscf x 1 lb/7000 grain x 300 ft3/min x 30 min/transfer x 4 transfer/day = 0.007 lbs/day

Application Emission Increase

Annual PM₁₀ = Storage Silo + Feed Bin

$$0.42 \text{ lb/yr} + 0.67 \text{ lb/yr} = 1.09 \text{ lb/yr or } 0.000545 \text{ ton/yr}$$

III. PLANT CUMULATIVE INCREASE SINCE 4/5/91

The Databank shows the following cumulative increase for this plant.

	<u>Current</u> <u>Ton/yr</u>	<u>New</u> <u>Ton/yr</u>	<u>New Total</u>	
			<u>Lbs/yr</u>	<u>Tons/yr</u>
POC =	0.00	0.00	0.00	0.00
NO_x =	0.00	0.00	0.00	0.00
SO₂ =	0.00	0.00	0.00	0.00
CO =	0.00	0.00	0.00	0.00
NPOC =	0.00	0.00	0.00	0.00
PM₁₀ =	0.00	0.000545	1.09	0.000545

IV. TOXIC SCREENING ANALYSIS

The mercury emissions because of this proposed project will be reduced, making Lehigh less of a health risk to the surrounding community. Thus, this application does not require any toxic risk screening analysis per Regulation 2-5.

Air Toxics Hot Spots Program (ATHS):

The Air Toxics "Hot Spots" Information and Assessment Act (AB 2588, Connelly, 1987) established a formal regulatory program for site-specific air toxics emissions inventory and health risk quantification that is managed by California air districts. Under this program, a wide variety of industrial, commercial, and public facilities are required to report the types and quantities of toxic substances their facilities routinely

release into the air. The goals of the Air Toxics Hot Spots Program are to collect emissions data, to identify facilities with potential for localized health impacts, to ascertain health risks, to notify nearby residents of risks that are determined to warrant such notification, and to reduce significant risks.

There are five steps to implementing the ATHS program. Guidelines have been developed for all five steps to establish a consistent, science-based, methodology for implementing the program. The five steps are briefly described as follows:

- **Air Toxics Emissions Inventory:** Subject facilities are required to prepare and submit a comprehensive emissions inventory plan followed by a toxics emissions inventory report. Each facility's emissions inventory must be updated on a regular basis (in order to reflect changes in equipment, materials, and production levels at the facility).
- **Prioritization:** Each facility is prioritized for potentially significant health impacts based on the quantity and toxicity of emissions, and the proximity of nearby residents and workers.
- **Health Risk Assessment:** Facilities that are determined to be "high priority" are required to prepare a comprehensive HRA. The air district and Cal/EPA's Office of Environmental Health Hazard Assessment (OEHHA) review the HRA.
- **Public Notification:** If the health risks resulting from the facility's emissions exceed action levels established by the air district, the facility is required to perform notification to all exposed persons regarding the results of the HRA. The BAAQMD has established a cancer risk of 10 in a million and a noncancer Hazard Index of one as ATHS public notification levels.
- **Risk Reduction:** If the health risks resulting from the facility's emissions exceed significance levels established by the air district, the facility is required to conduct an airborne toxic risk reduction audit and develop a plan to implement measures that will reduce emissions from the facility to a level below the significance level within five years. The BAAQMD has established a cancer risk of 100 in a million and a noncancer Hazard Index of ten as ATHS mandatory risk reduction levels.

Lehigh's ATHS Status: Lehigh is in compliance with the ATHS program. At the District's request, Lehigh submitted an updated ATHS emission inventory in 2009. The District reviewed the emissions report and changed the prioritization status of the facility to High Priority. Therefore, Lehigh was required to prepare a comprehensive HRA, which they submitted in September, 2010. The District requested revision of the HRA and Lehigh submitted a revised HRA in March, 2011. The HRA indicates that, based on the emissions represented by the 2011 Production scenario, risk levels are below the thresholds requiring public notification; the 2011 Production scenario represents the implementation of the Activated Carbon Injection system (subject of this application) and an hourly emission rate of 0.064 lb/hr of mercury (approximate 65% reduction from baseline). Preliminary review by District staff indicates that the HRA was prepared according to the Air Toxics Hot Spots Health Risk Assessment Guidelines and represents toxic emissions and risk appropriately. The HRA report will be eligible for final approval after review by the District and OEHHA staff is complete.

V. BEST AVAILABLE CONTROL TECHNOLOGY

Sources S-168 and S-169 did not trigger BACT because the PM10 emissions are below 10 pounds per highest day per Regulation 2-2-301. However, Lehigh will install BACT(1) level Dust Collectors at sources S-168 and S-169 with an outlet grain loading limit of 0.0013 gr/dscf.

S-154 will not have any emission increases as a result of this proposed project; therefore, BACT does not apply.

VI. OFFSETS

Offsets are required since the facility's PM10 emissions are more than 100 ton/yr per Regulation 2-2-303. Lehigh is required to provide PM10 emission offsets since there is an increase of 17.10 lbs/yr of PM10 from material handling of the ACI system. At this time, Lehigh elected to defer the offsets per Regulation 2-2-421, until the annual permit renewal period because the PM10 emission increase is much less than 1 ton/yr.

VII. STATEMENT OF COMPLIANCE

The owner/operator of source S-154, S-168 and S-169 is expected to continue to comply with the requirements of District Regulation 1-301 "Public Nuisance" and District Regulation 6 "Particulate Matter and Visible Emissions". The sources that are abated by the Dust Collectors are conditionally permitted to meet these requirements.

PSD

PSD does not apply because the activated carbon injection system project's emissions increases and maximum air quality impacts are not major modifications per federal PSD regulations and do not exceed the significance levels for air quality impacts, as defined in federal PSD regulations.

National Emissions Standards for Hazardous Air Pollutants Standards (NESHAPS)

The owner/operator of sources S-154, S-168 and S-169 are expected to continue to comply with NSPS Subpart F, Portland Cement Plants and NESHAP Subpart LLL, National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry.

California Environmental Quality Act (CEQA)

This project is categorically exempt from CEQA because the permit application is to install air pollution control or abatement equipment per Regulation 2-1-312.2.

This project is expected to reduce mercury emissions; thus, this application does not require any toxic risk screening analysis per Regulation 2-5. The applicant has submitted a CEQA Environmental Information Form H for the project, and has not identified any potential significant impacts.

This project is over 1,000 ft from the nearest public school and is therefore not subject to the public notification requirements of Regulation 2-1-412.

Major Facility Review (Title V)

As discussed in the Section I, Background, the changes approved in this Authority to Construct will be administrative amendments and minor revisions to the Major Facility Review permit.

S-168, Activated Carbon Silo, and S-169, Activated Carbon Feed Bin, are subject to SIP Regulation 6, Particulate Matter and Visible Emissions, which contains federally enforceable limits on particulate matter. Because the facility is subject to Major Facility Review in accordance with BAAQMD Regulation 2, Rule 6, monitoring for all federally enforceable requirements must be evaluated. As shown in Section II, Emission Calculations, the particulate emissions of sources S-168 and S-169 after abatement are estimated to be 0.42 and 0.67 lb/yr, respectively. The sources will be monitored by checking the pressure drop across the baghouse and checking for visible emissions on a monthly basis.

Compliance Assurance Monitoring (CAM) Plan

Sources S-168 and S-169 are exempt from a CAM plan because they have potential pre-control device emissions that are equal or less than 100 tons per year of particulate matter per 64.2(1)(3).

VIII. CONDITIONS

Condition # 603

S-154 Calciner Kiln

S-171 Kiln Fuel Mill System

S-172 Precalciner Fuel Mill System

Amended by A/N 15398, A/N 18535, A/N 21753 and A/N 22953

Any condition that is preceded by an asterisk is not federally enforceable.

1. The Owner/Operator shall not operate the pneumatic system from trucks to storage unless it is vented to a dust collection system. The S-171 Kiln Mill System shall be abated by A-171 Dust Collector, and the S-172 Precalciner Mill shall be abated by the A-172 Dust Collector. (Basis: Regulation 2-2-212 Cumulative Increase)
2. The owner/operator of S-171 and S-172, shall not exceed the following usage limits in the Pre-calciner and Kiln (S-154):
Operation with 100 % coal at maximum 29 tons/hr; or
Operation with 100% Petroleum Coke at maximum 20 tons/hr

The Owner/Operator may use any combination of coal and petroleum coke other than specified above, provided that the owner/operator can demonstrate that the total fuel consumption does not exceed 4,960,000 MMBTU/yr (1,600,000 tons/yr clinker x 3.1 MMBtu/ton).

For calculation purposes, the coal's heat content is assumed to be 25 MMBTU/ton and coke's heat content is assumed to be 29 MMBTU/ton. The values may change depending on each shipment received.
(Basis: Cumulative Increase).

3. Deleted, (inappropriate PSD analysis trigger level for lead per Regulation 2-2-306)
4. Deleted, (inappropriate PSD analysis trigger level for beryllium per Regulation 2-2-306)
- *5. The Owner/Operator of S-154 shall not exceed 1.06 pounds of hexavalent chromium per any consecutive 12-month. (Basis: Toxics)
6. Deleted, (Part 8 replaces quarterly composition analysis of coke)

7. The Owner/Operator of S-154, S-171 and S-172 shall calibrate, maintain, and operate District-approved continuous volumetric flow meters on 4 of the 32 kiln (S-154) exhaust dust collectors (A-141, A-142) and on the fuel grinding mills exhaust dust collectors (A-171 and A-172) as suggested by the manufacturer's recommendation. (Basis: Regulation 2-6-503)
- *8. The Owner/Operator of S-154 shall conduct a source test at the exhausts of Dust Collectors (A-141, A-142, A-171 and A-172) at least once per calendar year to demonstrate subsequent compliance with Part 5. The test should be conducted with the raw mill on and the raw mill off. The Owner/Operator shall also test for trace metals contents (Sb, As, Be, Cd, Cr⁺⁶, total Cr, Cu, Hg, Mn, Ni, P, Pb, Se, V, Zn), benzene, Hydrochloric Acid (HCl) and total hydrocarbon (THC) at least once per calendar year. The Owner/Operator shall submit the source test results to the District Source Test Section and Engineering Divisions no later than 60 days after the source test. Lehigh may use the same concentrations from A-141 and A-142 if repeated source tests demonstrate that the concentrations from A-171 and A-172 are lower than the concentrations from A-141 and A-142. (Basis: Periodic Monitoring, Regulation 1-502)
9. The Owner/Operator shall obtain approval for all source test procedures from the District's Source Test Manager prior to conducting any tests. The Owner/Operator shall comply with all applicable testing requirements for continuous emissions monitors as approved by the District's Source Test Manager. The Owner/Operator shall notify the District's Source Test Manager, in writing, of the source test protocols and projected test dates at least 7 days prior to testing. (Basis: Source test compliance verification and accuracy)
10. The owner/operator shall maintain daily records (calendar day), in a District approved log, for: (1) the amount of coke and coal usage, each separately (2) the coke's heat content and the coal's heat content. The daily throughput of fuel used and daily average volumetric flow rates shall be submitted to the District once each quarter. All records shall be retained for a period of at least five years from the date of entry. This log shall be kept on site and made available to District staff upon request. (Basis: Recordkeeping)
11. The owner / operator shall operate A-154 Lime Slurry Injection System so as to mitigate / maintain HCl emissions from S-154 to the applicable Federal NESHAPs HCl standard. (Basis: Cumulative increase, revised NESHAP Subpart LLL. (Effective upon adoption of the revised NESHAP Subpart LLL and its compliance date).
12. The owner/operator of the Lime Slurry Injection system (A-154) shall install, operate and maintain District approved continuous hydrochloric acid (HCl) emission monitors at the exhausts of Dust Collectors (A-141, A-142, A-171 and A-172) as suggested by the manufacturer's recommendation. Lehigh must apply and obtain EPA's approval before using the HCl monitor's concentrations at the exhaust of A-141 and A-142 to calculate the mass flow of HCl emissions at the exhaust of A-171 and A-172. (Basis: Regulation 2-6-503, NESHAP Subpart LLL). (Effective upon adoption of the revised NESHAP Subpart LLL and its compliance date).
- 13a. The owner/operator shall maintain hourly continuous emission monitoring records for the monitoring system in a form suitable for inspection and approved by the APCO and the EPA administrator. Such records shall include, but are not limited to: (Basis: RACT)
 - (i) The continuous emission monitoring measurements for HCl expressed in ppm;

- (ii) The date, time, and duration of any start-up, shutdown or malfunction in the operation of any of the kiln systems or the emission monitoring equipment; and,
 - (iii) The results of performance testing, evaluation, calibration, checks, adjustments, and maintenance of the continuous emission monitoring system.
- *13b. The owner/operator shall maintain hourly continuous emission monitoring records for the Hg monitoring system in a form suitable for inspection and approved by the APCO and the EPA administrator. Such records shall include, but are not limited to:
- (iv) The continuous emission monitoring measurements for mercury expressed in ppm (1-hour average);
 - (v) The production rates of clinker (tons/hr and tons/month);
 - (vi) The emission rates of Hg in lb/hr (for each hour of the month, the maximum 1-hour average during month, rolling 3-hr average, and rolling 30-day average) and lb/yr (30-day rolling average and 12-month rolling average);
 - (iv) The date, time, and duration of any start-up, shutdown or malfunction in the operation of any of the kiln systems or the emission monitoring equipment; and,
 - (v) The results of performance testing, evaluation, calibration, checks, adjustments, and maintenance of the continuous emission monitoring system.
- (Basis: H&S Code 44300 et seq.)
- 14a. The owner/operator shall maintain the HCl CEMS records at the facility for at least five years. These records shall be made available to the APCO or the EPA Administrator upon request. (Basis: Cumulative Increase)
- *14b. The owner/operator shall maintain the mercury (Hg) CEMS records at the facility for at least five years. These records shall be made available to the APCO or the EPA Administrator upon request.
(Basis: H&S Code 44300 et seq.)
- 15a. The HCl Continuous Emission Monitor System (CEMs) shall meet the requirements of District Manual of Procedures, Volume V, Continuous Emission Monitoring, Policy and Procedures. (Basis: Regulation 1-522, 1-602; Manual of Procedures, Volume V)
- *15b. The mercury Continuous Emission Monitor System (CEMs) shall meet the requirements of District Manual of Procedures, Volume V, Continuous Emission Monitoring, Policy and Procedures. (Basis: Regulation 1-522, 1-602; Manual of Procedures, Volume V, H&S Code 44300 et seq.)
- *16. The owner/operator of S-154, S-171 and S-172 shall not emit more than 261 lbs/yr (12-month rolling average) and 0.064 lb/hr ((3-hour rolling average) of total mercury during normal operation. These mercury limits may be revised based on a new stack or other modifications that Lehigh will be making, which could affect the Health Risk Analysis results. (Basis: H&S Code 44300 et seq.) (Effective upon operation/certification of Hg CEM).
- *17. The owner/operator of the Activated Carbon Injection System (A-156) shall install, operate and maintain District approved continuous mercury (Hg) emission monitors at the exhausts of Dust Collectors (A-141 and A-142) as suggested by the manufacturer's recommendation. (Basis: H&S Code 44300 et seq.).

*18. The owner/operator of S-154 shall not emit more than 0.064 lb/hr of total mercury on a 30 days rolling average during normal operation. The owner/operator shall perform a mass balance calculation (In = Out) to determine the mercury compliance. The following equation should be used:

Total Hg (air) = total feed Hg (Pre-Blend Limestone + Iron + Bauxite + Coke) – total product Hg (KMDC dust to Finish Mills)

The sample of raw materials (Iron, Bauxite and coke) shall be taken once a week. The weekly composites of each raw material shall be analyzed for Hg by a certified laboratory once a month.

The sample of KMDC dust to Finish Mill and Pre-Blend Limestone shall be taken every day. The daily composites of KMDC dust and Pre-Blend Limestone shall be analyzed for Hg by a certified laboratory once a week.

(Basis: H&S Code 44300 et seq.) (Effective until superseded by Part 16).

*19. The owner/operator shall report all Hg results to the District within 30 days at the close of the month reported on when using material balance to demonstrate compliance.

When the Hg CEMs is operational, the owner/operator shall report the CEMs readings and calculations to the District according to Part 13b within 30 days at the close of the month reported on. (Basis: Regulation 1-522)

*20. The owner/operator of the Hg CEMs must submit a monitoring plan to the District for approval. All operating parameters must be specified within 90 days of CEMs startup. (Basis: H&S Code 44300 et seq.)

COND# 24626

For S-167 Lime Bin, abated by A-167 dust collector

Amended by A/N 22953

1. The owner/operator shall ensure visible particulate emissions from S-167 shall not exceed Ringelmann 1.0 for more than 3 minutes in any hour or result in fallout on adjacent property in such quantities as to cause a public nuisance per Regulation 1-301. (Basis: BACT, Regulation 6, Rule 1, Regulation 1-301)
2. The owner/operator shall ensure all of the particulate emissions emitted from S-167 flow under negative pressure to Dust Collector A-167. The owner/operator shall equip this Baghouse with a District approved manometer for measuring the pressure drop across the Baghouse. Each manometer shall be checked for proper operation at least once every month. (Basis: Regulation 6-1-301, 6-1-310, 6-1-311, Regulation 2-1-403)
3. The owner/operator shall ensure the outlet grain loading for Baghouse A-167 does not exceed 0.0013 grain/dscf. (Basis: Regulation 2-2-212 Cumulative Increase)
6. The owner/operator shall ensure the total throughput of powder lime at S-167 does not exceed 5,800 tons in any calendar year. (Basis: Regulation 2-2-212 Cumulative Increase)

7. The owner/operator shall not exceed 290 hydrated lime delivery trucks in any consecutive 12 month period and the total amount of cement trucks,hydrated lime and powdered activated carbon trucks shall not exceed 70,000 trucks in any consecutive 12 month period. (Basis: To Avoid Cumulative Increase of PM10)
6. To determine compliance with the above parts, the owner/operator shall maintain the following records and provide all of the data necessary to evaluate compliance with the above parts, including the following information:
 - a. Total monthly hours of operation.
 - b. The monthly hours of operation shall be totaled on a yearly basis.
 - c. The total monthly throughput of lime.
 - d. Total monthly number of truck for lime delivery and their delivery times.All records shall be retained on-site for five years, from the date of entry, and made available for inspection by District staff upon request. These recordkeeping requirements shall not replace the recordkeeping requirements contained in any applicable District Regulations. (Basis: Cumulative Increase)
7. The owner/operator shall inspect Baghouse, A-167 monthly to ensure proper operation. The following items shall be checked:
 - a. The pressure drop across the baghouse shall be checked monthly. The pressure drop shall be no lower than 0.5 inches of water and no greater than 8 inches of water.
 - b. The baghouse exhaust shall be checked monthly for evidence of particulate breakthrough. If breakthrough is evident from plume observations, dust buildup near the stack outlet, or abnormal pressure drops, the filter bags shall be checked for any tears, holes, abrasions, and scuffs, and replaced as needed.
 - c. All hoppers shall be discharged in a timely manner to maintain compliance with 6(a) above.
 - d. The pulsejet, shaker cleaning system shall be maintained and operated at sufficient intervals to maintain compliance with 6(a) above.(Basis: Regulation 2-1-403)
8. In order to demonstrate compliance with the above permit conditions, the following records shall be maintained in a District approved log. These records shall be kept on site and made available for District inspection for a period of at least five years from the date on which a record is made.
 - a. Records of all inspections and all maintenance work including bag replacement for the baghouse. Records of each inspection shall consist of a log containing the date of inspection and the initials of the personnel that inspects the baghouses.(Basis: Regulation 1-441)
9. Not later than 60 days from the startup of A-167, and once every five years thereafter, the owner/operator shall conduct an initial District approved source tests to determine compliance with the limit in Part 3. The owner/operator shall submit the source test results to the District staff no later than 60 days after the source test. (Basis: BACT, Cumulative Increase)
10. The owner/operator shall obtain approval for all source test procedures from the District's Source Test Section prior to conducting any tests. The owner/operator shall comply with all applicable testing requirements as specified in Volume V of the District's Manual of Procedures. The owner/operator shall notify the District's Source Test Section, in writing,

of the source test protocols and projected test dates at least 7 days prior to testing. (Basis: Cumulative Increase)

COND# 24899

For S-168 Activated Carbon Storage Silo, abated by A-168 Dust Collector

For S-169 Activated Carbon Feed Bin, abated by A-169 Dust Collector

1. The owner/operator shall ensure visible particulate emissions from S-168, S-169, A-168 and A-169 shall not exceed Ringelmann 1.0 for more than 3 minutes in any hour or result in fallout on adjacent property in such quantities as to cause a public nuisance per Regulation 1-301. (Basis: BACT, Regulation 6, Rule 1, Regulation 1-301)
2. The owner/operator shall ensure S-168 and S-169 are abated by A-168 and A-169, respectively, at all times when in operation. The owner/operator shall equip A-168 and A169, Dust Collectors, with a District approved manometer for measuring the pressure drop across the Dust Collector. Each manometer shall be checked for proper operation at least once every month. (Basis: Regulation 6-1-301, 6-1-310, 6-1-311, Regulation 2-1-403)
3. The owner/operator shall ensure the outlet grain loading for Dust Collector A-168 and A-169 does not exceed 0.0013 grain/dscf each. (Basis: Regulation 2-2-212 Cumulative Increase)
6. The owner/operator shall ensure the total throughput of powdered activated carbon at S-168 and/or S-169 does not exceed 2,000 tons in any calendar year. (Basis: Regulation 2-2-212 Cumulative Increase)
7. The owner/operator shall not exceed 100 powdered activated carbon delivery trucks in any consecutive 12 month period and the total amount of cement, hydrated lime and powdered activated carbon trucks shall not exceed 70,000 trucks in any consecutive 12 months period. (Basis: To Avoid Cumulative Increase of PM10)
6. To determine compliance with the above parts, the owner/operator shall maintain the following records and provide all of the data necessary to evaluate compliance with the above parts, including the following information:
 - a. Total monthly hours of operation.
 - b. The monthly hours of operation shall be totaled on a yearly basis.
 - c. The total monthly throughput of activated carbon.
 - d. Total monthly number of truck for powder activated carbon delivery and their delivery times.All records shall be retained on-site for five years, from the date of entry, and made available for inspection by District staff upon request. These recordkeeping requirements shall not replace the recordkeeping requirements contained in any applicable District Regulations. (Basis: Cumulative Increase)
7. The owner/operator shall inspect Dust Collector, A-168 and A-169 monthly to ensure proper operation. The following items shall be checked:
 - a. The pressure drop across the baghouse shall be checked monthly. The pressure drop shall be no lower than 0.5 inches of water and no greater than 8 inches of water.

- b. The baghouse exhaust shall be checked monthly for evidence of particulate breakthrough. If breakthrough is evident from plume observations, dust buildup near the stack outlet, or abnormal pressure drops, the filter bags shall be checked for any tears, holes, abrasions, and scuffs, and replaced as needed.
 - c. All hoppers shall be discharged in a timely manner to maintain compliance with 6(a) above.
 - d. The pulsejet, shaker cleaning system shall be maintained and operated at sufficient intervals to maintain compliance with 6(a) above.
(Basis: Regulation 2-1-403)
8. In order to demonstrate compliance with the above permit conditions, the following records shall be maintained in a District approved log. These records shall be kept on site and made available for District inspection for a period of at least five years from the date on which a record is made.
 - a. Records of all inspections and all maintenance work including bag replacement for the dust collector. Records of each inspection shall consist of a log containing the date of inspection and the initials of the personnel that inspects the dust collectors.
(Basis: Regulation 1-441)
9. Not later than 60 days from the startup of A-168 and A-169, and once every five years thereafter, the owner/operator shall conduct an initial District approved source tests to determine compliance with the limit in Part 3. The owner/operator shall submit the source test results to the District staff no later than 60 days after the source test. (Basis: BACT, Cumulative Increase)
10. The owner/operator shall obtain approval for all source test procedures from the District's Source Test Section prior to conducting any tests. The owner/operator shall comply with all applicable testing requirements as specified in Volume V of the District's Manual of Procedures. The owner/operator shall notify the District's Source Test Section, in writing, of the source test protocols and projected test dates at least 7 days prior to testing. (Basis: Cumulative Increase)

COND# 16109

**For S-17 Clinker Transfer (6-BC-3, 6-BC-6, 6-BC-7), S-45 West Silo Top Cement Distribution Tower, S-46 Middle Silo Top Cement Distribution Tower, S-47 East Silo Top Cement Distribution Tower, S-48 Bulk Cement Loadout Tanks #1 and #2, S-49 Bulk Cement Loadout Tank #28, S-50 Bulk Cement Loadout Tank #29, S-54 Cement Packer #1, S-55 Cement Packer #2, and S-167 Lime Bin
Amended by A/N 21753 and A/N 22953**

1. The owner/operator shall ensure visible particulate emissions from each source S-17, S-45, S-46, S-47, S-48, S-49, S-50, S-54, S-55, S-56 do not exceed Ringlemann 0.5 or result in fallout on adjacent property in such quantities as to cause a public nuisance per Regulation 1-301.
(Regulation 1-301, BACT)

2. The owner/operator shall ensure all of the particulate emissions emitted from the handling of cement for the sources identified in part #1 flow under negative or positive pressure to the corresponding baghouse (s) (A-420 through A-436). (Regulation 2-2-212 Cumulative increase, BACT)
3. The outlet grain loading for each baghouse shall not exceed 0.006 grains/dscf. (Cumulative Increase, Regulation 2-2-301.1 BACT))
4. Deleted (Source test requirement has been met).
5. The owner/operator of S-48, S-49, S-50, S-54, S-55, S-167 and S-168 shall not load cement out and deliver hydrated lime and powdered activated carbon more than its percent maximum throughput of current trucks, a maximum of 70,000 cement /hydrated lime/powdered activated carbon trucks loaded/unloaded to capacities (limited by current law on cement trucks maximum tonnage and this facility's cap on cement production), in any consecutive twelve month period. (Regulation 2-2-212, Cumulative increase)
6. The owner/operator shall maintain in, a District approved log, monthly records of the total number of cement trucks loaded, hydrated lime and powdered activated carbon trucks received and unloaded, the total amount of cement loaded out in the cement trucks and the total amount of hydrated lime and powdered activated carbon unloaded. These records shall be retained for a period of at least five years. The logs shall be kept on site and made available to District staff upon request. (Cumulative Increase)

VII. RECOMMENDATION

Issue a conditional Authority to Construct/Permit to Operate to Lehigh for the following equipment:

- A-156 Activated Carbon Injection System to abate S-154 Calciner Kiln**
- S-168 Activated Carbon Storage Silo, 60 tons capacity, abated by A-168 Dust Collector, Dustex, 750 scfm or equivalent equipment**
- S-169 Activated Carbon Feed Bin, 10 tons capacity, abated by A-169 Dust Collector, Dustex, 300 scfm**

Thu H. Bui
Senior Air Quality Engineer
Engineering Division
date: _____

Appendix D
Compliance Assurance Monitoring (CAM) Analysis

Attachment 1:

CAM Applicability Analysis

Permit Evaluation and Statement of Basis: Site A0017, Lehigh Southwest Cement Company
24001 Stevens Creek Boulevard Cupertino, CA 95014

Instructions: This table was prepared in order to determine the applicability of CAM to each device listed in the Title V Permit. Note 40 CFR 64.2(a) is General Applicability which all three must be satisfied to apply; 40 CFR 64.2(b) is Exemptions.

Notes: Y: Yes, N: No, NE: Not Evaluated, M22: Epa Method 22, VE: Visible Emission observation, P:periodic, M:monthly, Q:Quarter, BLD:Bag Leak Detector

Source No (S-)	Source Description	Pollutant	Federally Enforceable Emissions Limit or Standard? 40 CFR 64.2(a)(1)		Uses a Control Device for Compliance? 40 CFR 64.2(a)(2)	Pre-Control PTE > Major Source Threshold (MST)? 40 CFR 64.2(a)(3)	Subject to CAM			Compliance Method in Title V Permit
			Emission Limit	Basis			Y/N	Reason	Description	
168	<u>Activated Carbon Storage Silo</u>	<u>Opacity</u>	<u>< 10% opacity</u>	<u>60.672(b)</u>	<u>A-168 Dust Collector</u>	<u>N</u>	<u>N</u>	<u>64.2(a)(3)</u>	<u>Pre-control PTE < MST</u>	<u>Pressure Drop-P/M, Source Test - P/every 5 yrs- Condition # 24899 per 40 CFR 70.6(c)</u>
		<u>Particulate Matter</u>	<u>Ringelmann 1.0 Limitation</u>	<u>SIP 6-301</u>						
			<u>Visible Particles</u>	<u>SIP 6-305</u>						
			<u>Ringelmann 1.0 Limitation</u>	<u>BAAQMD Condition # 24899 Part 1</u>						
169	<u>Activated Carbon Feed Bin</u>	<u>Opacity</u>	<u>< 10% opacity</u>	<u>60.672(b)</u>	<u>A-169 Dust Collector</u>	<u>N</u>	<u>N</u>	<u>64.2(a)(3)</u>	<u>Pre-control PTE < MST</u>	<u>Pressure Drop-P/M, Source Test - P/every 5 yrs- Condition # 24899 per 40 CFR 70.6(c)</u>
		<u>Particulate Matter</u>	<u>Ringelmann 1.0 Limitation</u>	<u>SIP 6-301</u>						
			<u>Visible Particles</u>	<u>SIP 6-305</u>						
			<u>Ringelmann 1.0 Limitation</u>	<u>BAAQMD Condition # 24899 Part 1</u>						

Attachment 2:

**Potential
To Emit**

Permit Evaluation and Statement of Basis: Site A0017, Lehigh Southwest Cement Company
24001 Stevens Creek Boulevard Cupertino, CA 95014

Source No (S-)	Source Description	Abatement Device	Material Stream	Applicable Annual Permit Limit	Process Fugitive Emissions (ton/yr)	Dust Collector Emissions (ton/yr)	Control Efficiency (%) ¹	Uncontrolled Emissions Based on Applicable Limit (ton/yr)
<u>168</u>	<u>Activated Carbon Storage Silo</u>	<u>A-168 Dust Collector</u>	<u>Powder Activated Carbon</u>	<u>2000 tons activated carbon</u>	<u>--</u>	<u>2.10E-4</u>	<u>99.5%</u>	<u>0.042</u>
<u>169</u>	<u>Activated Carbon Feed Bin</u>	<u>A-169 Dust Collector</u>	<u>Powder Activated Carbon</u>	<u>2000 tons activated carbon</u>	<u>--</u>	<u>3.35E-4</u>	<u>99.5%</u>	<u>0.067</u>

Notes:

- Control efficiencies were applied consistent with EPA (AP-42) and BAAQMD (Statement of Basis) guidelines: 70% for water sprays, 95% for rock/ aggregate sources per AP-42 11.19, and 99.5% for cement/ clinker sources (NESHAP LLL Sources).