Bay Area Air Quality Management District

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PROPOSED

Permit Evaluation
and
Statement of Basis
for
RENEWAL of

MAJOR FACILITY REVIEW PERMIT

for
Lehigh Southwest Cement Company
Facility #A0017

Facility Address:
24001 Stevens Creek Boulevard
Cupertino, CA 95014

Mailing Address:
24001 Stevens Creek Boulevard
Cupertino, CA 95014

Application Engineers: Thu Bui
Site Engineer: Thu Bui

Application: 28289

August 2018

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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 a regulated air pollutant. It is also a major facility because it has the potential to emit more than 10 tons per year of a hazardous air pollutant (HAP) or more than 25 tons per year of combined HAPs.

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 facility received its initial Title V permit on November 5, 2003 and Title V Permit Renewal on April 17, 2012. Its Title V permit was set to expire on April 17, 2017. Lehigh submitted a timely and complete renewal application at least six months prior to the expiration date; therefore, all terms and conditions of the permit shall remain in effect until the renewal permit has been issued. This application is for a renewal to the Title V permit. The standard sections of the permit have been updated to include new standard language used in all Title V permit renewal. The proposed permit shows all changes to the existing permit in strikeout/underline format.

This Title V Permit Renewal incorporates District Authority to Construct ("ATC") permits that have been issued, as well as provisions from Regulation 9, Rule 13. The content of the ATCs and rule provisions are described below, along with, as appropriate, descriptions of steps Lehigh is taking to implement them. However, these permit conditions and rule provisions are not being altered or augmented in this Title V action. The sole purpose of this renewal to the Title V permit is to incorporate these ATCs and rule provisions accurately and completely.

Changes to this Title V Permit Renewal include:

1. Incorporation of the emission standards and monitoring requirements for the nitrogen oxides, particulate matter and toxic air contaminants from District Regulation 9, Rule 13. This Title V Permit Renewal adds requirement of Regulation 9, Rule 13 to all appropriate source specific tables. Regulation 9-13 established a deadline of September 9, 2013, to meet the new emissions limits summarized below. Regulation 9-13 was amended on October 19, 2016 to establish a limit for ammonia instead of a baseline ammonia plus 10 ppmv, which became effective immediately after the adoption of the amendment.

Pollutant	Existing Kilns	Monitor
Nitrogen Oxides (NOx)	2.3 pounds per ton of clinker produced, averaged over 30 days	Continuous NOx monitor system

		(CEMS)
Mercury (Hg)	55 pounds per million tons of clinker, averaged over 30 days	Continuous mercury monitor system (CEMS)
Total Hydrocarbons (THC)	24 parts per million by volume (ppmv), dry at 7% O_2 averaged over 30 days, or alternatively 12 ppmv, dry at 7% O_2 of total organic HAP	Established HAP and THC relationship every 30 months - THC CEMS
Particulate Matter (PM)	0.04 pounds per ton of clinker via 3 run test average	Annual Testing
Hydrochloric acid (HCl)	3 ppmv, dry at 7% O_2 averaged over 30 days	HCl CEMS or lime injection rate until HCl performance specification is approved by EPA
Dioxins and Furans (D/F)	0.2 ng-TEQ/dscm at 7% O2	Established parametric temperature every 30 months
Ammonia (NH_3)	270 ppmv, dry at 7 % O2 averaged over 182 days	NH_3 CEMs
Opacity	20% for 3 minutes in any one-hour period	Visible Reading
Stack Requirement	Emissions must be monitored through a stack and pass the Air Toxics "Hot Spots" notification	Install 2 new stacks (Kiln and Clinker Coolers)
Pollutant	**Existing Clinker Coolers**	**Monitor**
Particulate Matter (PM)	0.04 pounds per ton of clinker via 3 run test average	Annual Testing
Opacity	20% for 3 minutes in any one-hour period	Visible Reading
Pollutant	**Other Existing Equipment**	**Monitor**
Opacity	10% for 3 minutes in any one-hour period	Visible Reading
Pollutant	**Facility Wide**	**Monitor**
Particulate Matter (PM)	Fugitive Dust Mitigation Control Measures	Fugitive Dust Control Plan

2. Control Technologies

Lehigh installed a Selective Non-Catalytic Reduction (SNCR) system that reduces the actual NOx emissions by approximately 50% in September 2013. The request for this permit modification was submitted via new source review (NSR) Application # 25477. Additional ammonia usage is needed to ensure adequate removal of NOx was permitted under NSR Application # 26350. The ATC for the SNCR system was combined with the ATC issued for original application (# 25477) as an amendment and one Permit to Operate was issued for both the original and subsequent permit application.

For hydrochloric acid emission reduction, Lehigh installed the dry lime injection system in addition to the slurry lime injection system under ATC # 26277. The dry lime performance is the same or better

and easier to handle than the slurry lime injection. ATC #26277 was combined with the original lime injection Application # 21753, which received the Authority to Construct on July 15, 2010 and renewed on August 2, 2012, as an amendment. The Permit to Operate for the dry lime injection NSR Application # 26277 was issued at the same time with the original slurry lime permit NSR Application # 21753. Changes in NSR Application # 21753 were included in previous Title V minor revision permit.

All conditions of Application # 25477, # 26350 and # 26277 are being incorporated into the Title V Permit Renewal through this revision.

3. Fugitive Dust Control Plan and Operating and Maintenance (O&M) Plan
   Lehigh continues to maintain and revise the O&M Plan as it adds new equipment and their controls. The O&M Plan contains procedures for proper operations and maintenance of process and pollution control equipment to minimize emissions during normal operations, startup, shutdown and malfunction events. Lehigh is required to use it as a guideline for preventive maintenances and corrective actions for sources that are subject to NESHAP Subpart LLL requirement. Lehigh has been maintaining the O&M Plan at the Cupertino plant since the implementation of the NESHAP Subpart LLL. The plan will be reviewed every 5 years along with this Title V Permit Renewal. This plan can be accessed by all operators and a copy of it remains in the environmental manager's office at Lehigh. The O&M Plan is incorporated in the Title V Permit Renewal.

4. Regulation 9, Rule 13
   The District adopted Regulation 9, Rule 13 – Nitrogen Oxides, Particulate Matter, and Toxic Air Contaminants from Portland Cement Manufacturing on September 19, 2012, which became effective on September 9, 2013. This Title V Permit Renewal incorporates all new requirements from the Regulation 9, Rule 13. The District has issued ATC # 25447 allowing Lehigh to install SNCR for NOx reduction in order to meet the requirement of 2.3 lbs NOx per ton of clinker produced. ATC # 25447 is also being incorporated into the Title V Permit Renewal as part in this revision.

5. AB2588 Health Risk Assessment Report
   Lehigh revised the health risk assessment (HRA) to demonstrate compliance with Regulation 9, Rule 13 at maximum capacity of 1.6 million tons of clinker per year. All finding are posted online at http://www.baaqmd.gov/research-and-data/special-air-monitoring-projects/special-reports. The revised HRA was based on the new stacks' configurations and on an updated emission data. These data represent toxic air contaminants emitted directly from stationary sources and fugitive emissions, from both permitted and un-permitted sources. Lehigh submitted the stack combination permit under ATC # 26247. The kiln stack is 295 feet high and 15 feet diameter. The clinker cooler stack is 116 feet high and 7 feet diameter. The District received comments on the revised HRA, which was posted on September 8, 2014. The comment period ended on December 22, 2014. The District approved the revised HRA on February 3, 2015.

6. Continuous Air Emission (CEM) Monitors and a Single Kiln Stack at the Facility in February 2015
   The cement kiln at Lehigh was equipped with four volumetric flow meters, one NOx and one SO2 continuous monitor on each train. Lehigh combined existing 34 stacks into one tall, single stack, which has CEMS that measure total hydrocarbon (THC), hydrochloric acid (HCl), ammonia (NH3), NOx, SO2, PM, Opacity, Temperature, flow, CO, CO2, H2O and O2 monitors to demonstrate compliances with Regulation 9-13 and NESHAP Subpart LLL requirements. In addition, Lehigh combined existing 10 clinker cooler's stacks into one tall stack. Lehigh installed PM, opacity, flow and temperature CEMS at the new clinker cooler stack.

Lehigh also installed leak detectors on each of the 44 baghouse compartments that connect to the kiln and clinker cooler stacks. These changes enhanced the dispersion of emissions from the stacks as well as simplify and improve the continuous monitoring systems.

7. This Title V Permit Renewal includes the following applications:

Application incorporated into the Title V permit in this revision (Title V Application #/NSR Application #)	**Description**
24617/24618	S-608 Hopper abated by A-608, Water Suppression System S-609 Primary Crusher abated by A-609 Dust S-610 Conveyor System (BC-1, BC-2, and BC3) abated by A-610, Dust Collectors (2), and A-612, Dust Collectors (3), and A-613, Dust Collectors (4) S-611 Vibrating Screen abated by A-611, Dust Collectors (2) S-612 Secondary Crusher
23620/25447	A-157, Selective Non-Catalytic Reduction, (SNCR) S-158 Ammonia Storage Tank
23620/26247	Stack Modification
23620/26277	A-154, Dry Lime Injection System
23620/26350	S-158, SNCR System (Ammonia Injection)
28289/27465	A-154, Lime Dry/Slurry Injection (SO2 Reduction)
28289/27936	S-618, Storage bin for Lime/Soda Ash/Sodium Bicarbonate, abated by A-618 Dust Collector
28289/28788	S-1000, Final Water Treatment System (exempt)

- Application # 24618 was to replace existing equipment with new equipment:

Existing Source Description	**Existing Abatement Device**	**New Source Description**	**New Abatement Device**
S-601 Hopper	A-4501 Water Spray	S-608 Hopper /Grizzly Feeder	A-608 Water Suppression Spray System
S-201 Primary Crusher	None	S-609 Primary Crusher	A-609 Dust Collector
S-602 Conveyors (BC-1 and BC-2)	Water Spray	S-610 (BC-1, BC-2 and BC-3)	A-610, A-611 and A-612 Dust Collectors
S-603 Vibrating Grizzly	Water Spray	S-611 Vibrating Grizzly	A-610 Dust collector
S-202 Secondary Crusher	None	S-612 Secondary Crusher	A-612 Dust Collector

Lehigh relocated the non-metallic rock crushing facility to another area within its plant boundaries. The new equipment will be approximately 750 feet southeast of the existing area.

- Application # 25447/TV 26320 was to combine 32 existing cement kiln stacks and two existing fuel mill stacks into one. The new cement kiln stack (P-154) will be 295 feet high and 15 feet in diameter, while the existing stacks are at the rooftop, 43 feet high. In addition, Lehigh will combine 10 existing

clinker cooler stacks into one. The new clinker cooler stack will be 116 feet high and 7 feet in diameter, while the existing stacks are at 45 feet high. The purpose of the project is to meet the stack requirements of Regulation 9, Rule 13-303. Per ATC # 25477, the following continuous monitor systems were installed at the two new stack P-158 and P-166.

Continuous Emission Monitor Systems (CEMS) – Kiln Stack (P-154)

Monitor Type	CEM Manufacturer	CEM Model	New or Existing	Details
Mercury, Hg	Tekran	3300	Existing	
HCl, NH3, NO, NO2, SO2, CO, H2O, O2, THC, Temp, Baro P.	SICK	MCS 100	Existing	2 Units will be installed
Hg	M&C	Sorbent Trap Sampler	New	Verification sampler
PM	SICK	Dusthunter SP100	New	Provides PM parametric data
Flow	SICK	Flowsic 100H	New	Ultrasonic measurement
Opacity	SICK	Dusthunter T200	New	Optical Measurement
Temperature	Various	Thermocouple	New	

Continuous Emission Monitor Systems (CEMS) – Clinker Cooler Stack (P-166)

Monitor Type	CEM Manufacturer	CEM Model	New or Existing	Details
PM	SICK	Dusthunter SP100	New	Provides PM parametric data
Flow	SICK	Flowsic 100H	New	Ultrasonic measurement
Opacity	SICK	Dusthunter T200	New	Optical Measurement
Temperature	Various	Thermocouple	New	

In addition, to monitor the operational integrity of the individual dust collectors, Lehigh installed bag leak detectors on each of the 34-kiln individual compartment that will connect to the new Cement Kiln Stack (P-154), and on each of the 10 cooler individual compartments that will connect to the new Clinker Cooler Stack (P-166). A total of 44 bag leak detectors were wired to the main control system, and an alarm will sound off if there is any detected leak. The bag leak detectors are FilterSense Mutichannel Particulate Monitor, Model PM100. These are state-of-the art instruments that had been previously installed in other locations and their performance are proven effective.

- Application # 26277 was to use dry lime in addition to the existing slurry lime injection system. During the startup period and trial study on October 23-26, 2013, Lehigh found the dry lime appears to have the same control efficiency as the slurry lime, between 20 and 30 percent. The dry lime system has fewer moving parts and is easier to operate; thus, it is more dependable. As a result, Lehigh would like to operate the dry lime injection system and retain the slurry lime injection system as a backup. As mentioned above, the change from this NSR application was included in this Title V

permit application and its Permit to Operate were issued along with the original slurry lime injection permit ATC # 21753 in July 2015.

Regulation 9-13 requires Lehigh to monitor HCl, but EPA's Performance Specification 15 for HCl was not adequate for low concentration. EPA is currently proposing Performance Specification 18 and Quality Assurance Procedure 6 for HCl monitor. EPA amended NESHAP Subpart LLL on July 25, 2016 to allow additional one-year period to demonstrate compliance with HCL emission limit using alternate HCl Continuous Parametric Monitoring System by July 25, 2017. In the meantime, the District will accept dry lime injection rate as a surrogate for HCl. This application will not result in any emission increases.

- Application # 26350 allows Lehigh to increase the amount ammonia hydroxide injection from 1,850,000 gallons per year to 2,450,000 gallons per year to ensure adequate removal of NOx. This would increase 600,000 gallons per year of ammonia hydroxide at storage tank S-158, which was exempt for storing aqueous solution containing less than 1% (wt) of organic compound. Trucks deliveries will increase by 100 per year and result in 31.05 lb/yr of PM10 emissions. Since ammonia is not a regulated pollutant and there will not be any health risk increases with the change of operation, the District considered this application as an alteration to the SNCR permit Application # 25447, for which the District issued an ATC on August 19, 2013. In addition, Lehigh has previously discussed with the District about possible ammonia hydroxide's throughput increase if the estimated usage is not adequate for the purpose of NOx reduction before the Authority to Construct of SNCR Application # 25447 was issued.

- Application # 27465 is the alteration that involves an increased lime injection rate and an evaluation of various injection points to optimize reductions in SO2 emitted from the kiln stack. Once the optimal injection point(s) and injection rate(s) for maximum SO2 control have been determined and the effectiveness of the system has been demonstrated, a 30-day rolling average emission limit for SO2 (lb/ton clinker) will be established for the kiln. The alteration may also eventually necessitate the need for a new Lime Storage Bin to augment the existing Lime Storage Bin S-167.

- Application # 27936 is the alteration to S-154 and addition of new Storage Bin S-613 and its Dust Collector A-613 to store lime/soda ash/sodium bicarbonate to reduce SO2 emissions from the cement kiln through enhanced lime/soda ash/sodium bicarbonate injection. In accordance with the "test-and-set" requirements of the possible future Consent Decree, Lehigh applied to expand and optimize the existing lime injection system to control emissions of sulfur dioxide (SO2). The alteration necessitated the need for a new Lime/Soda Ash/Bicarbonate Storage Bin, S-613, to augment the existing Lime Storage Bin S-167.

- Application # 28788 is the new final water treatment system (S-1000), includes bioreactor, biofilter system to remove selenium and metals from quarry water, plant process water and storm water runoff. The treatment system is a unique piece of equipment that deemed by the APCO to be equivalent to a source or operation which is expressly exempted by Sections 2-1-113 through 128. In this case, the equivalent source or operation is "Liquid Storage and Loading Equipment".

  2-1-123 Exemption, Liquid Storage and Loading Equipment: The following equipment is exempt from the requirements of Sections 2-1-301 and 302, provided that the source does not require permitting pursuant to Section 2-1-319.

  123.2 Tanks, vessels and pumping equipment used exclusively for the storage or dispensing of any aqueous solution which contains less than 1 percent (wt) organic compounds.

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 is 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.

Changes to Permit:
The Facility Contact was changed from Sam Barket to Tressa Jackson, Environmental Manager.
The Facility Responsible Officer was changed from Alan Sabawi to Keith Krugh, Plant Manager.

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. If the Title IV (Acid Rain) requirements for certain fossil-fuel fired electrical generating facilities or the accidental release (40 CFR § 68) programs apply, the section will contain a standard condition pertaining to these programs. Many of these conditions are derived from 40 CFR § 70.6, Permit Content, which dictates certain standard conditions that must be placed in the permit. The language that the District has developed for many of these requirements has been adopted into the BAAQMD Manual of Procedures, Volume II, Part 3, Section 4, and therefore must appear in the permit.

The standard conditions also contain references to BAAQMD Regulation 1 and Regulation 2. These are the District's General Provisions and Permitting rules.

Changes to permit:

- Condition I.A – Regulation effective dates were updated.
- Condition I.B.1 – Conditions to Implement Regulation 2, Rule 6, Major Facility Review. The dates of adoption and subsequent renewal application dates have been adjusted for the issuance of the renewal permit.
- Condition I.F – The dates of monitoring reports submittal have been adjusted for the issuance of the renewal permit.
- Condition I.F and J.2 – District address was changed to 375 Beale Street. Suite 600, San Francisco, CA 94105.
- Condition I.G – The dates of certification submittal have been adjusted for the issuance of the renewal permit. In the basis, removed MOP Volume II, Part 3 Section 4.15 because it does not exist.

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.

Following are explanations of the differences in the equipment list between the time that the facility renewed the Title V permit and the current:

Table II-A – Permitted Sources

- S-132 Preblend, description updated to Preblend dome
- S-141 Raw Mill 4-GM-1, description updated to Raw Mill 1 4-GM-1
- S-142 Raw Mill 4-GM-1, description updated to Raw Mill 2 4-GM-2
- S-201 Primary Crusher, deleted, removed from service per NSR Application # 24618
- S-202 Secondary Crusher, deleted, removed from service per NSR Application # 24618
- S-245 6-GM-1 Clay Feeder (6-WF-5 was changed to 6-WF-9)
- S-415 Finish Mill Building Conveyor, deleted, removed from service
- S-503 Portable Compressor Driver, deleted, removed from service
- S-504 Portable Compressor Driver, deleted, removed from service
- S-601 Rock Hopper (9-DH-1), deleted, removed from service per NSR Application # 24618
- S-602 Conveyers, deleted, removed from service per NSR Application # 24618
- S-603 Vibrating Grizzly, deleted, removed from service per NSR Application # 24618
- S-608 Hopper/Grizzly Feeder, added, replaced S-601 per NSR Application # 24618
- S-609 Primary Crusher, added, replaced S-201 per NSR Application # 24618
- S-610 Conveyors, added, replaced S-602 per NSR Application # 24618
- S-611 Vibrating Grizzly, added, replaced S-603 per NSR Application # 24618
- S-612 Secondary Crusher, added, replaced S-202 per NSR Application # 24618
- S-613 Storage Bin for Lime/Soda Ash/Sodium Bicarbonate, added per NSR, Application # 27936

Table II-B – Abatement Devices

- A-10, added Regulation 9-13 applicable requirement, operating parameter and limits, and condition #24621, Part 2. Corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.
- A-13, added Regulation 9-13 applicable requirement, operating parameter and limits, and condition #24621, Part 2. Corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.
- A-58, added Regulation 9-13 applicable requirement, operating parameter and limits, and condition #24621, Part 2. Corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.
- A-100, added Regulation 9-13 applicable requirement, operating parameter and limits
- A-111, added Regulation 9-13 applicable requirement, operating parameter and limits, and condition #24621, Part 2. Corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.
- A-112, added Regulation 9-13 applicable requirement, operating parameter and limits, and condition #24621, Part 2. Corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.
- A-113, added Regulation 9-13 applicable requirement, operating parameter and limits, and condition #24621, Part 2. Corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.
- A-114, added Regulation 9-13 applicable requirement, operating parameter and limits, and condition #24621, Part 2. Corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.

- A-115, added Regulation 9-13 applicable requirement, operating parameter and limits, and condition #24621, Part 2. Corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.
- A-121, added Regulation 9-13 applicable requirement, operating parameter and limits, and Condition #24621, Part 2. Corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.
- A-122, added Regulation 9-13 applicable requirement, operating parameter and limits, and Condition #24621, Part 2. Corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.
- A-123, Regulation 9-13 applicable requirement, operating parameter and limits, and added Condition #24621, Part 2. Corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.
- A-131, added Regulation 9-13 applicable requirement, operating parameter and limits, and Condition #24621, Part 2. Corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.
- A-132, added Regulation 9-13 applicable requirement, operating parameter and limits, and Condition #24621, Part 2. Corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.
- A-133, added Regulation 9-13 applicable requirement, operating parameter and limits, and Condition #24621, Part 2. Corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.
- A-134, added Regulation 9-13 applicable requirement, operating parameter and limits, and Condition #24621, Part 2. Corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.
- A-135, added Regulation 9-13 applicable requirement, operating parameter and limits, and Condition #24621, Part 2. Corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.
- A-141, added Regulation 9-13 applicable requirement, operating parameter and limits, and Condition #2786 Part B. Corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.
- A-142, added Regulation 9-13 applicable requirement, operating parameter and limits, and Condition #2786 Part B. Corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.
- A-143, added Regulation 9-13 applicable requirement, operating parameter and limits, and condition #24621, Part 2. Corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.
- A-144, added Regulation 9-13 applicable requirement, operating parameter and limits, and condition #24621, Part 2. Corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.
- A-151, added Regulation 9-13 applicable requirement, operating parameter and limits, and condition #24621, Part 2. Corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.
- A-152, added Regulation 9-13 applicable requirement, operating parameter and limits, and condition #24621, Part 2. Corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.
- A-153, added Regulation 9-13 applicable requirement, operating parameter and limits, and condition #24621, Part 2. Corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.

- A-154, updated description to list dry lime injection in addition to slurry injection system, added Regulation 9-13 applicable requirement, operating parameter and limits. Added BAAQMD Condition 603, part 12 applicable requirement. Corrected the applicable limit for Regulation 9-13-301.8.
- A-156, added Regulation 9-13 applicable requirement, operating parameter and limits
- A-157, Selective Non-Catalytic Reduction, added per NSR Application #25447
- A-161, added Regulation 9-13 applicable requirement, operating parameter and limits. Corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.
- A-162, added Regulation 9-13 applicable requirement, operating parameter and limits, and condition #24621, Part 2. Corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.
- A-163, added Regulation 9-13 applicable requirement, operating parameter and limits, and condition #24621, Part 2. Corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.
- A-164, added Regulation 9-13 applicable requirement, operating parameter and limits, and condition #24621, Part 2. Corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.
- A-165, added Regulation 9-13 applicable requirement, operating parameter and limits, and condition #24621, Part 2. Corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.
- A-167, added Regulation 9-13 applicable requirement, operating parameter and limits, and Condition # 24626, part 8. Corrected the condition number for BAAQMD 24626, part 1, and corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.
- A-168, added Regulation 9-13 applicable requirement, operating parameter and limits, and Condition # 24899, part 9. Corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.
- A-169, added Regulation 9-13 applicable requirement, operating parameter and limits, and Condition # 24899, part 9. Corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.
- A-171, added Regulation 9-13 applicable requirement, operating parameter and limits. Corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.
- A-172, added Regulation 9-13 applicable requirement, operating parameter and limits. Corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.
- A-190, deleted, removed from service.
- A-210, added Regulation 9-13 applicable requirement, operating parameter and limits, and condition #24621, Part 2. Corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.
- A-211, added Regulation 9-13 applicable requirement, operating parameter and limits, and condition #24621, Part 2. Updated the operating parameter requirements (source test every 5 years) and corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD 6-1-311, and Condition # 24621, Part 2.
- A-216, added Regulation 9-13 applicable requirement, operating parameter and limits, and condition #24621, Part 2. Corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.
- A-217, added Regulation 9-13 applicable requirement, operating parameter and limits, and condition #24621, Part 2. Corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.
- A-218, added Regulation 9-13 applicable requirement, operating parameter and limits, and condition #24621, Part 2. Corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.

- A-220, added Regulation 9-13 applicable requirement, operating parameter and limits, and condition #24621, Part 2. Corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.
- A-221, added Regulation 9-13 applicable requirement, operating parameter and limits, and condition #24621, Part 2. Corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.
- A-222, added Regulation 9-13 applicable requirement, operating parameter and limits, and condition #24621, Part 2. Corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.
- A-230, added Regulation 9-13 applicable requirement, operating parameter and limits, and condition #24621, Part 2. Corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.
- A-231, added Regulation 9-13 applicable requirement, operating parameter and limits, and condition #24621, Part 2. Corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.
- A-240, added Regulation 9-13 applicable requirement, operating parameter and limits, and condition #24621, Part 2. Corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.
- A-242, added Regulation 9-13 applicable requirement, operating parameter and limits, and condition #24621, Part 2. Corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.
- A-243, added Regulation 9-13 applicable requirement, operating parameter and limit, and condition #24621, Part 2. Corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.
- A-244, added Regulation 9-13 applicable requirement, operating parameter and limits, and condition #24621, Part 2. Corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.
- A-245, added Regulation 9-13 applicable requirement, operating parameter and limits, and condition #24621, Part 2. Corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.
- A-300, added Regulation 9-13 applicable requirement, operating parameter and limits
- A-301, added Regulation 9-13 applicable requirement, operating parameter and limits, and condition #24621, Part 2 (Source test every 5 years). Corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.
- A-340, added Regulation 9-13 applicable requirement, operating parameter and limits, and condition #24621, Part 2 (Source test every 5 years). Corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.
- A-341, added Regulation 9-13 applicable requirement, operating parameter and limits, and condition #24621, Part 2 (Source test every 5 years). Corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.
- A-342 added Regulation 9-13 applicable requirement, operating parameter and limits, and condition #24621, Part 2 (Source test every 5 years). Corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.
- A-350, added Regulation 9-13 applicable requirement, operating parameter and limits
- A-360, added Regulation 9-13 applicable requirement, operating parameter and limits
- A-370, added Regulation 9-13 applicable requirement, operating parameter and limits
- A-384 added Regulation 9-13 applicable requirement, operating parameter and limits, and condition #24621, Part 2 (Source test every 5 years). Specified the applicable requirement as CAM for

BAAQMD Condition #24781. Corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.

- A-390 added Regulation 9-13 applicable requirement, operating parameter and limits, and condition #24621, Part 2 (Source test every 5 years). Corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.
- A-413, added Regulation 9-13 applicable requirement, operating parameter and limits, and condition #24621, Part 2. Corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.
- A-415, deleted, removed from service.
- A-420, added Regulation 9-13 applicable requirement, operating parameter and limits, and condition #24621, Part 2. Corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.
- A-421, added Regulation 9-13 applicable requirement, operating parameter and limits, and condition #24621, Part 2. Corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.
- A-422, added Regulation 9-13 applicable requirement, operating parameter and limits, and condition #24621, Part 2. Corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.
- A-423, added Regulation 9-13 applicable requirement, operating parameter and limits, and condition #24621, Part 2. Corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.
- A-424, added Regulation 9-13 applicable requirement, operating parameter and limits, and condition #24621, Part 2. Corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.
- A-425, added Regulation 9-13 applicable requirement, operating parameter and limits, and condition #24621, Part 2. Corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.
- A-426, added Regulation 9-13 applicable requirement, operating parameter and limits, and condition #24621, Part 2. Corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.
- A-427, added Regulation 9-13 applicable requirement, operating parameter and limits, and condition #24621, Part 2. Corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.
- A-428, added Regulation 9-13 applicable requirement, operating parameter and limits, and condition #24621, Part 2. Corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.
- A-429, added Regulation 9-13 applicable requirement, operating parameter and limits, and condition #24621, Part 2. Corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.
- A-430, added Regulation 9-13 applicable requirement, operating parameter and limits, and condition #24621, Part 2. Corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.
- A-431, added Regulation 9-13 applicable requirement, operating parameter and limits, and condition #24621, Part 2. Corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.
- A-433, added Regulation 9-13 applicable requirement, operating parameter and limits, and condition #24621, Part 2. Corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.

- A-434, added Regulation 9-13 applicable requirement, operating parameter and limits, and condition #24621, Part 2. Corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.
- A-435, added Regulation 9-13 applicable requirement, operating parameter and limits, and condition #24621, Part 2. Corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.
- A-436, added Regulation 9-13 applicable requirement, operating parameter and limits, and condition #24621, Part 2. Corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.
- A-444, added Regulation 9-13 applicable requirement, operating parameter and limits
- A-447, added Regulation 9-13 applicable requirement, operating parameter and limits, and condition #24621, Part 2. Corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.
- A-448, added Regulation 9-13 applicable requirement, operating parameter and limits, and condition #24621, Part 2. Corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.
- A-449, added Regulation 9-13 applicable requirement, operating parameter and limits, and condition #24621, Part 2. Corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.
- A-450, added Regulation 9-13 applicable requirement, operating parameter and limits, and condition #24621, Part 2. Corrected the unit of the process weight from ton/hr to lb/hr per BAAQMD Regulation 6-1-311.
- A-608 Water Suppression System, added per NSR Application #24618
- A-609 Dust Collector, added per NSR Application #24618
- A-610 Dust Collector, added per NSR Application # 24618
- A-612, Dust Collector, added per NSR Application # 24618
- A-4501 Water Spray, deleted per NSR Application # 24618
- A-613, Dust Collector, added per NSR Application # 27936

Table II-C – Exempt Sources

- Spelling correction to "regulation" in throughput column
- S-158 Ammonia Hydroxide Tank, added per NSR Application # 25447
- S-1000 Final Water Treatment System, added per NSR Application #28788
- Laboratories – Hoods and Testing Equipment, corrected regulation citation to 2-1-113.2.12.

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:

The dates of adoption or approval of the rules in Table III have also been updated:

- BAAQMD Regulation 1
- BAAQMD Regulation 2, Rule 1
- SIP Regulation 2, Rule 1
- Deleted BAAQMD and SIP Regulation 2-1-429, repetitive to Regulation 2, Rule 1
- Added missing BAAQMD Regulation 2, Rule 4
- BAAQMD Regulation 2, Rule 5
- Added missing BAAQMD Regulation 2, Rule 6
- Added missing BAAQMD Regulation 3
- BAAQMD Regulation 5
- BAAQMD Regulation 8, Rule 3
- Added BAAQMD Regulation 11, Rule 18
- CCR, Title 17, Section 93115
- CCR, Title 17, Section 93116
- Subpart F, 40 CFR 82.156 corrected to Subpart F, 40 CFR 82.157

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.

This section also contains the applicable limits and compliance monitoring requirements section. It 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 District has reviewed all monitoring and has determined the existing monitoring is adequate.

Complex applicability determinations in this Title V Permit Renewal

The determinations and conditional changes described below were reviewed and approved under ATC # 26247. The sole purpose of this Title V revision is to incorporate these permit conditions accurately and completely.

In addition to the monitor requirements (Opacity and PM) of NESHAP Subpart LLL, the District Regulation 9-13-501.2 requires Lehigh to demonstrate continuous compliance with the operational integrity of the PM control device. To comply, Lehigh chose to install 34 bag leak detectors on each of the 34 kiln individual compartment that connect to the new Cement Kiln Stack (P-154), and on each of the 10 cooler individual compartments that connect to the new Clinker Cooler Stack (P-166). Each of the bag leak detector will be wired to the main control system with an alarm. These bag leak detectors are state-of-art instruments that had been previously installed in other locations and their performance are proven effective. The Compliance Assurance Monitoring (CAM) Permit Condition # 23781 was revised to add maintenance, service, cause analysis and prevention requirements for the new bag leak detectors.

THC and HAP Correlation

Regulation 9-13 requires Lehigh to develop a correlation to monitor total hydrocarbon (THC) and total organic hazardous air pollutants (HAP). This correlation is developed by taking actual HAP source tests and compared them to the THC data from CEM. According to NESHAP Subpart LLL guideline, the site-specific operational limit should be calculated in accordance with §63.1349(b)(4) or §63.1349b)(7). THC and HAP should be re-established at least once every 30 months by source testing.

Dioxins/Furans (D/F) and Temperature

Regulation 9-13 requires Lehigh to monitor D/F by using temperature as its surrogate. The temperature of the kiln exhaust gas at the inlet to the PM control device established through a source test is used to demonstrate compliance with D/F concentration below 0.02 ng-TEQ/dscm. In accordance with NESHAP Subpart LLL, this temperature will be reset at least once every 30 months.

Dry/slurry Lime Injection and HCl Correlation

Regulation 9-13 requires Lehigh to monitor HCl, but EPA has not adopted the Performance Specification for HCl. EPA is currently proposing Performance Specification 18 for HCl monitor. While the Performance Specification is being finalized, the District will accept dry lime injection rate as a surrogate for HCl. Lehigh conducted trial tests from October 23 to 26, 2013 for slurry and dry lime injections. See attached Lehigh's trial conducted on October 23 through 26, 2013 under application # 26247. The HCl emissions will be less than 3 ppmd @7% O_2 per in-house study performed by Lehigh.

Ammonia Baseline and Ammonia Slip

The purpose of the ammonia emission limit in Section 9-13-301.4 is to minimize the ammonia slip from any ammonia-based NOx control equipment.

After a long period of evaluating Lehigh's ammonia operation, the District amended Regulation 9, Rule 13 to set the ammonia limit at 270 ppmv at 7% oxygen on a 182-day rolling average. Regulation 9, Rule 13 was amended in October 2016. In this title V renewal, the District revised Condition 11780, Part C4 to 270 ppmv of ammonia at 7% oxygen, dry, on a 182-day rolling average to be consistent with the revised Regulation 9-13.

Sulfur Dioxide (SO_2) Emission Reduction

As part of an anticipated Consent Decree currently being negotiated with Lehigh over past violations of the Clean Air Act, US EPA intends to impose a "Test-and-Set" protocol on Lehigh to reduce SO_2 emissions from the cement kiln through enhanced lime injection. The protocol calls for Lehigh to design and optimize the kiln lime injection system to substantially reduce SO_2 emissions from current levels.

Lehigh requested to add Soda Ash and Sodium Bicarbonate as potential injectable materials to control SO_2. Emission limit for SO_2 will be set after Lehigh establishes test procedures and determines optimal control level according to EPA requirements.

Condition #603, Parts 11,21 and 22

The proposed Title V Renewal shows emission limits in Condition #603, Parts 11, 21, and 22, setting for site-specific operating limits (SSOLs) to assure compliance with 40 CFR Part 63, Subpart LLL and with District Rule 9-13. District Rule 9-13 contains provisions that parallel those in Subpart LLL as it relates to this issue. These provisions of Rule 9-13 were adopted in anticipation of the federal NESHAP becoming final. The District is considering the factors discussed below in evaluating whether to remove the SSOLs in Condition #603 from the Title V renewal when it is finalized.

The SSOLs in Condition #603 were established pursuant to Section 63.1349(b)(7)(vii), which provides for the setting of emission limits based on tests conducted every 30 months. The limits in Condition #603 are soon to be superseded by limits established through a more recent test also conducted in accordance with that provision. Lehigh has submitted an application to remove the older limits from Condition #603. The District agrees that these older limits will need to be revised when superseded, but is still evaluating whether or how to incorporate the newer emission limits into the Title V permit. Lehigh contends that the intent of Subpart LLL is for these limits to exist only in the Operation and Maintenance Plan required by 40 CFR 63.1347. At the time of proposal of this Title V renewal, the District is still evaluating whether this is an acceptable interpretation of EPA regulations or whether instead the emission limits established pursuant to the procedure in Section 63.1349(b)(7)(vii) need to be in the Title V permit itself. The District is in communication with EPA to determine EPA's intent in adopting LLL and EPA's practice in reviewing other Title V permits. Because Rule 9-13 contains parallel provisions, the District is not necessarily bound to follow EPA's policy in this regard, but intends to be consistent with EPA if doing so will sufficiently ensure the enforceability and transparency of SSOLs. The District will make a determination when it finalizes the renewal after considering any comments received.

Changes to permit:

- Change title "Table IV and VII" to "Table IV"

Table IV – Facility Wide

- BAAQMD Regulation 1, updated to reflect date of adoption or approval
- BAAQMD Regulation 11, Rule 18, added
- BAAQMD Condition 24621, Part 1, corrected the unit of the process weight from ton/hr to lb/hr
- BAAQMD Condition 24621, Part 2, corrected the unit of the process weight from ton/hr to lb/hr
- NESHAP 40 CFR 63.1343(c), updated to reflect the latest version
- NESHAP 40 CFR 63.1343(d) removed to reflect latest version
- Regulation 9-13-302, added 10% Opacity
- Regulation 9-13-304, added Fugitive Dust Mitigation Control Measures
- NESHAP 40 CFR 63.1351(a), (b), (c), (d) and (e), added applicable requirements and limits

Table IV – A, S-1 Gasoline Dispensing Facility

- BAAQMD Regulation 8-7-301.11 applicable requirements added
- BAAQMD Condition #24297 Part 7h, corrected to BAAQMD Condition #24297 Part 7f
- BAAQMD Condition #24298 Part 5, specified source test 48-hour advance notification requirements

Table IV – B, S-17 Clinker Transfer Area

- BAAQMD Regulation 6-1-301, added applicable requirements, limits and the visual inspection monitoring and reporting requirement

- BAAQMD Regulation 6-1-311, corrected the unit of process weight from ton/hr to lb/hr
- SIP Regulation 6-1-301, added applicable requirements, limits and the visual inspection monitoring and reporting requirement
- SIP Regulation 6-311, corrected the unit of process weight from ton/hr to lb/hr
- BAAQMD Regulation 9-13, added new Regulation
- NESHAP 40 CFR 63, Subpart A, added 63.13,14 and 15
- NESHAP 40 CFR 63, Subpart LLL, updated to reflect the latest version (7/27/15)
- NESHAP 40 CFR 63.1351(a)(1), deleted, since this is included in the facility-wide table

Table IV – C, S-19 Clinker Storage Area

- BAAQMD Regulation 6-1-311, corrected the unit of process weight from ton/hr to lb/hr
- SIP Regulation 6-311, corrected the unit of process weight from ton/hr to lb/hr
- BAAQMD Regulation 9-13, added new Regulation
- NESHAP 40 CFR 63, Subpart A, added 63.13,14 and 15
- NESHAP 40 CFR 63, Subpart LLL, updated to reflect the latest version (7/27/15)
- NESHAP 40 CFR 63.1351(a)(1), deleted, since this is included in the facility-wide table
- BAAQMD Regulation #24621 Part 2, corrected the unit of process weight from ton/hr to lb/hr

Table IV – D, S-21 Roll Press Clinker Surge Bin and Feeder

- BAAQMD Regulation 6-1-311, corrected the unit of process weight from ton/hr to lb/hr
- SIP Regulation 6-311, corrected the unit of process weight from ton/hr to lb/hr
- BAAQMD Regulation 9-13, added new Regulation
- NESHAP 40 CFR 63, Subpart LLL, updated to reflect the latest version (7/27/15)
- NESHAP 40 CFR 63.1351(a)(1), deleted, since this is included in the facility-wide table
- BAAQMD Regulation #24621 Part 2, corrected the unit of process weight from ton/hr to lb/hr

Table IV – E, S-45, S-46 and S-47 Cement Silos

- BAAQMD Regulation 6-1-311, corrected the unit of process weight from ton/hr to lb/hr
- SIP Regulation 6-311, corrected the unit of process weight from ton/hr to lb/hr
- BAAQMD Regulation 9-13, added new Regulation
- NESHAP 40 CFR 63, Subpart LLL, updated to reflect the latest version (7/27/15)
- NESHAP 40 CFR 63.1351(a)(1), deleted, since this is included in the facility-wide table

Table IV – F, S-48, S-49, S-50, S—54 and S-55 Cement Loadout Tanks and Packers

- BAAQMD Regulation 6-1-311, corrected the unit of process weight from ton/hr to lb/hr
- SIP Regulation 6-311, corrected the unit of process weight from ton/hr to lb/hr
- BAAQMD Regulation 9-13, added new Regulation
- NESHAP 40 CFR 63, Subpart LLL, updated to reflect the latest version (7/27/15)
- NESHAP 40 CFR 63.1351(a)(1), deleted, since this is included in the facility-wide table
- BAAQMD Regulation #24621 Part 2, corrected the unit of process weight from ton/hr to lb/hr

Table IV – G, S-74 Type II Mechanical Transfer System

- BAAQMD Regulation 6-1-311, corrected the unit of process weight from ton/hr to lb/hr
- SIP Regulation 6-311, corrected the unit of process weight from ton/hr to lb/hr
- BAAQMD Regulation 9-13, added new Regulation
- NESHAP 40 CFR 63, Subpart LLL, updated to reflect the latest version (7/27/15)
- NESHAP 40 CFR 63.1351(a)(1), deleted, since this is included in the facility-wide table
- BAAQMD Regulation #24621 Part 2, corrected the unit of process weight from ton/hr to lb/hr

Table IV – H, S-100 Precalciner Kiln Fuel Handling System

- BAAQMD Regulation 9-13, added new Regulation
- NESHAP 40 CFR 60, Subpart Y, correction and updated for source operate after April 28, 2008

Table IV – I, S-111, S-112, S-113 and S-115 Rail Unloading system, Hopper, Bin, and Additive Storage

- BAAQMD Regulation 6-1-311, corrected the unit of process weight from ton/hr to lb/hr
- SIP Regulation 6-311, corrected the unit of process weight from ton/hr to lb/hr
- BAAQMD Regulation 9-13, added new Regulation
- Combined Table IV-UU into Table IV-I to add Regulation 11, Rule 1 for lead requirement
- NESHAP 40 CFR 60, Subpart Y, correction and updated for source operate before April 28, 2008
- Revised Condition #2786 per A/N 26247
- BAAQMD Regulation #24621 Part 2, corrected the unit of process weight from ton/hr to lb/hr.

Table IV – J, S-121 and S-122 Screen and Tertiary Crusher

- Renumbered table
- BAAQMD Regulation 6-1-311, corrected the unit of process weight from ton/hr to lb/hr
- SIP Regulation 6-311, corrected the unit of process weight from ton/hr to lb/hr
- BAAQMD Regulation 9-13, added new Regulation
- NSPS 40 CFR 60, Subpart A, missing added
- NESHAP 40 CFR 60, Subpart OOO, correction and updated for source operate before April 22, 2008
- Removed Condition #2786, Part D, redundant per A/N 26247

Table IV – K, S-123, S-131, S-132, S-134 and S-135 Rock Conveying System, Sampling, Preblend Dome and Storage Bins

- S-123, S-131, S-132 were moved to new Table IV-K
- S-134 and S-135 were moved to Table IV-L

Table IV – K, S-123, S-131, and S-132 Rock Conveying System, Sampling, and Preblend Dome

- Table IV – J-1, added, S-123, S-131 and S-132 were split from Table IV-J
- Update to source description for S-132 to reflect Preblend Dome consistent with Table II-A updates
- BAAQMD Regulation 6-1-311, corrected the unit of process weight from ton/hr to lb/hr
- SIP Regulation 6-311, corrected the unit of process weight from ton/hr to lb/hr
- BAAQMD Regulation 9-13, added new Regulation
- BAAQMD Regulation 10, added applicable requirements.
- NSPS 40 CFR 60, Subpart A, added applicable requirements.
- NSPS 40 CFR 60 Subpart OOO, added applicable requirements
- Removed Condition #2786, Part D, redundant per A/N 26247
- BAAQMD Regulation #24621 Part 2, corrected the unit of process weight from ton/hr to lb/hr

Table IV – L S-134 and S-135 Storage Bins

- Table IV – L, added, S-134 and S-135 were split from Table IV-J
- BAAQMD Regulation 6-1-311, corrected the unit of process weight from ton/hr to lb/hr
- SIP Regulation 6-311, corrected the unit of process weight from ton/hr to lb/hr
- BAAQMD Regulation 9-13, added new Regulation
- NESHAP 40 CFR 63, Subpart A, added applicable requirements.
- NESHAP 40 CFR 63, Subpart LLL, added applicable requirements.
- Removed Condition #2786, Part D, redundant per A/N 26247

- BAAQMD Regulation #24621 Part 2, corrected the unit of process weight from ton/hr to lb/hr

Table IV - Combine S-141 and S-142, Raw Mills, S-143 and S-144, Raw Mill Separators, S-171 and S-172, Kiln and Precalciner Fuel Mill System into S-154 Calcining Kiln Table IV-N

- Given that the Cupertino facility has an inline fuel mill and raw mill system, emissions of which exhaust from the kiln stack, these sources were combined in to one source specific applicable requirement table.

Table IV – M, S-151 and S-153, Homogenizer and Kiln Feed System

- Regulation 6-1-301, deleted because of duplication
- BAAQMD Regulation 6-1-311, corrected the unit of process weight from ton/hr to lb/hr
- SIP Regulation 6-311, corrected the unit of process weight from ton/hr to lb/hr
- BAAQMD Regulation 9-13, added new Regulation
- NESHAP 40 CFR 63, Subpart LLL, updated to reflect the latest version (7/27/15)
- NESHAP 40 CFR 63.1351, deleted, since this is included in the facility-wide table
- Revised Condition #2786 per A/N 26247
- BAAQMD Regulation #24621 Part 2, corrected the unit of process weight from ton/hr to lb/hr

Table IV – N, S-141 and S-142, Raw Mills, S-143 and S-144, Raw Mill Separators, S-171 and S-172, Kiln and Precalciner Fuel Mill System and S-154 Precalciner Kiln

- Given that the Cupertino facility has an inline fuel mill and raw mill system, emissions of which exhaust from the kiln stack, these sources were combined in to one source specific applicable requirement table.
- Updated to description for A-154 to list Lime Dry/Slurry Injection System consistent with Table II-B updates
- Removed all past due dates “effective 9/9/2016”. PM monitor is currently required by Regulation 9-13
- BAAQMD Regulation 6-1-301 monitoring and frequency was changed from pressure drop monitor to filter bag leak detector, and from weekly to continuous frequency
- BAAQMD Regulation 6-1-301, replaced visual inspection with opacity monitor, and daily with continuous frequency
- BAAQMD Regulation 6-1-310 monitoring and frequency was changed from pressure drop monitor to filter bag leak detector, and from weekly to continuous frequency
- SIP Regulation 6-1-301 monitoring and frequency was changed from pressure drop monitor to filter bag leak detector, and from weekly to continuous frequency
- SIP Regulation 6-1-310 monitoring and frequency was changed from pressure drop monitor to filter bag leak detector, and from weekly to continuous frequency
- BAAQMD Regulation 6-1-311, corrected the unit of process weight from ton/hr to lb/hr
- SIP Regulation 6-311, corrected the unit of process weight from ton/hr to lb/hr
- BAAQMD Regulation 9-1-304, corrected monitoring citation number
- BAAQMD Regulation 9-13 was added per A/N 26247
- NESHAP 40 CFR 63, Subpart LLL, updated to reflect the latest version (7/27/15)
- NESHAP 40 CFR 63.1351, deleted, since this is included in the facility-wide table
- NSPS, 40 CFR Part 60, Appendix B Performance Specification 18 was added as an alternative method for HCl CEMs in combination with Quality Assurance Procedure 6
- NSPS, 40 CFR Part 60, Appendix F Procedure 6 was added as an alternative method for HCl CEMs in combination with Performance Specification 18
- Revised Condition #603 per A/N 26247

- BAAQMD Condition #603, Part 11, updated the description of requirement to "Lime Dry/Slurry Injection System".
- Revised Condition #2786 per A/N 26247
- Revised Condition #11780 per A/N 26247
- Revised Condition #24781 per A/N 26247

Table IV – O, S-161, Clinker Cooler

- BAAQMD Regulation 6-1-311, corrected the unit of process weight from ton/hr to lb/hr
- SIP Regulation 6-311, corrected the unit of process weight from ton/hr to lb/hr
- BAAQMD Regulation 9-13, added new Regulation
- NESHAP 40 CFR 63, Subpart LLL, updated to reflect the latest version (7/27/15)
- NESHAP 40 CFR 63.1351, deleted, since this is included in the facility-wide table
- Revised Condition #603 per A/N 26247
- Revised Condition #2786 per A/N 26247
- Revised Condition #24781 per A/N 26247

Table IV – P, S-162 Through S-165, Clinker Silos, Storage Bin and Transfer System

- Removed abatement device number A-190 associated with S-165 consistent with Table II-B updates
- BAAQMD Regulation 6-1-311, corrected the unit of process weight from ton/hr to lb/hr
- SIP Regulation 6-311, corrected the unit of process weight from ton/hr to lb/hr
- BAAQMD Regulation 9-13, added new Regulation
- NESHAP 40 CFR 63, Subpart LLL, updated to reflect the latest version (7/27/15)
- Revised Condition #2786 per A/N 26247
- NESHAP 40 CFR 63.1351, deleted, since this is included in the facility-wide table
- BAAQMD Regulation #24621 Part 2, corrected the unit of process weight from ton/hr to lb/hr

Table IV – Q, S-167, Lime Bin and S-613 Lime/Soda Ash/Sodium Bicarbonate Bin

- Renumbered table
- BAAQMD Regulation 6-1-311, corrected the unit of process weight from ton/hr to lb/hr
- SIP Regulation 6-311, corrected the unit of process weight from ton/hr to lb/hr
- BAAQMD Regulation 9-13, added new Regulation
- BAAQMD Regulation 10 Part 66, removed since the sources on this table are not subject to NSPS OOO and are subject to NESHAP 40 CFR 63, Subpart LLL
- Added S-613 and A-613 to the table per A/N 27936
- NESHAP 40 CFR 63, Subpart A, added regulation and applicable requirements.
- NESHAP 40 CFR 63 Subpart LLL, added regulation and applicable requirements
- NSPS 40 CFR 60, Subpart A, removed because units are not subject to Subpart OOO
- BAAQMD Condition #24626 Parts 3 and 5, corrected the monitoring citation
- Condition #24626 Part 4, removed because the lime throughput increase potentially mandated by Consent Decree with US EPA to reduce S02 per A/N 27936
- Condition # 24626 Part 5, add Soda Ash/Sodium Bicarbonate trucks per A/N 27936
- BAAQMD Condition #16109 Part 5, add powdered activated carbon in limit citation, corrected motoring citation to #16109

Table IV – R, S-168 and S-169, Activated Carbon Storage Silo and Storage Bin

- Renumbered table
- BAAQMD Regulation 6-1-311, corrected the unit of process weight from ton/hr to lb/hr
- SIP Regulation 6-311, corrected the unit of process weight from ton/hr to lb/hr

- BAAQMD Regulation 9-13, added new Regulation
- NESHAP 40 CFR 63, Subpart A, added regulation and applicable requirements
- NESHAP 40 CFR 63, Subpart LLL, added regulation and applicable requirements
- NSPS 40 CFR 60, Subpart OOO, removed because the units are not subject to Subpart OOO
- BAAQMD Condition #16109 Part 5, corrected motoring citation to #16109
- Condition # 24626 Part 5, add Soda Ash/Sodium Bicarbonate trucks per A/N 27936
- BAAQMD Condition #24899, Part 4, corrected throughput rate limit and monitoring citation
- BAAQMD Condition #24899, Part 5, corrected monitoring citation.

Table IV – S, S-176, Rock Plant 1 Storage Pile

- BAAQMD Regulation 9-13, added new Regulation

Table IV – T S-187, Hopper and Storage Bin

- BAAQMD Regulation 6-1-311, corrected the unit of process weight from ton/hr to lb/hr
- SIP Regulation 6-311, corrected the unit of process weight from ton/hr to lb/hr
- BAAQMD Regulation 9-13, added new Regulation

Table IV-U, S-609 Primary Crusher and S-612 Secondary Crusher

- S-201 and S-202 were replaced by S-609 and S-612, respectively
- BAAQMD Regulation 9-13, added new Regulation
- BAAQMD Condition #805 was deleted per NSR Application #24618
- BAAQMD Condition #24621, Part 2 was added per NSR Application #24618
- BAAQMD Condition #25380 was added per NSR Application #24618
- BAAQMD Regulation 10, Parts 1 and Part 66, added regulations
- NSPS 40 CFR 60 Subpart A, added regulation and applicable requirements
- NSPS 40 CFR 60 Subpart OOO, added regulation and applicable requirements

Table IV – V, S-210, Finish Mill

- BAAQMD Regulation 6-1-311, corrected the unit of process weight from ton/hr to lb/hr
- SIP Regulation 6-311, corrected the unit of process weight from ton/hr to lb/hr
- BAAQMD Regulation 9-13, added new Regulation
- NESHAP 40 CFR 63, Subpart LLL, updated to reflect the latest version
- NESHAP 40 CFR 63.1351, deleted, since this is included in the facility-wide table
- BAAQMD Condition #779, Part 7, spelling correction for the description of the requirement

Table IV – W, S-211, Separator

- BAAQMD Regulation 6-1-311, corrected the unit of process weight from ton/hr to lb/hr
- SIP Regulation 6-311, corrected the unit of process weight from ton/hr to lb/hr
- BAAQMD Regulation 9-13, added new Regulation
- NESHAP 40 CFR 63, Subpart LLL, updated to reflect the latest version
- NESHAP 40 CFR 63.1351, deleted, since this is included in the facility-wide table
- BAAQMD Condition #1545, Part 6, added broken bag leak detection limit based on permit condition
- BAAQMD Condition #24621, corrected formatting
- BAAQMD Regulation #24621 Part 2, corrected the unit of process weight from ton/hr to lb/hr

Table IV – X, S-216, S-217, S-221, S-223, S-231 and S-242, Clinker Cake Conveyor, Feeder and Bin

- BAAQMD Regulation 6-1-311, corrected the unit of process weight from ton/hr to lb/hr

- SIP Regulation 6-311, corrected the unit of process weight from ton/hr to lb/hr
- BAAQMD Regulation 9-13, added new Regulation
- NESHAP 40 CFR 63, Subpart LLL, updated to reflect the latest version
- NESHAP 40 CFR 63.1351, deleted, since this is included in the facility-wide table
- BAAQMD Regulation #24621 Part 2, corrected the unit of process weight from ton/hr to lb/hr

Table IV – Y, S-218, Separator

- BAAQMD Regulation 6-1-311, corrected the unit of process weight from ton/hr to lb/hr
- SIP Regulation 6-311, corrected the unit of process weight from ton/hr to lb/hr
- BAAQMD Regulation 9-13, added new Regulation
- NESHAP 40 CFR 63, Subpart LLL, updated to reflect the latest version
- NESHAP 40 CFR 63.1351, deleted, since this is included in the facility-wide table
- BAAQMD Condition #4997, Part 7 removed hour of operation listed as the limit since this does not reflect the records required by this condition
- BAAQMD Regulation #24621 Part 2, corrected the unit of process weight from ton/hr to lb/hr

Table IV – Z, S-220, Finish Mill

- BAAQMD Regulation 6-1-311, corrected the unit of process weight from ton/hr to lb/hr
- SIP Regulation 6-311, corrected the unit of process weight from ton/hr to lb/hr
- BAAQMD Regulation 9-13, added new Regulation
- NESHAP 40 CFR 63, Subpart LLL, updated to reflect the latest version.
- BAAQMD Condition #4997, Part 7 removed hour of operation limit
- BAAQMD Regulation #24621 Part 2, corrected the unit of process weight from ton/hr to lb/hr

Table IV – AA, S-222, S-223, S-243, S-244, S-245 and S-246, Gypsum, Pozzolan, and Clay Feeders

- Updated S-245 equipment description to 6-GM-1 Clay Feeder (6-WF-9) consistent with updates in Table II-A
- BAAQMD Regulation 6-1-311, corrected the unit of process weight from ton/hr to lb/hr
- SIP Regulation 6-311, corrected the unit of process weight from ton/hr to lb/hr
- BAAQMD Regulation 9-13, added new Regulation
- BAAQMD Regulation 10, Parts 1 and 66, removed since NSPS OOO does not apply to these sources
- NSPS 40 CFR 60, Subpart A and Subpart OOO, removed.
- NESHAP 40 CFR 63, Subpart LLL, updated to reflect the latest version
- BAAQMD Regulation #24621 Part 2, corrected the unit of process weight from ton/hr to lb/hr

Table IV –BB, S-230, Hydraulic Roller Press

- BAAQMD Regulation 6-1-311, corrected the unit of process weight from ton/hr to lb/hr
- SIP Regulation 6-311, corrected the unit of process weight from ton/hr to lb/hr
- BAAQMD Regulation 9-13, added new Regulation
- NESHAP 40 CFR 63, Subpart LLL, updated to reflect the latest version
- NESHAP 40 CFR 63.1351, deleted, since this is included in the facility-wide table
- BAAQMD Regulation #24621 Part 2, corrected the unit of process weight from ton/hr to lb/hr

Table IV – CC, S-300, Rockplant Wet Aggregate Storage Piles

- BAAQMD Regulation 9-13, added new Regulation

Table IV – DD, S-301, Rail Loadout System

- BAAQMD Regulation 6-1-311, corrected the unit of process weight from ton/hr to lb/hr

- SIP Regulation 6-311, corrected the unit of process weight from ton/hr to lb/hr
- BAAQMD Regulation 9-13, added new Regulation
- NESHAP 40 CFR 63, Subpart LLL, updated to reflect the latest version
- NESHAP 40 CFR 63.1351, deleted, since this is included in the facility-wide table
- BAAQMD Regulation #24621 Part 2, corrected the unit of process weight from ton/hr to lb/hr

Table IV – EE, S-340, S-341, S-343 Rock Conveyors and Screen

- BAAQMD Regulation 6-1-311, corrected the unit of process weight from ton/hr to lb/hr
- SIP Regulation 6-311, corrected the unit of process weight from ton/hr to lb/hr
- BAAQMD Regulation 9-13, added new Regulation
- BAAQMD Regulation #24621 Part 2, corrected the unit of process weight from ton/hr to lb/hr

Table IV – FF, S-390, Conveyor

- Renumbered table
- BAAQMD Regulation 6-1-311, corrected the unit of process weight from ton/hr to lb/hr
- SIP Regulation 6-311, corrected the unit of process weight from ton/hr to lb/hr
- BAAQMD Regulation 9-13, added new Regulation
- BAAQMD Regulation #24621 Part 2, corrected the unit of process weight from ton/hr to lb/hr

Table IV – GG, S-342, Rock Crushers

- Renumbered table
- BAAQMD Regulation 6-1-311, corrected the unit of process weight from ton/hr to lb/hr
- SIP Regulation 6-311, corrected the unit of process weight from ton/hr to lb/hr
- BAAQMD Regulation 9-13, added new Regulation
- BAAQMD Regulation #24621 Part 2, corrected the unit of process weight from ton/hr to lb/hr

Table IV – HH, S-344, Rockplant Wet Screen Feed Conveyor

- Renumbered table
- BAAQMD Regulation 9-13, added new Regulation

Table IV – II, S-350, Rockplant Wet Screen Feed Conveyor

- Renumbered table
- BAAQMD Regulation 9-13, added new Regulation

Table IV – JJ, S-360, Rockplant Wet Aggregate Loadout System

- Renumbered table
- BAAQMD Regulation 9-13, added new Regulation

Table IV – KK, S-380, S-381, S-382, Sand Transfer Hopper, Storage Pile and Water Clarifier System

- Renumbered table
- BAAQMD Regulation 9-13, added new Regulation

Table IV – LL, S-370, Aggregate Additive Transfer System

- Renumbered table
- BAAQMD Regulation 9-13, added new Regulation

Table IV –MM, S-383 and S-384, Rock Plant 2 conveyors and Screens

- Renumbered table

- BAAQMD Regulation 9-13, added new Regulation

Table IV – NN, S-412, Finish Mill

- Renumbered table
- BAAQMD Regulation 6-1-311, corrected the unit of process weight from ton/hr to lb/hr
- SIP Regulation 6-311, corrected the unit of process weight from ton/hr to lb/hr
- BAAQMD Regulation 9-13, added new Regulation
- NESHAP 40 CFR 63, Subpart LLL, updated to reflect the latest version
- NESHAP 40 CFR 63.1351, deleted, since this is included in the facility-wide table
- BAAQMD Regulation #24621 Part 2, corrected the unit of process weight from ton/hr to lb/hr

Table IV –OO, S-414, Kiln Dust Additive Bin

- Renumbered table
- BAAQMD Regulation 6-1-311, corrected the unit of process weight from ton/hr to lb/hr
- SIP Regulation 6-311, corrected the unit of process weight from ton/hr to lb/hr
- BAAQMD Regulation 9-13, added new Regulation
- NESHAP 40 CFR 63, Subpart LLL, updated to reflect the latest version
- BAAQMD Condition #13982, Part 1, added visible particulates limit
- BAAQMD Condition #13982, Part 7, removed reporting frequency
- BAAQMD Condition #13982, Part 9, added reporting frequency

Table IV –NN, S-415, Finish Mill Building Conyevor

- Deleted Table IV – NN since this source is no longer in service

Table IV – PP, S-444, Emergency Clinker Conveyor

- Renumbered table
- BAAQMD Regulation 9-13, added new Regulation
- NESHAP 40 CFR 63, Subpart LLL, updated to reflect the latest version
- NESHAP 40 CFR 63.1351, deleted, since this is included in the facility-wide table

Table IV – QQ, S-501 and S-502, Emergency Diesel Generator

- Renumbered table
- BAAQMD Regulation 6-1-311, corrected the unit of process weight from ton/hr to lb/hr
- SIP Regulation 6-311, corrected the unit of process weight from ton/hr to lb/hr
- Per §63.6590(b)(3)(iii), stationary RICE does not have to meet the requirements of this subpart and of subpart A of this part, including initial notification requirements: Existing emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that does not operate or is not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii). Given that the permit condition for the units limits operation for reliability testing to 20 hours per year, NESHAP 40 CFR 63, Subpart ZZZZ, work practice standards in §63.6600 were added

Table IV – RR, S-505, Portable Pump Drive

- Renumbered table
- BAAQMD Regulation 6-1-311, corrected the unit of process weight from ton/hr to lb/hr
- SIP Regulation 6-311, corrected the unit of process weight from ton/hr to lb/hr
- SIP Regulation 9-8-110, corrected citation to 9-8-110.1
- BAAQMD Condition #24557, Part 2, corrected opacity limit

- NESHAP 40 CFR 63, Subpart ZZZZ, added regulation and applicable requirements

Table IV – SS, S-600, Quarry Blasting
- Renumbered table
- BAAQMD Regulation 9-13, added new Regulation

Table IV-RR, S-601 Hopper, deleted source removed from service per NSR Application #24618

Table IV–TT, S-608 Hopper abated by A-608 Water Suppression Spray System, S-610 Conveyors abated by A-610, A-611 and A-612 Dust Collectors, S-611 Vibrating Grizzly abated by A-610 Dust Collector
- Renumbered table
- S-608, S-610 and S-611 were added per NSR Application # 24618
- S-602 and S-603 deleted, source removed from service per NSR Application #24618
- BAAQMD Condition #23896 deleted, replaced by Condition #24621 and #25380
- BAAQMD Condition #24621, Part 2 was added per NSR Application #24618
- BAAQMD Condition #25380 was added per NSR Application #24618
- BAAQMD Regulation 9-13, added new Regulation
- NSPS 40 CFR 60, Subpart OOO updated to reflect latest version; 60.672(a) corrected PM10 limit and deleted opacity limits

Table IV –UU, S-606 and S607, Storage Piles
- Renumbered table
- BAAQMD Regulation 9-13, added new Regulation

Table IV –UU, P-111, P-112, P-113 and P-114
- Table deleted, moved Regulation 9, Rule 11 to other applicable sources' Table IV.

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:

"409.10 A 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."

VI. Permit Conditions

During the Title V permit development, the District has reviewed the existing permit conditions, deleted the obsolete conditions, and, as appropriate, revised the conditions for clarity and enforceability. Each permit condition is identified with a unique numerical identifier, up to five digits.

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

All changes to existing permit conditions 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.

The existing permit conditions 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.

Conditions that are obsolete or that have no regulatory basis have been deleted from the permit.

Conditions have also been deleted due to the following:

- Redundancy in recordkeeping requirements.
- Redundancy in other conditions, regulations and rules.
- The condition has been superseded by other regulations and rules.
- The equipment has been taken out of service or is exempt.
- The event has already occurred (i.e. initial or start-up source tests).

The regulatory basis is listed following each condition. The regulatory basis may be a rule or regulation. The District is also using the following terms for regulatory basis:

- BACT: This term is used for a condition imposed by the Air Pollution Control Officer (APCO) to ensure compliance with the Best Available Control Technology in Regulation 2-2-301.
- Cumulative Increase: This term is used for a condition imposed by the APCO that limits a source's operation to the operation described in the permit application pursuant to BAAQMD Regulation 2-1-403.
- Offsets: This term is used for a condition imposed by the APCO to ensure compliance with the use of offsets for the permitting of a source or with the banking of emissions from a source pursuant to Regulation 2, Rules 2 and 4.
- PSD: This term is used for a condition imposed by the APCO to ensure compliance with a Prevention of Significant Deterioration permit issued pursuant to Regulation 2, Rule 2.
- Regulation 2-5 or Toxics: This term is used for a condition imposed by the APCO to ensure compliance with limits that arise from the District's Regulation 2, Rule 5.

<u>Changes to permit:</u>

- Condition #603 was revised per NSR Application #26247. Add the word "dry" to Parts 11, 21 and 22.
- Condition # 805 was deleted per NSR Application 24618
- Condition #2786 was revised per NSR Application #26247
- Condition #11780 was revised per NSR Application #26247
- Condition #20751 removed references to shut down equipment (S-416 Finish Mill Building, A-190 and A-415 abatement devices)
- Condition #21345 removed since S-415 was shut down
- Condition #24557 removed references to shut down S-503 and S-504 Portable Compressor Drivers
- Condition #23896 was deleted and replaced by #24621 and #25380 per NSR Application #24618

- Condition #24626, revised per NSR Application #27465 and NSR Application # 27936
- Condition #24781 was revised per NSR Application #26247

VII. 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:

- BAAQMD 8-7-302 description of requirement revised to Phase II requirement
- BAAQMD 9-304 now became 9-1-304
- Condition # 1004 changed to 779
- Condition # 17918 Parts 4,11,18 and 23 were deleted
- Regulation 9-13-601 through 611 Test Method added to Table VII for visible emission monitoring

VIII. Permit Shield:

The District rules allow two types of permit shields. The permit shield types are defined as follows: (1) A provision in a major facility review permit explaining that specific federally enforceable regulations and standards do not apply to a source or group of sources, or (2) A provision in a major facility review permit explaining that specific federally enforceable applicable requirements for monitoring, recordkeeping and/or reporting are subsumed because other applicable requirements for monitoring, recordkeeping, and reporting in the permit will assure compliance with all emission limits.

The second type of permit shield is allowed by EPA's "White Paper 2 for Improved Implementation of the Part 70 Operating Permits Program." The District uses the second type of permit shield for all streamlining of monitoring, recordkeeping, and reporting requirements in Title V permits. The District's program does not allow other types of streamlining in Title V permits.

This facility has the first type of permit shield.

This permit has no streamlining.

Changes to permit:

- Table VIII A-1:
  - S-201 and S-202 were deleted from Permit Shield because sources were removed
  - S-601 was deleted from Permit Shield because the source was removed
- Table VIII A-2:
  - S-415 was deleted from Permit Shield because the source was removed

IX. Glossary

No Changes to the Glossary:

X. Revision History

Changes to permit:

- Application 16867, Title V Minor Revision was added

- Application 17947, Title V renewal was added
- Application 22954, Title V Minor Revision was added
- Application 23663, Title V Minor Revision was added
- Application 23620, Title V significant Revision was added
- Application 28289, Title V Renewal was added

XI. State Implementation Plan

No Changes to permit:

D. Alternate Operating Scenarios:

No alternate operating scenario has been requested for this facility.

E. Compliance Status:

Pursuant to BAAQMD Regulation 2-6-426.1, Lehigh submitted a Major Facility Review Certification Statement with a statement of compliance signed by the responsible official for Facility A0017 certifying that the statement of compliance is true, accurate, and complete based on information and belief formed after reasonable inquiry. Consistent with Regulation 2-6-426.2, Lehigh submitted an updated Major Facility Review Certification Statement on October 7, 2016 and March 7, 2018.

F. Differences between the Application and the Proposed Permit:

None.

APPENDIX A – 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)

NOx
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, NOx, 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 B–

NSR Permit Evaluations

NSR Application	Description
# 24618	Hopper, Primary and Secondary Crushers and Conveyors, S-608 through S-612
# 25447	Selective Non-Catalytic Reduction (SNCR), A-157
#26277	Stack Modification, P-154 and P-166
#26277	Dry Lime Injection System, A-154
#26350	Ammonia Increase for SNCR, S-158
#27465	Lime Injection Increase
#27936	S-613 Soda Ash/Sodium Bicarbonate
#28778	S-1000 Final Water Treatment System (exempt)

EVALUATION REPORT
Lehigh Southwest Cement Company
Application #24618- 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:

S-608 Hopper/Grizzly Feeder, Metso N62X24, 1,160 ton/hr abated by A-608, Water Suppression System, Nesco Model 402
S-609 Primary Crusher, Nordberg C-160 Jaw Crusher, 540 ton/hr abated by A-609 Dust Collector, Donaldson Torit, CPV-12, 3,300 SCFM
S-610 Conveyor System (BC-1, BC-2, and BC3) abated by A-610, Dust Collectors, Donaldson Torit Model CPV-8, 2,400 SCFM, and A-611, Dust Collectors, Donaldson Torit Model CPV-12, 3,300 SCFM and A-612, Dust Collectors, Donaldson Torit Model CPV-8, 2,400 SCFM
S-611 Vibrating Screen, Metso CVB-2661-3P, 1,160 ton/hr abated by A-610, Dust Collectors, Donaldson Torit Model CPV-8, 2,400 SCFM
S-612 Secondary Crusher, Nordberg GP500S Cone Crusher, 724 ton/hr abated by A-612, Dust Collectors, Donaldson Torit Model CPV-12, 3,300 SCFM

Lehigh is proposing to install the above new equipment to replace the existing equipment:

Existing Source Description	Existing Abatement Device	New Source Description	New Abatement Device
S-601 Hopper	A-4501 Water Spray	S-608 Hopper /Grizzly Feeder	A-608 Water Suppression Spray System
S-201 Primary Crusher	None	S-609 Primary Crusher	A-609 Dust Collector
S-602 Conveyors (BC-1 and BC-2)	Water Spray	S-610 (BC-1, BC-2 and BC-3)	A-610, A-611 and A-612 Dust Collectors
S-603 Vibrating Grizzly	Water Spray	S-611 Vibrating Grizzly	A-610 Dust collector
S-202 Secondary Crusher	None	S-612 Secondary Crusher	A-612 Dust Collector

Lehigh is relocating the non-metallic rock crushing facility to another area within its plant boundaries. The new equipment will be approximately 750 feet southeast of the existing area.

This project is not part of the quarry relocation project. That project is undergoing an Environmental Impact Report being prepared by the County of Santa Clara.

There was a similar project submitted by Hanson Permanente (previous owner) under Application 15572. Lehigh has cancelled part of this application in 2011 because the proposed equipment replacements were not designed by Lehigh. All new equipment have less design capacities (1,160 ton per hour - TPH) than the existing equipment (1,800 TPH). All dust collectors in this new application will have a manufacturer's guaranteed BACT grain loading level of 0.0013 gr/dscf. There will be a reduction in PM10 emissions because Lehigh added control abatement devices on all equipment at BACT level.

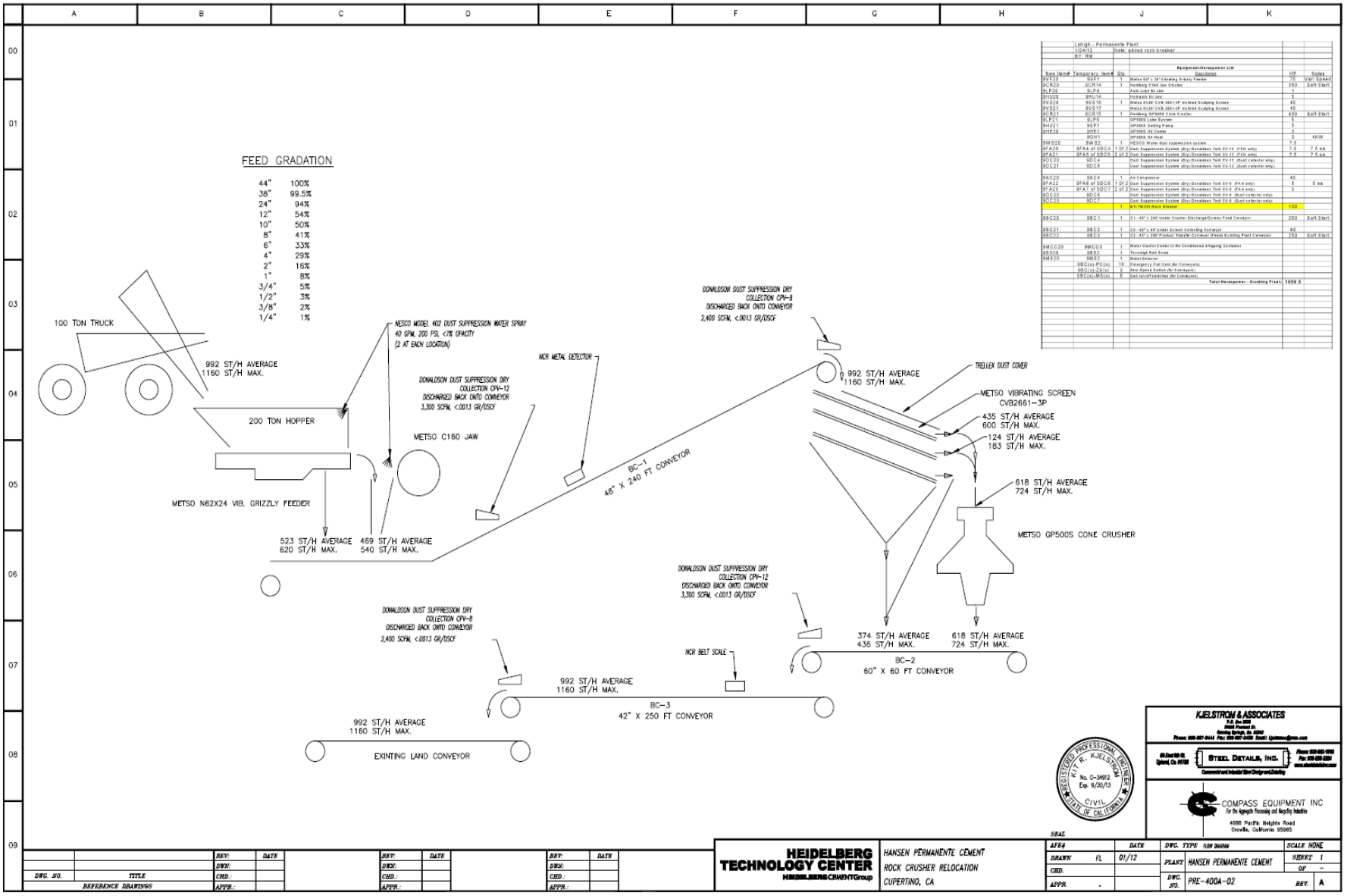
Lehigh submitted the Title V permit application under # 24617 along with this new source review application. The location and process flow diagram for the crushers are included below.

A0017: Application #'s 24617 & 24618
Lehigh Southwest Cement Company - Permanente Plant - New Primary and Secondary Crusher

Lehigh Southwest Cement Co.

Application #24618

Plant #17



II. EMISSION CALCULATIONS

Current Baseline Emissions:
For determining emissions increases, the baseline period is the 3 years period immediately proceeding the date that a permit application is deemed complete per Regulation 2-2-605. Instead of using the actual 3 years period immediately proceeding the date that this permit deemed complete, the District will allow the annual throughput that Lehigh reported in the past 3 years to simplify the retrieval of records. Lehigh actually processed an average of 1,925,543 tons per year of rock during 2009, 2010 and 2011. The data below are taken from the annual update reported to the District by Lehigh at the end of each year.

Year	Rock Throughput (Short TPY)
7/1/09-12/31/09	1,085,134
2010	2,165,318
2011	1,690,970
1/1/12-6/30/12	794,105
Average	1,911,842

Since all existing sources are grandfathered sources, AP-42, Chapter 11.19.2's emission factor (EF) from Crushed Stone Processing and Pulverized Mineral Processing will be used to calculate PM10 emissions. The District also use 99.5% PM-10 removal efficiency per filter manufacturer and assume 70% abatement efficiency for water spray source S-601 and A-601 along with three years average baseline throughput and 24 hr/day, 365 day/yr operation . Per note "n" in Table 11-19-2-2, use the tertiary crusher emission factor as the upper limit emission for primary and secondary crushers, although it is expected that the larger particles at the primary and secondary crushers will result in less PM-10 emissions.

Source Description	EF (lb/ton)	3yr Avg. Throughput (MM TPY)	Design Capacity (TPH)	Abatement Efficiency	Controlled Emissions (lb/yr PM 10)	Controlled Emissions (TPY PM10)
201 Primary Crusher	0.0024	0.8986	1500	Unabated	2,157	1.078
202 Secondary Crusher	0.0024	1.185	1500	Unabated	2,845	1.422
203 Vibrating Screen	0.0087	1.912	1800	0.3	5025.67	2.513
601 Hopper	0.000016	1.912	1800	0.3	9.24	0.005
602 Conveyors (3)	0.0011	1.912	1800	0.3	631	0.315
603 Vibrating Grizzly	0.0087	1.912	1800	0.3	5025.67	2.513
Total					15,694	7.847

Note: Primary crusher uses 47% of total throughput and secondary uses 62% of total throughput

Future Emission Increases or Decreases:

S-608 Hopper/Vibrating Grizzly is abated by water spray, so the controlled efficiency is 70% based on the recommendation from AP 42, Chapter 11.19.2. All other sources are abated by dust collectors that will have permit conditions limiting the grain loading to 0.0013 grain/SCF.

Source Description	EF (lb/ton)	Maximum Throughput (MM TPY)	Design Capacity (TPH)	Abatement Efficiency	Controlled Emissions (lb/yr PM 10)	Controlled Emissions (TPY PM10)
608 Hopper/Grizzly	0.0011	10.134	1160	0.3	3344.14	1.672

Source Description	Grain Loading (gr/SCF)	Design Capacity (TPH)	Flow Rate SCFM	Controlled Emissions (lb/day PM10	Controlled Emissions (lb/yr PM10)	Controlled Emissions (TPY PM10)
609 Primary Crusher	0.0013	540	3300	0.88	321.24	0.161
610 Conveyors (3)	0.0013	1160	2400	0.64	233.63	0.117
611 Vibrating Screen	0.0013	1160	2400	0.64	233.63	0.117
612 Secondary Crusher	0.0013	724	3300	0.88	321.24	0.161
Total					4453.86	2.228

III. PLANT CUMULATIVE INCREASE (Post 4/5/91)

The Databank shows the following cumulative increase for this plant.

	Current Ton/yr	New Ton/yr	New Total Lbs/yr	New Total Tons/yr
POC =	0.00	0.00	0.00	0.00
NO_x =	0.00	0.00	0.00	0.00
SO_2 =	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
PM_{10} =	0.00385	2.228	4,461.45	2.231

IV. TOXIC RISK SCREENING ANALYSIS

A toxic risk screen is required for this project because the replaced sources are new per Regulation 2-5.

V. BACT ANALYSIS

Source S-608 did not trigger BACT because the PM10 emissions are below 10 pounds per highest day per Regulation 2-2-301. All other sources in this application trigger and met BACT requirements per Regulation 2-2-301. Sources S-609 through S-612 are abated by dust collectors A-609 through A-612 that perform at the BACT level of 0.0013 gr/scf or less.

VI. OFFSET ANALYSIS

This application requires PM10 emission offsets per Regulation 2-2-302. Offsets will be provided by the contemporaneous emission reduction from the shutdown of all old sources. This application will result in net emission decreases of 7.847 ton/yr.

Summary of Estimated Offsets

	PM_{10}	
Emission Increases (Offsets Required)	lb/yr	ton/yr
Application 22953 – Activated Carbon Injection System	1.09	0.000545
Application 21783 – Lime Injection System	6.5	0.0033
Application 24618 - Crushers	4453.86	2.228
Total	4461.45	2.231
Offsets To Be Provided		
Application 24618 – Shutdown of old crushers and other equipment	**-15,694**	**-7.847**
Emissions less Offsets To Be Provided	**-11,232**	**-5.616**

VII. STATEMENT OF COMPLIANCE

Because the sources at the non-metallic rock crushing facility (S-608 through S-612) are abated by dust collectors or water suppression spray system, they are expected to comply with the requirements of Regulations 6-1-301 (Ringelmann No. 1 limitation) and 6-1-302 (Opacity). Regulation 10 incorporates

Federal New Source Performance Standards (NSPS) by reference. One of these standards applies to this project:

Nonmetallic Mineral Processing Plants - 40 CFR 60 Subpart OOO: the opacity limits, which are usually met with water spray or other abatement, and delineates requirements for visual inspection, recordkeeping, and reporting. The opacity limit of 15% for crushers S-609 and S-612 should be easily met through the use of the A-609 and A-612 dust collector abatement devices.

This project is considered to be ministerial under the District's CEQA Regulation 2-1-311 and therefore is not subject to CEQA review. The engineering review for this project requires only the application of standard permit conditions and standard emission factors and therefore is not discretionary as defined by CEQA (Permit Handbook chapter 11.7).

This project is over 1000 feet from the nearest school and is therefore not subject to the public notification requirements of Reg 2-1-412.

BACT, PSD, and NESHAPS are not triggered for this project.

VII. CONDITIONS

CONDITION #25380

For:

S-608 Hopper/Grizzly Feeder, Metso N62X24, 1,160 ton/hr abated by A-608, Water Suppression System, Nesco Model 402

S-609 Primary Crusher, Nordberg C-160 Jaw Crusher, 540 ton/hr abated by A-609 Dust Collector, Donaldson Torit, CPV-12, 3,300 SCFM

S-610 Conveyor System (BC-1, BC-2, and BC3) abated by A-610, Dust Collectors, Donaldson Torit Model CPV-8, 2,400 SCFM, and A-611, Dust Collectors, Donaldson Torit Model CPV-12, 3,300 SCFM and A-612, Dust Collectors, Donaldson Torit Model CPV-8, 2,400 SCFM

S-611 Vibrating Screen, Metso CVB-2661-3P, 1,160 ton/hr abated by A-610, Dust Collectors, Donaldson Torit Model CPV-8, 2,400 SCFM

S-612 Secondary Crusher, Nordberg GP500S Cone Crusher, 724 ton/hr abated by A-612, Dust Collectors, Donaldson Torit Model CPV-12, 3,300 SCFM

1. The owner/operator shall abate each of these sources with their respective abatement devices as listed above. (Basis: Regulation 2-2-212 Cumulative Increase)

2. The owner/operator shall equipped Dust Collectors, A-609 through A-612 with a device for measuring the pressure drop across the dust collectors. Each device should be checked for plugging at least every three months. (Basis: Regulations 6-1-301, 6-1-310, 6-1-311, 2-1-403)

3. The owner/operator shall inspect Dust Collectors A-609 through A-612 quarterly to ensure proper operation. The following items shall be checked:
   a. The pressure drop across the dust collector shall be checked quarterly. The pressure drop shall be no lower than 2 inches of water and no greater than 6 inches of water.
   b. The dust collector exhaust shall be checked quarterly 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 3(a) above.
d. The pulsejet, shaker cleaning system shall be maintained and operated at sufficient intervals to maintain compliance with 3(a) above.

(Basis: Regulation 2-1-403)

4. In order to demonstrate compliance with Parts 1, 2 and 3, 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 maintenance work including bag replacement for the dust collector.
   b. 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)

5. The owner/operator of S-609 through S-612 shall ensure that the outlet grain loading for Dust Collectors A- 609 through A-612 shall not exceed 0.0013 grain/dscf each. (Basis: BACT)

6. The owner/operator shall not operate more than 10,133,800 tons of rocks at S-608 in any rolling 12 consecutive month periods. The owner/operator shall not operate sources S-608 through S-612 more than 8,736 hours in any rolling 12 consecutive month periods. (Basis: Cumulative Increase)

7. 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. Total daily rock throughput at S-608
   c. The daily throughput shall be totaled on a monthly basis

   All records shall be retained on-site for at least 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: Recordkeeping)

8. To demonstrate compliance with the emission limit in Part 5, the owner/operator shall perform a PM10 initial source test using CARB Method 501, USEPA Method 201/201A, or District approved equivalent at A-609 through A-612 Dust Collectors within 45 days of startup of the source. The results shall be delivered to the District no later than 30 days from the date of the test. (Basis: Regulation 2-1-403)

9. 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: BACT, Cumulative Increase)

Condition #24621
Facility Wide, Lehigh Southwest Cement Company, Plant # 17

1. The owner/operator shall operate and maintain the "Fugitive Dust Control Plan" for sources that are not subject to NESHAP 40 CFR 63 Subpart LLL at the Cement and Rock Plants, including the on-site dust emissions from truck traffics. This plan must be updated periodically as necessary and must be submitted to the District for approval at least once every five year during the Title V permit renewal. This plan must be kept on site and made available to District's staff upon request. (Basis: Regulation 2-1-403)

2. The owner/operator shall perform source tests for the following abatement devices at least once every five years to demonstrate with compliance limits of Regulation 6-1. 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. All measurements, records and data required to be maintained by the owner/operator shall be retained and made available for inspection by the District for at least five years (Basis: Regulation 2-1-403)

BAAQMD Source #	Abatement Description	Plant ID	Abating Source #	Source Description
24621A10	Dust Collector	6-DC-45-48	S-19	Clinker Storage Area
A-13	Dust Collector	6-DC-1	S-21	Roll Press Clinker Surge Bin and Feeder
A-58	Dust Collector	7-DC-8	S-74	Type II Mechanical Transfer System
A-111	Dust Collector	1-DC-1	S-111	Rail Unloading System Area 1
A-112	Dust Collector	1-DC-2	S-112	Additive Hopper Transfer System Area 1
A-113	Dust Collector	1-DC-3	S-113	Additive Bin Transfer Facilities Area 1
A-114	Dust Collector	1-DC-4	S-113	Additive Bin Transfer Facilities Area 1
A-115	Dust Collector	1-DC-5	S-115	Additive Storage Tripper
A-123	Dust Collector	2-DC-3	S-123	Rock Conveying System Area 2
A-131	Dust Collector	3-DC-1	S-131	Rock Sampling System Area 3
A-132	Dust Collector	3-DC-2	S-132	Preblend
A-133	Dust Collector	3-DC-3	S-132	Preblend
A-134	Dust Collector	3-DC-4	S-134	Preblend Storage Bin 4
A-135	Dust Collector	3-DC-5	S-135	High Grade Storage Bin
A-143	Dust Collector	4-DC-3	S-143	Raw Mill 1Separator System 4
A-144	Dust Collector	4-DC-4	S-144	Raw Mill 2 Separator Circuit 4
A-151	Dust Collector	5-DC-1	S-151	Homogenizer 5
A-152	Dust Collector	5-DC-2	S-151	Homogenizer 5

BAAQMD Source #	Abatement Description	Plant ID	Abating Source #	Source Description
A-153	Dust Collector	5-DC-3	S-153	Kiln Feed System
A-162	Dust Collector	5-DC-24	S-162	Clinker Silo A
A-163	Dust Collector	5-DC-25	S-163	Clinker Silo B
A-164	Dust Collector	5-DC-23	S-164	Free Lime Storage Bin
A-165	Dust Collector	5-DC-27	S-165	Clinker Transfer System
A-176	Dust Collector		S-167	Lime Bin
A-190	Dust Collector	5-DC-26	S-165	Clinker Transfer System
A-210	Dust Collector	6-DC-17	S-210	Finish Mill
A-211	Dust Collector	6-DC-12, 14,16 & 18	S-211	Separator
A-216	Dust Collector	6-DC-13	S-216	Cake Conveyor
A-217	Dust Collector	6-DC-14	S-217	Cake Conveyor
A-218	Dust Collector	6-DC-19	S-218 & S-412	Air Separator & Finish Mill
A-220	Dust Collector	6-DC-8	S-220	Mill and Peripherals
A-221	Dust Collector	6-DC-6	S-221 & S-223	Cake Feeder
A-222	Dust Collector	6-DC-4	S-222	Gypsum Feed
A-230	Dust Collector	6-DC-2	S-230	Roller Press and Peripherals
A-231	Dust Collector	6-DC-3	S-231	Pressed Cake Bin
A-240	Dust Collector	6-DC-21	S-240	Additive Conveyor Bin
A-242	Dust Collector	6-DC-11	S-242	Cake Feeder
A-243	Dust Collector	6-DC-5	S-243 & S-246	Gypsum Feeder Reclaimed Cement
A-244	Dust Collector	6-DC-7	S-244	Pozzolan Feeder
A-245	Dust Collector	6-DC-9	S-245	Clay Feeder, Gypsum
A-301	Dust Collector	7-DC-9	S-301	Rail Loadout System
A-340	Dust Collector	8-DC-50	S-340	Coarse Rock Withdrawal System
A-341	Dust Collector	8-DC-51	S-341	Pre-Crushing Screen Rock Plant 3
A-342	Dust Collector	8-DC-52	S-342	Coarse Rock Crushing System 2
A-384	Dust Collector	8-DC-31	S-384	Rock Plant 2 Screen
A-390	Dust Collector	8-DC-30	S-390	Conveyor Belt
A-413	Dust Collector	6-DC-25	S-414	Kiln Dust Fugitive Bin
A-415	Dust Collector	6-DC-13	S-415	Finish Mill Building Conveyor
A-420	Dust Collector	7-DC-16	S-48	Bulk Cement Loadout Tank #1 and #2
A-421	Dust Collector	7-DC-17	S-48	Bulk Cement Loadout Tank #1 and #2
A-422	Dust Collector	7-DC-18	S-48	Bulk Cement Loadout Tank #1 and #2
A-423	Dust Collector	7-DC-12	S-49	Bulk Cement Loadout Tank #28
A-424	Dust Collector	7-DC-14	S-49	Bulk Cement Loadout Tank #28
A-425	Dust Collector	7-DC-13	S-50	Bulk Cement Loadout Tank #29
A-426	Dust Collector	7-DC-15	S-50	Bulk Cement Loadout Tank #29
A-427	Dust Collector	7-DC-19	S-49 & S-50	Bulk Cement Loadout Tank #28 & #29
A-428	Dust Collector	7-DC-11	S-48	Bulk Cement Loadout Tank #1 and #2

BAAQMD Source #	Abatement Description	Plant ID	Abating Source #	Source Description
A-429	Dust Collector	7-DC-10	S-49 & S-50	Bulk Cement Loadout Tank #28 & #29
A-430	Dust Collector	7-PDC-1	S-54	Cement Packer #1
A-431	Dust Collector	7-PDC-2	S-55	Cement Packer #2
A-433	Dust Collector	7-DC-5	S-45	West Silo Top Cement Distribution Tower
A-434	Dust Collector	7-DC-6	S-46	Middle West Silo Top Cement Distribution Tower
A-435	Dust Collector	7-DC-7	S-47	East Silo Top Cement Distribution Tower
A-436	Dust Collector	6-DC-49	S-17	Clinker Transfer Area
A-447	Dust Collector	6-DC-51	S-19	Clinker Storage Area
A-448	Dust Collector	6-DC-52	S-19	Clinker Storage Area
A-449	Dust Collector	6-DC-53	S-19	Clinker Storage Area
A-450	Dust Collector	6-DC-54	S-19	Clinker Storage Area
A-609	Dust Collector		S-609	Primary Crusher
A-610	Dust Collector		S-610	Conveyor System (3)
A-611	Dust Collector	BC-1, BC-2, BC-3	S-610	Conveyor System (3)
A-612	Dust Collector		S-610, S-612	Conveyor System (3), Secondary Crusher

RECOMMENDATION

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

S-608 Hopper/Grizzly Feeder, Metso N62X24, 1,160 ton/hr abated by A-608, Water Suppression System, Nesco Model 402

S-609 Primary Crusher, Nordberg C-160 Jaw Crusher, 540 ton/hr abated by A-609 Dust Collector, Donaldson Torit, CPV-12, 3,300 SCFM

S-610 Conveyor System (BC-1, BC-2, and BC3) abated by A-610, Dust Collectors, Donaldson Torit Model CPV-8, 2,400 SCFM, and A-611, Dust Collectors, Donaldson Torit Model CPV-12, 3,300 SCFM and A-612, Dust Collectors, Donaldson Torit Model CPV-8, 2,400 SCFM

S-611 Vibrating Screen, Metso CVB-2661-3P, 1,160 ton/hr abated by A-610, Dust Collectors, Donaldson Torit Model CPV-8, 2,400 SCFM

S-612 Secondary Crusher, Nordberg GP500S Cone Crusher, 724 ton/hr abated by A-612, Dust Collectors, Donaldson Torit Model CPV-12, 3,300 SCFM

By: _____ _____
Thu H. Bui
Senior Air Quality Engineer **Date**

EVALUATION REPORT - FINAL
Lehigh Southwest Cement Company
Application #25447- 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-157 Selective Non-Catalytic Reduction (SNCR) System to abate S-154 Existing Calciner Kiln

And an exemption for the following equipment:

S-158 Ammonia Hydroxide Storage Tank, 19% Ammonia Hydroxide, 30,000 gallons Capacity with Concrete Containment

Lehigh has requested to install an SNCR system to control NOx emissions at the Kiln, S-154. This is a result of Regulation 9-13 Portland Cement Manufacturing requirement to reduce the NOx emissions, which was adopted on September 19, 2012 and becomes effective on September 9, 2013. The District has identified Portland Cement Manufacturing as a potential source of NOx emissions in the Bay Area 2010 Clean Air Plan under Stationary Source Control Measure SSM-9.

The SNCR system is necessary to achieve compliance with the NOX emission limit of 2.3 pounds per million ton of clinker produced on a 30-operating day rolling average basis. In addition, Lehigh will also be required to comply with 10 ppmv of ammonia above the baseline (to be determined), dry at 7% O2 averaged over 24 hours. These emission limits will require the use of a continuous emission monitoring system (CEMs) as well as a means of monitoring and recording the production rates. Lehigh has already installed a CEM to measure ammonia and is currently calibrating and testing this equipment for quality assurance of the measurements.

Lehigh's SNCR system is composed of a nitrogen based reducing agent (19% ammonia hydroxide) storage tank, ammonia hydroxide pumps, and double walled transport pipes, which will run from the tank to several injection lances mounted on different locations at the calciner kiln where the temperature is between 1600 ^{0}F - 1950 ^{0}F. This temperature range is critical for the ammonia to react with nitrogen oxides (90-95% NO, 5-10% NO2) formed in the combustion process. If the temperature is low, the NO and the ammonia will not react, creating ammonia slip (un-reacted ammonia), and can result in odor concerns, stack plume visibility problems and secondary PM formation. If the temperature is high, ammonia decomposes, creating more NO instead of reducing it. The performance of SNCR system is highly dependent on temperature, residence time, dispersion and concentration of the applied reagent. The use of SNCR at Lehigh's preheater/calciner kiln is estimated to be around 40-50% of the current NOx emissions. The following reaction will occur when the aqueous droplet of ammonia is sprayed into the preheater/calciner kiln:

Nitrogen Oxide Reduction: $4\ NO + 4\ NH_3 + O_2 \rightarrow 4\ N_2 + 6\ H_2O$
Nitrogen Dioxides Reduction: $4\ NH_3 + 2\ NO_2 + O_2 \rightarrow 3\ N_2 + 6\ H_2O$

SNCR has been developed throughout Europe for preheater/calciner kiln system. It has been utilized in United States (US) recently and was proven to be effective as a NOx control

technology in wet kilns and long kilns. Reported NOx control efficiencies for the US applications run from 12% to 65%. However, higher efficiencies are generally associated with higher concentrations of ammonia added to the flue gas, and this often results in greater ammonia slip.

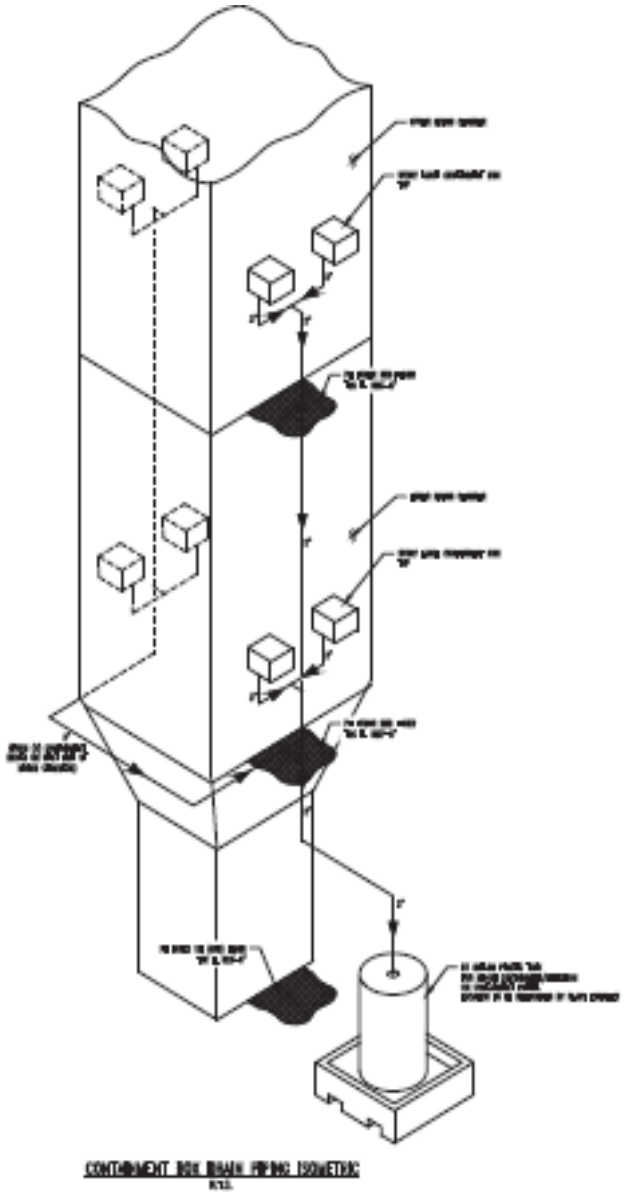
Selective Catalyst Reduction (SCR) has proven an effective means of NOx control for a variety of combustion sources; however, its use is very limited in cement kilns and none are currently operating in the US. Primary, this is due to the high levels of dust in cement kiln gas at the temperature (570 ^{0}F -700 ^{0}F) favorable for SCR use. It is possible to utilize SCR after the PM control device, but the exhaust gases would need to be reheated. SCR requires a catalyst bed, catalyst cleaning system, bypass ducting and periodic replacement of the catalyst. There are three known cement plant SCR installations worldwide. All in Europe and another is due to be installed in the US in Illinois in 2013 because of EPA consent decree. The concern with SCR is the potential dust buildup on the catalyst, which can reduce the effectiveness of the SCR and cleaning the catalyst can result in significant downtime. Because the SCR was not a sufficient demonstrated technology for the cement manufacturing industry, EPA has based its New Source Performance Standard's NOx emission limit of 1.5 pounds per ton of clinker on a new designed kiln with staged combustion and SNCR. Since Lehigh's kiln is an existing kiln that is not equipped with staged combustion, the District will accept the proposed use of SNCR for its NOx reduction.

The 19% aqueous ammonia hydroxide will be trucked into Lehigh and stored in S-158, a fixed roof storage tank with concrete containment. S-158 is exempt from the District permitting requirement per Regulation 2-1-123.2 because S-158 stores or dispenses aqueous solution which contains less than 1 % (wt) of organic compounds. The maximum estimated amount of ammonia hydroxide would be 1,850,000 gallons per year. This would be an equivalent of 310 delivery trucks per year, assuming each truck has approximately 6,000 tons capacity. Lehigh will submit another application for an ammonia hydroxide's throughput increase if the estimated usage is not adequate for the purpose of NOx reduction.

Lehigh will subsequently be making additional modifications, including adding a single stack, to further reduce public exposures to mercury and other toxic air contaminants.

This final revision corrected the source number of S-158 Ammonia Hydroxide Tank. When the Authority to Construct was issued in August 2013, the Ammonia Hydroxide Tank was named S-158. Source S-158 was already assigned to the Activated Carbon Storage Silo. Thus, the District changed the Ammonia Hydroxide Tank to S-158.

Diagram of SNCR System



The installation of the SNCR system, A-157, is to reduce NOx emissions from the kiln; therefore it will result in a benefit to the environment. The project will not result in an increase in production capacity. There is no new air contaminants associated with this project. The pre-existing ammonia emissions already present at the kiln stack are thought to be minor. There will be collateral ammonia increases from the un-reacted ammonia (ammonia slip) from the kiln.

However it is expected to be no more than 10 ppmv, dry at 7% O2, above the baseline established prior to operation of NOx control equipment, in any 24-hour rolling average per Regulation 9-13-301.4 requirement.

This application will result in a small amount of PM10 emission increases from the dust entrainment from truck travel on dry paved roads within the plant. The maximum of one truck per day increase is expected for delivery of ammonia when the SNCR is installed. The proposed project is not expected to exceed the current level of service of the areas surrounding Lehigh. According to the CEQA (Initial Study/Negative Declaration for the District's Regulation 9-13), the ammonia slip limit of 10 ppmv and the traffic impacts associated with the proposed Regulation 9-13 will not cause substantial adverse environmental impacts.

The applicable requirements for controlling NOx emission for the purposes of complying with the newly adopted Regulation 9-13, Portland Cement Manufacturing Operation will be incorporated into the Title V permit as significant revisions. Lehigh will submit a permit application for its Title V revision once this application is approved.

The applicable requirements for the A-157, SNCR System, are not yet federally enforceable and will be incorporated in the Title V permit as significant revisions as defined by BAAQMD Regulation 2-6-215 because the changes involve applicable monitoring, reporting or recordkeeping. 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.

II. EMISSION CALCULATIONS

NOx Emissions Reduction from S-154 with SNCR installation

Basis:

- Existing Condition #11780 allows 6.4 lb NOx/ton of clinker produced
- New requirement is 2.3 lb NOx/ton of clinker produced
- Maximum kiln design clinker production = 208 metric ton clinker/hr or 229.3 short ton/hr

- Annual NOx emissions = 2.3 lb NOx/ton x 1,600,000 ton/yr = 1,840 ton NOx/yr

- Maximum Hourly NOx Emissions = 2.3 lb NOx/ton x 229.3 ton/hr = 527 lb/hr
- Maximum Hourly NOx Concentration = (527 lb/hr x 386.9 dscf x 10^6) /(46 lb NO2/lbmole x 60 min/hr x 368,000 dscfm) = 201 ppmv

Ammonia Slip from SNCR (A-157)

Basis:
- 10 ppmv abovet he baseline to be determined @ 7%O2 – required by Regulation 9-13-301.4
- Stack Flow Rate – Designed capacity = 368,000 dscfm

$(10/10^6)$(1 lbmol/386.9 dscf)(17 lb NH_3/lbmol)(368,000 dscfm)(60 min/hr)
= 9.7 lb/hr NH_3
= 232.8 lb/day NH_3
= 84,987.2 lb/yr or 42.49 tpy NH_3

PM_{10} and $PM_{2.5}$ Dust Emissions from Truck Travel within Lehigh

- PM_{10} emissions factors from the truck traffic on the paved roads within the plant are calculated from AP-42 Sections 13.2.1 (1/11).
- There will be water spraying on the unpaved road and the control efficiency is assumed to 70%.
- There are 0.28 x 2 = 0.56 vehicle miles traveled (VMT) per operating day and 0.56 VMT/day x 310 trucks/yr = 173.6 VMT/yr on the paved road.

Paved road:
E (PM_{10}) = $k[sL]^{0.91}[W]^{1.02}$ = 0.0022 $[8.2]^{0.91}$ X $[22.5]^{1.02}$ = 0.4505 lb/VMT (vehicle mile traveled) from Table 13.2.1-1 (Jan.11)
E ($PM_{2.5}$) = $k[sL]^{0.91}[W]^{1.02}$ = 0.0022 $[8.2]^{0.91}$ X $[22.5]^{1.02}$ = 0.1106 lb/VMT
k = particle size multiplier = 0.0022 for PM_{10}
k = particle zise multiplier = 0.00054 for $PM_{2.5}$
sL = road surface silt loading = 8.2 g/m^2
W = Average weight (ton) of travel vehicle the road = 22.5 tons

PM_{10} Daily Emissions = 0.4505 lb/VMT X 0.56 VMT/day X (1-0.7) = 0.076 lb/day
PM_{10} Annual Emissions = 0.4505 lb/VMT X 173.6 VMT/yr X (1-0.7) = **23.5 lb/yr**

$PM_{2.5}$ Daily Emissions = 0.1106 lb/VMT X 0.56 VMT/day X (1-0.7) = 0.019 lb/day
$PM_{2.5}$ Annual Emissions = 0.1106 lb/VMT X 173.6 VMT/yr X (1-0.7) = 5.76 lb/yr

Mercury (Hg) Emissions Limit per Regulation 9-13 becomes effective on September 9, 2013
- Annual Hg Emissions = 55 lb/million ton clinker x 1.6 million ton = 88 lb/yr

III. PLANT CUMULATIVE INCREASE SINCE 4/5/91

The Databank shows the following cumulative increase for this plant.

	Current Ton/yr	New Ton/yr	New Total Lbs/yr	New Total Tons/yr
POC =	0.00	0.00	0.00	0.00
NO_x =	0.00	0.00	0.00	0.00
SO_2 =	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
PM_{10} =	0.012	0.00	23.5	0.012
$PM_{2.5}$ =	0.0029	0.00	5.76	0.0029

IV. TOXIC SCREENING ANALYSIS

A Toxic Risk Screening Analysis is required with this application since emissions of toxic compounds are above the health risk screening analysis trigger levels in Regulation 2-5, Table 1.

Compound	Hourly Emissions	Acute Trigger level	Annual Emissions	Chronic Trigger Level
	lb/hr	lb/hr	lb/yr	lb/yr
Ammonia	9.7	7.1E+00	84,987	7.70E+03

The District's Toxics Evaluation Section conducted a risk screen analysis for A-157. BAAQMD permitting rules require potential health risks be evaluated for increases in permitted emission level associated with only the new or modified sources. Results from the health risk screening analysis indicate that the estimated maximum chronic hazard index (0.0035) and acute hazard index (0.047) at the PIM are both less than 0.2. With respect to Regulation 2-5, the project only includes the stationary sources. Base on the risk values determined for the abatement, the project is in compliance and acceptable with Regulation 2-5-302.

V. BEST AVAILABLE CONTROL TECHNOLOGY

The installation of abatement A-157 SNCR is to reduce the NOx emissions at the cement kiln; therefore it did not trigger BACT per Regulation 2-2-301.

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 23.5 lbs/yr of PM_{10} from material handling of the SNCR 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 and abatement A-157 is expected to continue to comply with the requirements of District Regulation 1-301 "Public Nuisance" and District Regulation 6-1 "Particulate Matter and Visible Emissions". The sources that are abated by the Dust Collectors are conditionally permitted to meet these requirements.

Source S-154 is subject to and expected to comply with Regulation 9-13-301.1 of 2.3 pounds per ton of clinker produced.

PSD

PSD does not apply because the emissions increases from the proposed project 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 and A-157 is 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 application is also for the sole purpose of bringing an existing facility into compliance with newly adopted regulatory requirements of the District per Regulation 2-1-312.3.

This project is expected to reduce NOx emissions. 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 a significant revision to the Major Facility Review permit.

S-154, Calciner Kiln, and A-157, SNCR system, are subject to SIP Regulation 6-1, 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 ammonia and particulate matter emissions of source S-154 and A-157 from this project are estimated to be 42.49 ton/yr and 23.5 lb/yr, respectively. The source will be monitored by NOx CEM and ammonia CEM; thus, the monitoring requirements of Regulation 9-13 are satisfied.

Compliance Assurance Monitoring (CAM) Plan
Source S-154 is subject to 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). The CAM plan will be revised in the next Title V revision.

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, and A/N 25447

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 at a level to ~~so as to mitigate~~ maintain HCl emissions from S-154 within the range necessary to comply with ~~to~~ the applicable Regulation 9-13 and Federal NESHAPs HCl standard. (Basis: Cumulative increase, revised NESHAP Subpart LLL, Regulation 9-13)**.** Updated to indicate which portions are federally enforceable. ~~(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 a District ~~-~~approved continuous hydrochloric acid (HCl) emission monitors at the exhausts of Dust Collectors (A-141 and~~,~~ 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~~ Lehigh shall continuously measure the exhaust flow rates of Dust Collectors A-141, A-142, A-171 and A-172 and combine them to calculate total HCl emissions. (Basis: Regulation 2-6-503, NESHAP Subpart LLL, Regulation 9-13). ~~(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:

(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,
(iv) 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~~ 88 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., Regulation 9-13).

*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).~~ Deleted, interim mass balance for mercury before CEM is installed.

*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~~)Deleted, interim mass balance for mercury before CEM is installed

~~*~~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.)

21. The owner/operator shall operate at a level to maintain THC emissions from S-154 within the range necessary to comply with the applicable Regulation 9-13 and Federal NESHAPs THC standard. (Basis: Cumulative increase, revised NESHAP Subpart LLL, Regulation 9-13). Updated to indicate which portions are federally enforceable.

22. The owner/operator shall operate at a level to maintain Dioxin/Furan emissions from S-154 within the range necessary to comply with the applicable Regulation 9-13 and Federal NESHAPs Dioxin/Furan standard. (Basis: Cumulative increase, revised NESHAP Subpart LLL, Regulation 9-13). Updated to indicate which portions are federally enforceable.

COND# 11780
For Source 154 Cement Kiln, Plant 17

The following federally enforceable conditions limit the emissions of nitrogen oxides (NOx) from the cement manufacturing facility operated by the owner/operator, Lehigh Southwest Cement Company (previously Hanson

Permanente Cement, Inc.) located at 24001 Stevens Creek Boulevard, Cupertino, Cal. 95014, for the purpose of complying with Section 182(f) of the Federal Clean Air Act. These conditions represent reasonably available control technology (RACT) for this activity.

A) Definitions: (Basis: CAA Section 182(f) – RACT)

1. Breakdowns shall be handled according to provisions established in BAAQMD, Regulation 1, Section 112 and Section 431 through 434. (Basis: RACT)

2. Cement Kiln is a device for the calcining and clinkering of limestone, clay and other raw materials in the manufacture of cement. (Basis: Applicability)

3. Clinker is a mass of fused material produced in a cement kiln from which the finished cement is manufactured by milling and grinding. (Basis: Applicability)

4. Start-up is that period of time ~~during which a cement kiln is heated to operating temperature from a lower temperature not to exceed~~when fuel is first introduced into the kiln to heat it and when the kiln operating temperature reaches normal operating limits and raw material feed begins. A startup period shall not last longer than 36 hours. (Basis: ~~RACT~~Regulation 9-13)

5. Short ton is equivalent to 2,000 pounds. (Basis: Compliance Verification Component)

6. Shut-down is that period of time ~~during which a cement kiln is allowed to cool from operating temperature to a lower temperature~~when kiln raw material feed and fuel to the kiln begin to be decreased to reduce the kiln operating temperature until both feed and fuel are no longer fed into the kiln and it has ceased operation. A shutdown period shall ~~not~~ last more than ~~to exceed~~ 24~~36~~ hours. (Basis: ~~RACT~~Regulation 9-13)

B) Production and Throughput Limits: (Basis: Regulation 2-2-212)

1. The owner/operator shall not process more than 1.6 million short tons per year of clinker. (Basis: Regulation 2-2-212 Cumulative Increase)

2. The owner/operator shall ensure the total throughput of aqueous ammonia hydroxide at S-154 does not exceed 1,850,000 gallons in any calendar year. (Basis: Regulation 2-2-212 Cumulative Increase)

3. The owner/operator shall not exceed 310 ammonia hydroxide delivery trucks in any consecutive 12 month period. (Basis: Cumulative Increase)

4. 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 daily throughput of clinker and monthly throughput of ammonia hydroxide.
   d. Total monthly number of truck for ammonia hydroxide delivery and their delivery times.

   All records shall be retained on-site for at least 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)

C) Emission Limits: (Basis: Regulation 2-2-212)

1. The maximum allowable emission rate for Nitrogen Oxides from all kiln emission points shall not exceed both (i) ~~1158~~ 527 lb/hour based on 30-operating day rolling average and (ii) a maximum concentration of ~~615~~ 201 ppm (dry basis) based on 30-operating day rolling average without correction for oxygen~~, both measured as an average over a 2 hour period~~. (Basis: RACT)

2. The kiln emission points affected include the stacks venting the kiln-mill system (dust collector 4-DC-7 through 4-DC-38), the kiln coal mill exhaust (dust collector 5-DC-5) and the precalciner coal mill exhaust (dust collector 5-DC-6). (Basis: RACT)

*3. The emission of Nitrogen Oxides into the atmosphere shall not exceed ~~6.4~~2.3 lb/ton of clinker as determined on a ~~24 hour basis and averaged over any~~ 30-~~-~~operating~~consecutive~~ day~~s~~ rolling average~~of operation~~. (Basis: ~~RACT~~Regulation 9-13)

4. The owner/operator shall not exceed baseline emission level by more than 10 ppmv of ammonia, dry at 7% O2 on a 24-hour rolling average. The baseline ammonia must be established before the permit to operate for SNCR is issued. (Basis: Regulation 9-13).

D) Compliance Determination: (Basis: RACT)

1. All emission determinations shall be made in the as-found operating condition, except no compliance determination shall be established during or using periods of start-up, shut-down, or under breakdown conditions. (Basis: RACT)

2. For the purposes of mass emission limits, Nitrogen Oxides (NOx) shall be calculated as NO2 on a dry basis. (Basis: RACT)

3. The following expression shall be used to convert uncorrected observed volume in parts per million of NOx to pounds of NOx per hour

produced at standard conditions of 70 degrees F. and 29.92 inches of mercury: (Basis: RACT)

[(PPMvNOx)(46lb/lb mole)(~~263000~~ Exhaust Flow Rate (sdcfm))(60 min/hr)]/ [386 cf/lb mole * 1E6] = lbs NOx/hr

The exhaust flow rate using the readings from ~~four~~ six new flow meters is calculated as follows:

[(flow11+ flow26)/2] x 20 + [(flow19 + flow34)/2] x12 – [(flow11 + flow19 + flow26 + flow34)/4] x2 + [flow from two Feed Mills] = Exhaust Flow Rate

There are 20 units that filter process air and exhaust to ambient
There are 12 units that filter process air and send approximately 85% to ambient and 15% to cleaning units
There are 2 units that are cleaning at any one time

E) Monitoring and Records: (Basis: RACT)

1. The owner/operator shall maintain in good working order and operate an in-stack continuous emission monitoring system (CEMS) to demonstrate compliance with the emission limit in Part C.1. and C.4 by measuring the emission of nitrogen oxides (NOx) and ammonia (NH3). The in-stack continuous emission monitoring system shall be located on an emission point of one of the Kiln-Mill baghouses and shall continuously monitor and record NOx and NH3 emissions in a manner approved by the APCO and the EPA Administrator whenever the kiln is operating as defined in Part D.1. above. (Basis: Cumulative Increase)

2. The owner/operator shall maintain daily records of clinker production and heat input including the type of fuel burned and the quantity of fuel burned expressed as millions of BTU per ton of clinker. The amount of clinker produced shall be totaled so that the limit in Part B is not exceeded. (Basis: RACT)

3. 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 NOx and ammonia 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.

4. The CEMS records as well as records of clinker production and heat input shall be maintained at the facility for at least five years and shall be made available to the APCO or the EPA Administrator upon request. (Basis: Cumulative Increase)

F) Manual of Procedures

1. Determination of Nitrogen Oxides: The methods by which samples of exhaust gases are collected and analyzed to determine concentrations of nitrogen oxides are set forth in the District Manual of Procedures, Volume IV, ST-13A or 13B. EPA Method 7E may also be used to determine compliance. A source shall be considered in violation if the emissions measured by any of the referenced test methods exceed the standards of this rule. (Basis: Manual of Procedures, Volume IV)

Determination of ammonia: The methods by which samples of exhaust gases are collected and analyzed to determine concentration of ammonia are set forth in the District Manual of Procedure, Volume IV, ST-1B and EPA method 350.3 and by the parametric monitors that have been installed pursuant to Section 9-13-501 and meet the requirements of EPA Preliminary Performance Specification PPS-001 for Ammonia CEMs.

2. The 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)

VII. RECOMMENDATION

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

A-157 Selective Non-Catalytic Reduction (SNCR) System to abate S-154 Precalciner Kiln And an exemption for the following equipment:

S-158 Ammonia Storage Tank, 19% ammonia hydroxide, 30,000 gallons capacity
2-1-123 Exemption, Liquid Storage and Loading Equipment: The following equipment is exempt from the requirements of Sections 2-1-301 and 302, provided that the source does not require permitting pursuant to Section 2-1-319.
123.2 Tanks, vessels and pumping equipment used exclusively for the storage or dispensing of any aqueous solution which contains less than 1 percent (wt) organic compounds. Tanks and vessels storing the following materials are not exempt.
2.1 Sulfuric acid with an acid strength of more than 99.0% by weight.
2.2 Phosphoric acid with an acid strength of more than 99.0% by weight.
2.3 Nitric acid with an acid strength of more than 70.0% by weight.
2.4 Hydrochloric acid with an acid strength of more than 30.0% by weight.
2.5 Hydrofluoric acid with an acid strength of more than 30.0% by weight.
2.6 More than one liquid phase, where the top phase contains more than one percent VOC (wt).

Thu H. Bui
Senior Air Quality Engineer
Engineering Division

date:

THB:E\Lehigh\HansonPermanente\25447e

EVALUATION REPORT
Lehigh Southwest Cement Company
Application #26247- Plant #17

24001 Stevens Creek Blvd.
Cupertino, CA 95014

I. BACKGROUND

Lehigh Southwest Cement Company has applied for Authorities to Construct/Permits to Operate for the following equipment:

P-154 Cement Kiln Stack, 295 feet height x 15 feet diameter
P-166 Clinker Cooler Stack, 116 feet height x 7 feet diameter

Lehigh has requested to combine 32 existing cement kiln stacks and two existing fuel mill stacks into one. The new cement kiln stack (P-154) will be 295 feet high and 117 feet in diameter, while the existing stacks are at the rooftop, 43 feet high. In addition, Lehigh will combine 10 existing clinker cooler stacks into one. The new clinker cooler stack will be 116 feet high and 7 feet in diameter, while the existing stacks are at 45 feet high. Both stacks will be made of steel. The purpose of combining stacks is to comply with District Regulations 9-13-303 and 501 - Portland Cement Manufacturing stack and monitoring requirements, which became effective on September 9, 2013, and to comply with the upcoming new National Emission Standards for Hazardous Air Pollutants (NESHAP) Subpart LLL, which will become effective on September 9, 2015.

Lehigh is required to use continuous emission monitoring systems (CEMs) to directly measure NOx, SOx, mercury, total hydrocarbons, hydrochloric acid, ammonia, volumetric flow rate, opacity, and temperature in Regulation 9-13 and NESHAP Subpart LLL. With the combined stack, it would be feasible and economical for Lehigh to monitor and report accurate emissions by minimizing emission points. The stacks are also designed to provide good dispersion of emissions, which would reduce public exposures to mercury and other toxic air contaminants; thus the proposed project should reduce the health risk of nearby residents and workers.

Lehigh is currently operating under the Enforcement and Compliance Agreement signed by Lehigh and District on September 16, 2013. This Enforcement and Compliance Agreement is the result of a lawsuit that allows Lehigh until February 28, 2015 to build the stacks while working on stacks' designs and waiting for building permits from many responsible agencies.

The stacks will be built to meet or exceed all applicable building code standards. To allow sufficient exit velocity, Lehigh will install a 700 horsepower booster fan between the baghouses and kiln stack. The booster fan provides additional momentum for the kiln and fuel mill exhaust to overcome the back pressure created by the manifold and stack. The fan was sized to handle only the existing maximum flow from the current baghouses. No additional flow capacity is being provided by this fan and thus, no potential additional emissions are being created. The maximum clinker production rate will not exceed the current limit of 1.6 million tons per year. This project will not change any existing process or permit limits, and it does not increase any emissions. This project will also satisfy all requirements of NESHAP Subpart LLL Final Rule.

The two stacks will be equipped with sample ports to allow the insertion of probes to be connected to CEMs. Table 1 below lists the CEMs that will be installed at the Kiln Stack (P-154) and Table 2 lists the CEMS at the Clinker Cooler Stack (P-166).

Table 1
Continuous Emission Monitor Systems (CEMS) – Kiln Stack (P-154)

Monitor Type	CEM Manufacturer	CEM Model	New or Existing	Details
Mercury, Hg	Tekran	3300	Existing	
HCl, NH3, NO, NO2, SO2, CO, H2O, O2, THC, Temp, Baro P.	SICK	MCS 100	Existing	2 Units will be installed
Hg	M&C	Sorbent Trap Sampler	New	Verification sampler
PM	SICK	Dusthunter SP100	New	Provides PM parametric data
Flow	SICK	Flowsic 100H	New	Ultrasonic measurement
Opacity	SICK	Dusthunter T200	New	Optical Measurement
Temperature	Various	Thermocouple	New	

Table 2
Continuous Emission Monitor Systems (CEMS) – Clinker Cooler Stack (P-166)

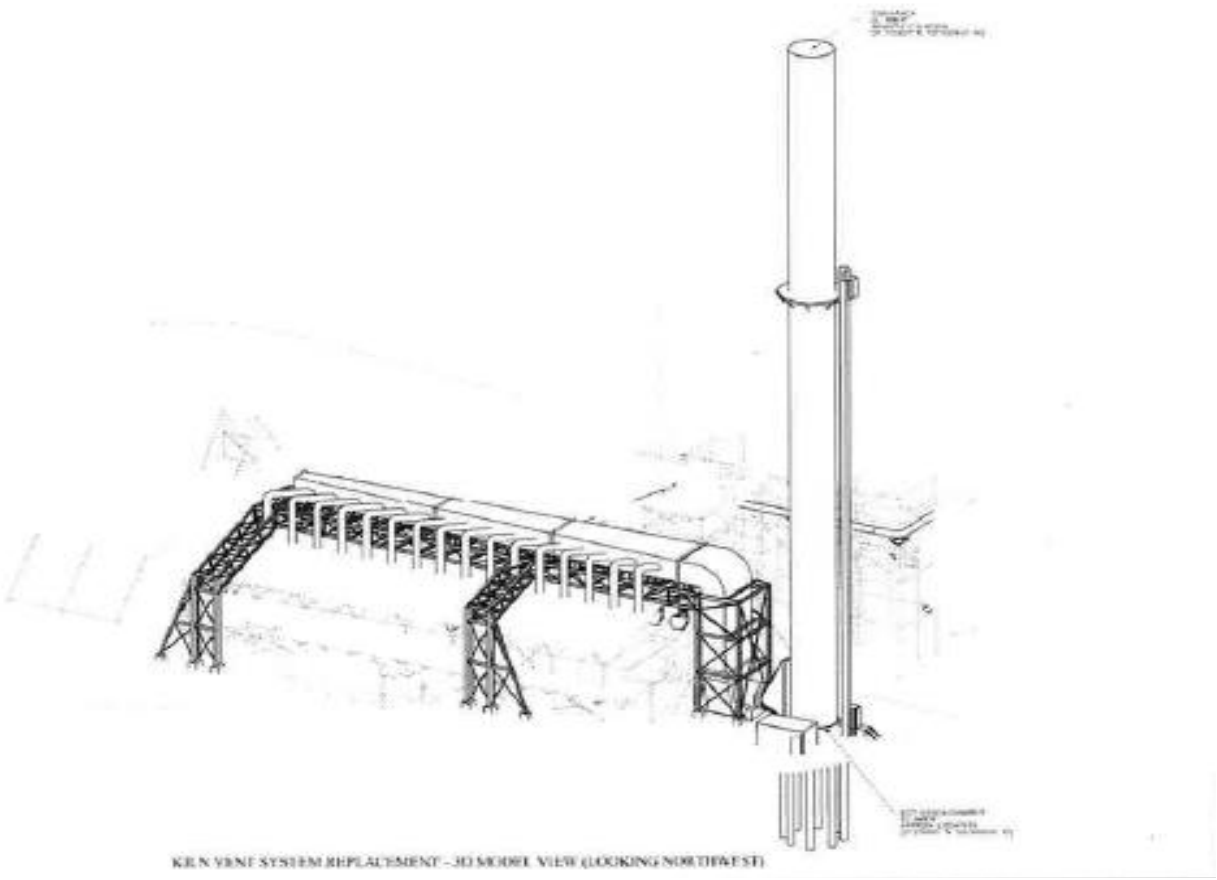
Monitor Type	CEM Manufacturer	CEM Model	New or Existing	Details
PM	SICK	Dusthunter SP100	New	Provides PM parametric data
Flow	SICK	Flowsic 100H	New	Ultrasonic measurement
Opacity	SICK	Dusthunter T200	New	Optical Measurement
Temperature	Various	Thermocouple	New	

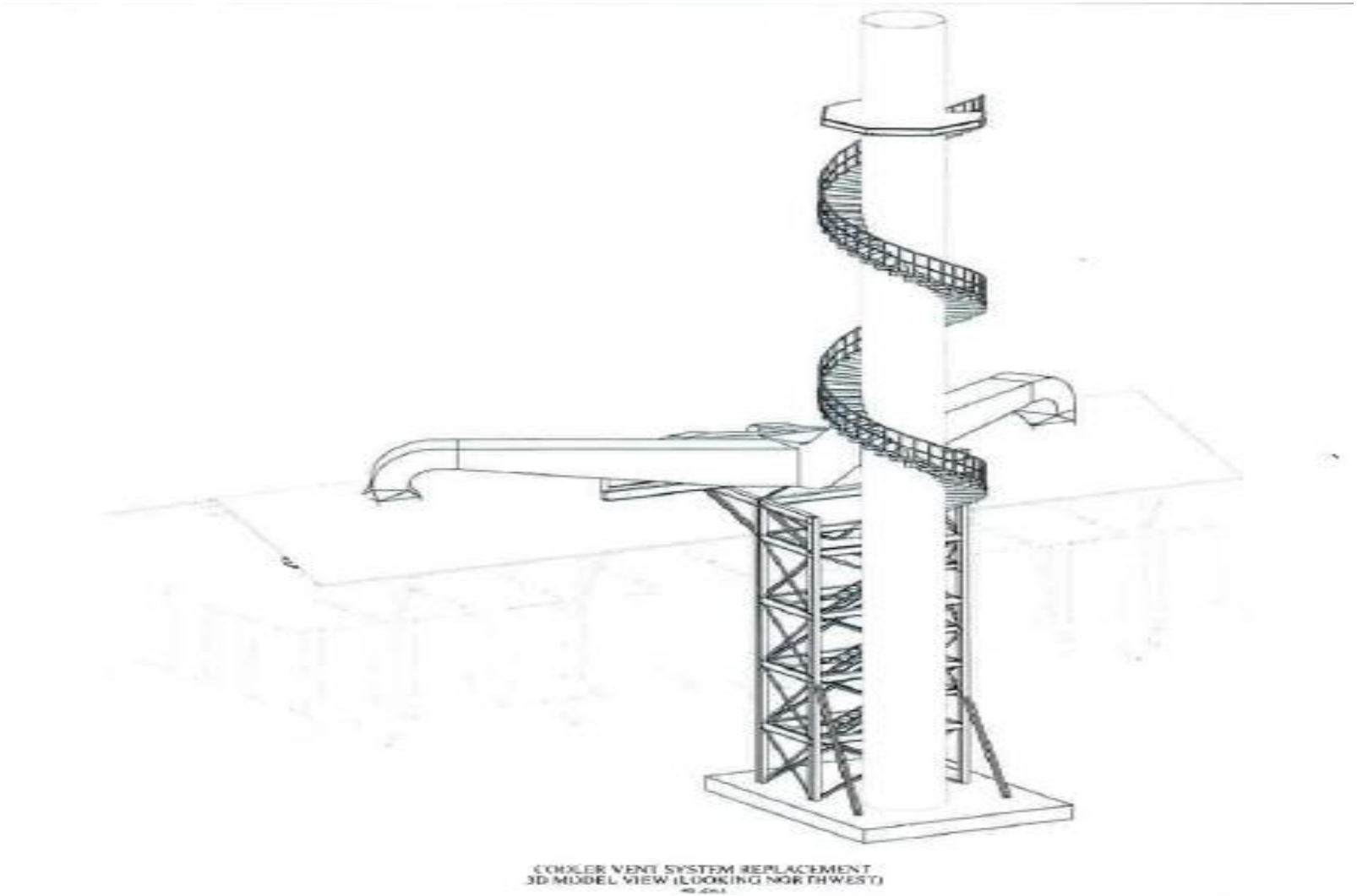
In addition, to monitor the operational integrity of the individual dust collectors, Lehigh will install bag leak detectors on each of the 34 kiln individual compartment that will connect to the new Cement Kiln Stack (P-154), and on each of the ten cooler individual compartments that will connect to the new Clinker Cooler Stack (P-166). Total 44 bag leak detectors will be wired to the main control system, and an alarm will sound off if there is any detected leak. The bag leak detectors are FilterSense Mutichannel Particulate Monitor, Model PM100. These are state-of-the art instruments that had been previously installed in other locations and their performance is proven.


Kiln Stack
Base elevation: 661 ft
Height: 295 ft
Diameter: 15 ft
Cooler Stack
Base elevation: 584 ft
Height: 116 ft
Diameter: 7 ft

AERIAL VIEW

New Kiln Stack (P-154)





New Clinker Cooler Stack (P-166)

The applicable requirements for the combined stacks for the purposes of complying with the newly adopted Regulation 9-13, Portland Cement Manufacturing Operation will be incorporated into the Title V permit as significant revisions. Lehigh submitted a permit application for its Title V revision under Application # 26320.

The applicable requirements for the combined stacks (P-154 and P-166), are not yet federally enforceable and will be incorporated in the Title V permit as significant revisions as defined by BAAQMD Regulation 2-6-215 because the changes involve applicable monitoring, reporting or recordkeeping. 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.

II. STANDARDS AND CORRELATIONS

THC and HAP Correlation

The new Regulation 9-13 requires Lehigh to develop a correlation to monitor total hydrocarbon (THC) and total organic hazardous air pollutants (HAP). This correlation is developed by taking actual HAP source tests and compared them to the THC data from CEM. According to NESHAP Subpart LLL guideline, the THC should be scaled as follows:

THC = 75% of HAP standard x (TWA of THC from CEM /TWA actual HAP)
= 9 ppmv x (99 ppmv/0.066 ppmv) = 13,500 ppmv

Where:
75 % of standard = 12 ppmv HAP x 75% = 9 ppmv
Time Weighted Average (TWA) = 77% mill on and 23 % mill off
See attached spread sheet for details. The THC and HAP should be reset at least once every 30 months by source testing.

Dioxins/Furans (D/F) and Temperature

The new Regulation 9-13 requires Lehigh to monitor D/F by using temperature as its surrogate. The temperature (198 ºC or 388 ºF) of the kiln exhaust gas at the inlet to the PM control device from source tests in the past is used to demonstrate compliance with D/F concentration below 0.02 ng-TEQ/dscm. This temperature will be reset at least once every 30 months.

Dry/slurry Lime Injection and HCl Correlation
The new Regulation 9-13 requires Lehigh to monitor HCl, but EPA has not adopted the Performance Specification for HCl. EPA is currently proposing Performance Specification 18 for HCl monitor. It went out for public review on May 14, 2014 and is expected to be added to the Federal Register by September 9, 2015. In the meantime, the District will accept dry lime injection rate as a surrogate for HCl. Lehigh conducted trial tests from October 23 to 26, 2013 for slurry and dry lime injections. See attached Lehigh's trial conducted on October 23 through 26, 2013.

With one raw mill running and one raw mill down, 1.5 lb/min is injected in the side with one raw mill running and 3.5 lb/min is injected in the side with one mill down for a total of 5.0 lb/min. With both raw mills down, 3.5 lb/min is injected into each side for a total of 7.0 lb/min. Lehigh operates the raw mill at 77% mill on and 23 % mill off; therefore, the dry/slurry lime will be conditioned at 2.8 ton/day for both trains. With these rates, the HCl emissions will be less than 3 ppm per in-house study performed by Lehigh.

Mill On = 1.5 lb/min/train x 2 trains x 60 min/hr x 24 hr/day = 4,320 lb/day
Mill Off = 3.5 lb/min/train x 2 trains x 60 min/hr x 24 hr/day = 10,080 lb/day
Mill On/Off = 4,320 lb/day x 77% + 10,080 lb/day x 23% = 5,645 lb/day or 2.8 ton/day

Adjusted Exhaust Concentration
Since the project required a booster fan with 700 bhp, the exhaust air will be diluted. In order to adjust for the air dilution, the air flow rate will be calculated using the fan's curve in Attachment A. The adjusted ppmv shall be used to calculate total emissions and demonstrate compliance with Regulation 9-13 standards:

ppmv = ppmv (measured) x [SCFM measured / (SCFM measured-SCFM fan)]

Ammonia Baseline and Ammonia Slip
The purpose of the ammonia emission limit in Section 9-13-301.4 is to minimize the ammonia slip from any ammonia-based NOx control equipment. The ammonia slip result from installation of the NOx control equipment such as A-157, Selective Non-catalytic Reduction (SNCR) at S-154, shall not exceed 10 ppm above the baseline emission. The baseline period shall not be less than 6 month in duration and shall be the median of the 6 monthly average values of ammonia. Based on the CEM data that Lehigh submitted, the 6-month median value prior to September 1, 2013 (startup date of A-157, SNCR) is 58 ppm at 7% oxygen, dry.

Per management's direction, staff will impose the six month, 24 -hour rolling average ammonia, dry, at 7% oxygen not to exceed 68 ppmv in Condition 11780, Part C4 to replace the language "to be established" for ammonia.

III. PLANT CUMULATIVE INCREASE SINCE 4/5/91

This application does not result in any cumulative emission increase.

IV. TOXIC SCREENING ANALYSIS

A Toxic Risk Screening Analysis is required with this application since emissions of toxic compounds are above the health risk screening analysis trigger levels in Regulation 2-5, Table 2-5-1. Over the past five years, the District has collected five source test results and they are presented in Table 4 for benzene, Table 5 for hexavalent chromium and Table 6 for nickel below. The benzene, hexavalent chromium, mercury and nickel emissions were based on the maximum production rate of 1.6 million tons clinker per year from the kiln. The mercury is capped at 88 lbs/yr per Regulation 9-13-301.6 requirement. The hourly emissions were based on 365 day/yr and 24 hr/day. Table 3 summarizes emissions from the four main toxic components that drive the cancer and non-cancerous risks for the kiln. Historically, Lehigh turns the mills on at 77% of the time and 23% of the time is off.

Table 3 – Toxic Emission Summary

Toxics	Hourly Emissions	Acute Trigger level	Annual Emissions	Chronic Trigger Level
	lb/hr	lb/hr	lb/yr	lb/yr
Benzene	1.857	2.9	16,268	3.8
Cr+6	----	----	2.08	7.7E-4
Mercury	0.010	1.3E-3	88	0.27
Nickel	0.00367	0.013	32.15	0.43

Table 4 - Benzene Source Test Results

Test Date	Outside Test	Kiln		Fuel Mills	
		Mill on	Mill off	Mill on	Mill off
		lb/ton feed	lb/ton feed	lb/ton feed	lb/ton feed
4/27/2009	2009-AB2588	0.0047	0.0042		
7/19/2011	OS-3842	0.0080	0.0080		
12/6/2011	OS-4082	0.0060	0.0050	0.000278	0.000227
12/4/2012	OS-4430	0.0110	0.0100	0.0004	0.0005
10/15/2013	OS-4838	0.0004	0.0004		
Average		0.0060	0.0055	0.0003	0.0003

Table 5 - Hexavalent Chromium Source Test Results

Hexavalent Chromium		Kiln			Fuel Mills
Date	Outside Test	Mill on	Mill off	Mill on	Mill off
		lb/ton feed	lb/ton feed	lb/ton feed	lb/ton feed
12/6/2011	OS-4082	1.41E-06	5.90E-07	2.55E-08	5.42E-08
12/4/2012	OS-4430	4.18E-07	2.24E-07	0.00E+00	3.90E-08
12/9/2013	OS-5017	3.50E-07	1.30E-07	2.40E-08	3.27E-08
Average		9.14E-07	4.07E-07	1.28E-08	4.66E-08

Table 6 - Nickel Source Test Results

Hexavalent Chromium			Kiln		Fuel Mills
Date	Outside Test	Mill on	Mill off	Mill on	Mill off
		lb/ton feed	lb/ton feed	lb/ton feed	lb/ton feed
12/6/2011	OS-4082	2.26E-5	9.23E-6	4.60E-7	2.61E-7
12/4/2012	OS-4430	4.97E-6	4.19E-6	3.77E-7	4.42E-7
12/9/2013	OS-5017	1.20E-5	1.00E-5	5.07E-7	1.37E-6
Average		1.32E-5	7.81E-6	4.48E-7	6.92E-7

The District's Toxics Evaluation Section conducted a risk screen analysis for the new stacks on June 5, 2014. BAAQMD permitting rules require potential health risks be evaluated for the stack modification. Results from the health risk screening analysis indicate that the maximally exposed individual (MEI) receptor is below the AB2588 notification levels (10.0 in a million and 1.0 Hazard Index (HI)) for Cancer Risk and Chronic HI. The point of maximum impact (PMI) receptor for Acute Non-cancer HI is below the notification level (1.0). With respect to Regulation 2-5, the project only includes the stationary sources. Based on the risk values, the project is in compliance and acceptable with the project risk requirement of Regulation 2-5-302. Table 7 summarizes the modeled impacts for the new stacks with maximum permitted production of 1.6 million tons of clinker produced.

Table 7 – Modeled Impacts

Receptor Type	Cancer Risk	Non-cancer Hazard Index (HI)	Maximum Acute Non-cancer HI
Max. Exposure Individual (MEI)	9.5 in a million	0.08	N/A
Point of Max. Impact (PMI)	N/A	N/A	0.44

Based on the latest result of the health risk analysis (HRA), mercury is no longer the driving toxic for the acute hazard index. The hourly rate of mercury imposed in condition #603, Part 16 is not the decisive factor anymore; thus, the District will remove the 0.064 lb/yr (average 3-hour) from permit Condition #603, Part 16. This would allow Lehigh the operational flexibility because of high variability of mercury in the raw limestone, while reducing the total annual mercury to 88 lb/yr and 55 lb/million tons of clinker produced.

Permit Condition # 603, Part 5 is changed from 1.06 lb/hr to 2.08 lb/hr of Hexavalent Chromium (Cr+6) since the HRA passed the risk at 2.08 lb/hr. This is reasonable because there is no other regulatory requirement or limit on Cr+6.

V. BEST AVAILABLE CONTROL TECHNOLOGY

The installation of two new stacks will not result in emission increase; therefore, this application does not trigger BACT per Regulation 2-2-301.

VI. OFFSETS

This application does not require any offsets per Regulation 2-2-302.

VII. STATEMENT OF COMPLIANCE

With the new stacks (P-154 and P-166), the owner/operator of source S-154 and abatement A-157, and source S-161 and abatement A-161 is expected to continue to comply with the requirements of District Regulation 1-301 "Public Nuisance" and District Regulation 6-1 "Particulate Matter and Visible Emissions". The sources that are abated by the Dust Collectors are conditionally permitted to meet these requirements.

Sources S-161 and S-154 are subject to and expected to comply with all of Regulation 9-13 requirements for Portland Cement Manufacturing.

PSD

PSD does not apply because there is no emissions increase from the proposed project. 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 and A-157 is expected to comply with NESHAP Subpart LLL, National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry by the effective date in 2015.

California Environmental Quality Act (CEQA)

The County of Santa Clara is the lead agency for Lehigh's stack installations. Lehigh submitted the building permit application to the County in December 2013. The County prepared the Architecture and Site Approval (ASA). The County ASA Committee approved the project on April 3, 2014. The County also determined and filed CEQA exemption because it qualified for Class 1 and Class 2 exemptions.

Class 1 exemption applied because the installation of two new stacks will not increase the production capacity but will meet the existing and future emissions requirements of the District.

Class 2 exemption applied because the project is a replacement as the new stacks replace portions of existing stack structure currently used to vent emissions from the plant. Overall, the project will enable the applicant to continue to operate its operation with no change in production capacity.

The County of Santa Clara filed the Notice of Exemption from CEQA under File # 9989-16-65-14A for this project on March 28, 2014.

The proposed Kiln Stack (P-154) got approval from the Federal Aviation Administration (FAA) on March 21, 2014 based on its aeronautical evaluation # 2014-AWP-869-OE. The study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation.

This project would also be categorically exempt from CEQA under the District's regulations because the permit application is for the sole purpose of bringing an existing facility into compliance with newly adopted regulatory requirements of the District per Regulation 2-1-312.3.

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 a significant revision to the Major Facility Review permit. The Title V revision will be handled in Application #26320.

S-154, Calciner Kiln and S-161 Clinker Cooler will be monitored by CEMS; thus, the monitoring requirements of Regulation 9-13 are satisfied.

Compliance Assurance Monitoring (CAM) Plan
Sources S-154 and S-161 are subject to CAM plan because they have potential pre-control device emissions that are equal or more than 100 tons per year of particulate matter per 64.2(1)(3). The CAM plan will be revised in the Title V revision.

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, A/N 22953, ~~and~~ A/N 25447, and A/N 26247

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

1. The ~~Owner~~owner/~~Operator~~ 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)

~~3.~~5. 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~~owner/~~Operator~~ 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~~owner/~~Operator~~ operator of S-154 shall not exceed ~~1.06~~ 2.08 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)~~Deleted (flow meters maintenance and service)

*8. The ~~Owner~~owner/~~Operator~~ operator of S-154 shall conduct a source test at the exhausts (P-154) of Dust Collectors (A-141, A-142, A-171 and A-172) ~~at least once per calendar year~~ to demonstrate subsequent compliance with Parts 5, 11, 16, 21 and 22. The test should be conducted with the raw mill on and the raw mill off. The ~~Owner~~owner/~~Operator~~ 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, ammonia (NH3), Hydrochloric Acid (HCl), and total hydrocarbon (THC) at least once per calendar year. The owner/operator shall also test for dioxinsfurans (D/F), and total organic HAP (formaldehyde, benzene, toluene, styrene, m-xylene, p-xylene, o-xylene, acetaldehyde and napthalene) at least once every 30 months. The ~~Owner~~owner/~~Operator~~ 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~~owner/~~Operator~~ operator shall obtain approval for all source test procedures from the District's Source Test Manager prior to conducting any tests. The ~~Owner~~owner/~~Operator~~ operator shall comply with all applicable testing requirements for continuous emissions monitors as approved by the District's Source Test Manager. The ~~Owner~~owner/~~Operator~~ 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~~ monthly. 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~~of S-154 and A-154 Lime Dry/Slurry Injection System ~~at~~ shall not exceed ~~a level to maintain~~3 ppmv of HCl, at 7 percent oxygen, over 30-operating day rolling average. ~~emissions from S-154 within the range necessary to comply with the applicable Regulation 9-13 and Federal NESHAPs HCl standard.~~ The owner/operator may use the hydrate lime injection rate as a parametric monitor for HCl while the Performance Specification for HCl is being developed. The owner/operator of S-154 and A-154 shall not operate below 2.8 ton of dry/slurry lime injection per day, over 30-operating day rolling average. (Basis: Cumulative increase, ~~revised~~ NESHAP Subpart LLL effective September 9, 2015, Regulation 9-13)~~.).~~

12. The owner/operator of the Lime Dry/Slurry Injection system (A-154) shall install, operate and maintain a District-approved continuous hydrochloric acid (HCl) emission monitors at the exhausts of Dust Collectors (~~A-141 and A-142~~ P-154) as suggested by the manufacturer's recommendation. ~~Lehigh shall continuously measure the exhaust flow rates of Dust Collectors A-141, A-142, A-171 and A-172 and combine them to calculate total HCl emissions.~~ (Basis: Regulation 2-6-503, NESHAP Subpart LLL effective September 9, 2015, Regulation 9-13).).

~~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.~~

*13~~b~~. The owner/operator shall maintain hourly continuous emission monitoring records for the Hg, HCl, THC, PM, Temperature, Opacity, and Volumetric Flow monitoring systems in a form suitable for inspection and approved by the APCO and the EPA administrator. Such records shall include, but are not limited to:

(v) The continuous emission monitoring measurements for ~~mercury~~Hg, HCl and THC expressed in ppm (1-hour average);
(vi) The production rates of clinker (tons/hr and tons/month);
(vii) 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,
(viii) The results of performance testing, evaluation, calibration, checks, adjustments, and maintenance of the continuous emission monitoring system.
(Basis: H&S Code 44300 et seq.)

*14~~a~~. The owner/operator shall maintain the Hg, HCl, THC, PM, Temperature, Opacity and Volumetric Flow 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, H&S Code 44300 et seq.))

~~*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.)~~

*15~~a~~. The Hg, HCl, THC, PM, opacity and Volumetric Flow Continuous Emission Monitor System (CEMs) shall meet the requirements of District Manual of Procedures, Volume V, Continuous Emission Monitoring, Policy and Procedures. All CEMS shall be operated and maintained as suggested by the manufacturer's recommendations. (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 the followings during normal operation:
(i) 55 pounds of mercury per million tons of clinker produced , over 30-operating day rolling average;
(ii) Maximum 88 pounds of mercury per year ~~lbs/yr~~ (12-month rolling average) ~~and~~
(iii) 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., Regulation 9-13).

*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. Deleted, interim mass balance for mercury before CEM is installed.

*19. Deleted, interim mass balance for mercury before CEM is installed

*20. The owner/operator of the Hg, NH3, HCl, THC, PM , opacity and Volumetric Flow 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.)

*21. The owner/operator of S-154 shall not emit more than 12 ppmv of total organic HAPs, at 7 percent oxygen over 30-operating day rolling average. The owner/operator may use the total hydrocarbon (THC) CEMS as a parametric monitor for the total organic HAP as approved by the District and established by source tests. The owner/operator of S-154 and A-154 shall not exceed 13,500 ppmv of THC, over 30-operating day rolling average. A correlation total organic HAP and THC concentration shall be determined at least once every 30 months where the total HAP shall be set during that compliance period. (Basis: Cumulative increase, NESHAP Subpart LLL effective September 9, 2015, Regulation 9-13)

*22. The owner/operator of S-154 shall not emit more than 0.2 ng-TEQ/dscm of dioxins and furans (D/F), at 7 percent oxygen over 24-hour rolling average. The owner/operator may use temperature CEMS as a parametric monitor for the D/F as approved by the District and established by source tests. The kiln exhaust gas at the inlet to the PM control device shall not exceed 198 ^{o}C (388 ^{o}F), over 24-hour rolling average. A correlation between D/F concentrations and temperature shall be determined at least once every 30 months where an operating temperature shall be set during that compliance period. (Basis: Cumulative increase, NESHAP Subpart LLL effective September 9, 2015, Regulation 9-13)

23. In order to adjust for the air dilution, the adjusted air flow rate will be calculated using the booster fan's curve in Attachment A. The owner/operator of the booster fan shall monitor

and record the fan operating total pressure (kPa) or its volumetric flow rate in Standard Cubic Feet per Minute (SCFM) on a daily basis. The adjusted concentration in ppmv shall be used to calculate total emissions and demonstrate compliance with Regulation 9-13 standards. The owner/operator of S-154 and S-161 shall adjust the measured concentration (ppmv) of all CEMS as follows: (Basis: Cumulative Increase)

ppmv (adjusted) = ppmv (measured) x [SCFM measured / (SCFM measured-SCFM fan)]

24. The owner/operator of S-154 and S-161 shall produce the CEM results in the data format specified with the appropriate calculation method used as suggested by the District's Source Test Section. All monthly CEMS data shall be reported using the same format specified in the source test's letter in Attachment B. The Attachment B will be developed and approved by Source Test Section before the permit to operate for new stacks is issued (Basis: Cumulative Increase)

COND# 11780
For Source 154 Cement Kiln, Plant 17

The following federally enforceable conditions limit the emissions of nitrogen oxides (NOx) from the cement manufacturing facility operated by the owner/operator, Lehigh Southwest Cement Company (previously Hanson Permanente Cement, Inc.) located at 24001 Stevens Creek Boulevard, Cupertino, Cal. 95014, for the purpose of complying with Section 182(f) of the Federal Clean Air Act. These conditions represent reasonably available control technology (RACT) for this activity.

A) Definitions: (Basis: CAA Section 182(f) – RACT)

1. Breakdowns shall be handled according to provisions established in BAAQMD, Regulation 1, Section 112 and Section 431 through 434. (Basis: RACT)

2. Cement Kiln is a device for the calcining and clinkering of limestone, clay and other raw materials in the manufacture of cement. (Basis: Applicability)

3. Clinker is a mass of fused material produced in a cement kiln from which the finished cement is manufactured by milling and grinding. (Basis: Applicability)

4. Start-up is that period of time when fuel is first introduced into the kiln to heat it and when the kiln operating temperature reaches normal operating limits and raw material feed begins. A startup period shall not last longer than 36 hours. (Basis: Regulation 9-13)

5. Short ton is equivalent to 2,000 pounds. (Basis: Compliance Verification Component)

6. Shut-down is that period of time when kiln raw material feed and fuel to the kiln begin to be decreased to reduce the kiln operating temperature until both feed and fuel are no longer fed into the kiln and it has ceased

operation. A shutdown period shall not last more than 24 hours. (Basis: Regulation 9-13)

B) Production and Throughput Limits: (Basis: Regulation 2-2-212)

1. The owner/operator shall not process more than 1.6 million short tons per year of clinker. (Basis: Regulation 2-2-212 Cumulative Increase)

2. The owner/operator shall ensure the total throughput of aqueous ammonia hydroxide at S-154 does not exceed ~~1,850,000~~2,450,000 gallons in any calendar year. (Basis: Regulation 2-2-212 Cumulative Increase)

~~4.~~6. The owner/operator shall not exceed ~~310~~ 410 ammonia hydroxide delivery trucks in any consecutive 12 month period. (Basis: Cumulative Increase)

4. 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 daily throughput of clinker and monthly throughput of ammonia hydroxide.
   d. Total monthly number of truck for ammonia hydroxide delivery and their delivery times.

   All records shall be retained on-site for at least 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)

C) Emission Limits: (Basis: Regulation 2-2-212)

1. ~~The maximum allowable emission rate for Nitrogen Oxides from all kiln emission points shall not exceed both (i) 527 lb/hour based on 30 operating day rolling average and (ii) a maximum concentration of 201 ppm (dry basis) based on 30 operating day rolling average without correction for oxygen. (Basis: RACT)~~. Deleted, old limit replaced by another Condition.

2. ~~The kiln emission points affected include the stacks venting the kiln mill system (dust collector 4-DC-7 through 4-DC-38), the kiln coal mill exhaust (dust collector 5-DC-5) and the precalciner coal mill exhaust (dust collector 5-DC-6). (Basis: RACT)~~Deleted. Emission points definition.

3. The emission of Nitrogen Oxides into the atmosphere shall not exceed 2.3 lb/ton of clinker as determined on a 30-operating day rolling average. (Basis: Regulation 9-13)

~~5.~~7. The owner/operator of S-154 shall not exceed the six month, 24-hour rolling average of 68 ppmv of ammonia, dry at 7% oxygen.~~baseline emission level by more than 10 ppmv of ammonia, dry at 7% O2 on a 24-~~

~~hour rolling average. The baseline ammonia must be established before the permit to operate for SNCR is issued.~~ (Basis: Regulation 9-13).

5. The owner/operator of S-154 Cement Kiln shall abate the NOx emissions from S-154 at all times it is in use with properly maintained A-157 Selective Non-Catalytic Reduction (SNCR) System. (Basis: Cumulative Increase, Regulation 9-13)

D) Compliance Determination: (Basis: RACT)

1. All emission determinations shall be made in the as-found operating condition, except no compliance determination shall be established during or using periods of start-up, shut-down, or under breakdown conditions. (Basis: RACT)

2. For the purposes of mass emission limits, Nitrogen Oxides (NOx) shall be calculated as NO2 on a dry basis. (Basis: RACT)

3. The following expression shall be used to convert uncorrected observed volume in parts per million of NOx to pounds of NOx per hour produced at standard conditions of 70 degrees F. and 29.92 inches of mercury: (Basis: RACT)

[(PPMvNOx)(46lb/lb mole)(Exhaust Flow Rate (sdcfm))(60 min/hr)]/ [386 cf/lb mole * 1E6] = lbs NOx/hr

~~The exhaust flow rate using the readings from six new flow meters is calculated as follows:~~

~~[(flow11+ flow26)/2] x 20 + [(flow19 + flow34)/2] x12 – [(flow11 + flow19 + flow26 + flow34)/4] x2 + [flow from two Feed Mills] = Exhaust Flow Rate~~

~~There are 20 units that filter process air and exhaust to ambient~~
~~There are 12 units that filter process air and send approximately 85% to ambient and 15% to cleaning units~~
~~There are 2 units that are cleaning at any one time~~

E) Monitoring and Records: (Basis: RACT)

1. The owner/operator shall maintain in good working order and operate an in-stack continuous emission monitoring system (CEMS) to demonstrate compliance with the emission limit in Part C.~~1~~3. and C.4 by measuring the emission of nitrogen oxides (NOx) and ammonia (NH3). The in-stack continuous emission monitoring system shall be located on an emission point of ~~one of~~ the Kiln (P-154) ~~Mill baghouses~~ and shall continuously monitor and record NOx and NH3 emissions in a manner approved by the APCO and the EPA Administrator whenever the kiln is operating as defined in Part D.1. above. (Basis: Cumulative Increase)

2. The owner/operator shall maintain daily records of clinker production and heat input including the type of fuel burned and the quantity of fuel burned

expressed as millions of BTU per ton of clinker. The amount of clinker produced shall be totaled so that the limit in Part B is not exceeded. (Basis: RACT)

3. The owner/operator shall maintain hourly continuous emission monitoring records for the NOx and NH3 monitoring systems 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 NOx and ammonia 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.

4. The CEMS records as well as records of clinker production and heat input shall be maintained at the facility for at least five years and shall be made available to the APCO or the EPA Administrator upon request. (Basis: Cumulative Increase)

F) Manual of Procedures

1. Determination of Nitrogen Oxides: The methods by which samples of exhaust gases are collected and analyzed to determine concentrations of nitrogen oxides are set forth in the District Manual of Procedures, Volume IV, ST-13A or 13B. EPA Method 7E may also be used to determine compliance. A source shall be considered in violation if the emissions measured by any of the referenced test methods exceed the standards of this rule. (Basis: Manual of Procedures, Volume IV)

   Determination of ammonia: The methods by which samples of exhaust gases are collected and analyzed to determine concentration of ammonia are set forth in the District Manual of Procedure, Volume IV, ST-1B and EPA method 350.3 and by the parametric monitors that have been installed pursuant to Section 9-13-501 and meet the requirements of EPA Preliminary Performance Specification PPS-001 for Ammonia CEMs.

2. The 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)

COND #2786 For:
S-111 Rail Unloading System, abated by A-111 Dust Collector 1-DC-1
S-112 Additive Hopper transfer system, abated by A-112 Dust Collector 1-DC-2
S-113 additive bin transfer facilities, abated by A-113 Dust Collector 1-DC-3
S-115 Additive Storage, abated by A-115 Dust Collector 1-DC-5
S-121 Tertiary scalping screen 2-VS-1-2, abated by A-121 Dust Collector 2-DC-1

S-122 Tertiary crusher 2-CR-1, abated by A-122 Dust Collector 2-DC-2
S-123 rock conveying system, S-131 rock sampling system, abated by A-123 Dust Collector 2-DC-3
S-132 preblend, abated by A-132 Dust Collector 3-DC-2
S-134 preblend storage bin 4-S-1, 4-S-2, abated by A-134 Dust Collector 3-DC-4
S-135 high grade storage bin 4-S-3, 4-S-4, abated by A-135 Dust Collector 3-DC-5
S-141 raw mill 4-GM-1, abated by A-141 Dust Collector 4-DC-7 through 4-DC-22
S-142 raw mill 2 4-GM-2, abated by A-142 Dust Collector 3-DC-23 through 4-DC-38
S-143 raw mill 1 separator system 4-SE-3, abated by A-143 Dust Collector 4-DC-3
S-144 raw mill 2 separator circuit 4-SE-4, abated by A-144 Dust Collector 4-DC-4
S-151 homogenizer 5-S-1-2, abated by A-151 Dust Collector 5-DC-1
S-153 kiln feed system, abated by A-153 Dust Collector 5-DC-3
S-154 Precalciner Kiln, abated by A-141, A-142, S-171 and A-172 Dust Collectors
S-161 clinker Cooler 5-CC-1, abated by A-161 Dust Collector 5-DC-11 through 5-DC-20
S-162 Clinker Silo A, abated by A-162 Dust Collector 5-DC-24
S-163 Clinker silo B, abated by A-163 Dust Collector 5-DC-25
S-164 free lime storage bin, abated by A-164 Dust Collector 5-DC-23
S-165 clinker transfer system, abated by A-164 Dust Collector 5-DC-27
S-171 Kiln Fuel Mill System, abated by A-171 Baghouse 5-DC-5
S-172 Precalciner Fuel Mill System, abated by A-~~171~~ 172 Baghouse 5-DC-~~5~~6

A. Gaseous Emission Limitations:

1. The owner/operator shall ensure the emission of sulfur dioxide does not exceed ~~the more stringent of (i) that accomplished by the rejection of 90% of the sulfur in the raw feed plus fuel, assuming, but not requiring, 0.6% sulfur coal as the fuel, averaged over a 24 hour day; OR (ii)~~ 481 lb/hr ~~also~~ averaged over the ~~same~~ 24 hour calendar day. (Basis: Cumulative Increase)

2. Deleted (Basis: The maximum allowable emission rate for oxides of nitrogen is redundant with condition 11780, part C.1.)

3. The owner/operator shall install at a location approved by the APCO continuous in-stack SO2 and NOx monitoring equipment on ~~an emission point of one of~~ the Kiln stack (P-154)~~Mill baghouses~~, and shall provide to the District, upon request, information on SO2 and NOx emissions in terms of pounds per hour and concentrations in parts per million. The monitoring equipment required shall be calibrated, maintained, serviced and repaired by the person responsible for the operation so that it will function and adequately sense, indicate and record the parameters it is designed to sense, indicate and record. The owner/operator ~~Permit Holder~~ shall also regularly provide to the District information concerning the feed sulfur input. (Basis: Cumulative Increase)

4. ~~The allowable emissions of SO2 at the coal mill and kiln mill, shall be prorated as follows: The owner/operator shall monitor SO2 emissions from the kiln mill as specified above; the owner/operator may also monitor SO2 emissions from the mill on a continuous basis, however, whenever coal mill SO2 emissions are not so monitored, they shall be deemed to constitute 12% of the total SO2 emissions; accordingly, emissions from the kiln mill shall be~~

~~deemed to constitute 88% of the SO2 emissions. When not so monitored, SO2 emissions from the coal mill shall not exceed 1.2% of the input sulfur, as provided in paragraph A (1) above, or 15% of the total SO2 emissions.~~

~~As to the alternative limitation of 481 lbs/hr, so long as the coal mill emissions are not monitored, SO2 emissions from the kiln mill shall not exceed 423 lbs/hr, and from the coal mill 58 lbs/hr. (Basis: Regulation 2-2-212 Cumulative Increase, Cumulative Increase)~~Deleted. Stacks are combined.

B. Particulate Emission Limitations: The owner/operator of S-141, S-142, S-154, S-161, S-171, and S-172 shall perform an annual source test to demonstrate compliance with the limits below in B(1), B(2), ~~and~~ B(3), B(4), B(5) and B(6). The owner/operator shall obtain approval for all source test procedures from the District Source Test Manager prior to conducting any tests. The owner/operator shall notify the District Source Test Manager in writing of the source test protocols and projected test dates at least 7 days prior to testing. The owner/operator shall submit the source test results to the District Source Test Manager and Engineering Division no later than 60 days after the source test. (Basis: Regulation 2-2-212 Cumulative Increase, Regulation 1-502):

The owner/operator shall ensure particulate emissions or grain loading from these sources does not exceed the following:

(1) ~~Cement Kilns and~~ Raw Mills (S-141, S-142) = 36 lb/hr total and 0.02 gr/SDCF. (Basis: Cumulative Increase)
~~(S-154 and S-142, S-141)~~

(2) Fuel Drying and Grinding (S-171 and S-172) = 6.6 lb/hr total and 0.02 gr/SDCF. (Basis: Cumulative Increase)
~~(S-171 and S-172)~~

(3) Clinker Cooler (S-161) = ~~8 lb/hr and 0.01 gr/SDCF.~~0.04 lb/ton of clinker produced, based on three run test average. (Basis: Regulation 9-13)
~~(S-161)~~

(4) Cement Kiln (S-154) = 0.04 lb/ton of clinker produced, based on three run test average. (Basis: Regulation 9-13)

The owner/operator shall ensure opacities from these sources does not exceed the following:

(5) Cement Kiln (S-154) shall not emit for a a period or periods aggregating more than three minutes in any hour an emission equal to or greater than Ringelmann 1 or 20% opacity. (Basis: Regulation 9-13, Regulations 6-1-301 and 302)

(6) Clinker Cooler (S-161) shall not emit for a a period or periods aggregating more than three minutes in any hour an emission equal to or greater than Ringelmann 1 or 20% opacity. (Basis: Regulation 9-13, Regulations 6-1-301 and 302)

C. Testing Facilities (Basis: Regulation 1-501)

The owner/operator shall provide test facilities so that representatives sampling and accurate measurements can be made of all emissions from all sources subject to NESHAP Subpart LLL effective September 9, 2015~~Regulation 10, NSPS Subpart F~~, Portland Cement Plants and for all measurements necessary to prove compliance with the conditions of this permit.
(Basis: Regulation 1-501)

D. ~~Production Rates: (Basis: Regulation 2-2-212 Cumulative Increase)~~

~~The annual production from all potential production facilities both old and new, shall not exceed 1,600,000 tons of clinker.~~Deleted. Redundant clinker production rate with Condition #11780 B.1.

E. Deleted (Basis: The sequence of shutting down the six cement kilns is no longer necessary. The ~~Owner~~owner/~~Operator~~ operator has only one cement kiln)

~~F. Particulate Monitoring~~

1. ~~The owner/operator shall equip A-143 and A-144 with a District-approved broken bag detection device, which shall include an alarm that is triggered when the device signals the current has exceeded 60% maximum allowable current limit. If the alarm is triggered, the owner/operator shall perform a Method 22 test within one hour of the alarm. Except for a 20-minute period after equipment startup and shutdown, if emissions are observed per Method 22, then the owner/operator shall record the event as an exceedance in a District-approved log. Any exceedance shall also be reported to the Director of Compliance and Enforcement in accordance with the requirements in Standard Condition I.F. (NESHAPS, Regulation 2-6-501, BAAQMD MOP Volume II, Part 3, §4.7)~~Deleted. Superseded by CAM Condition #24781 for bag leak detector.

2. Deleted. Superseded by CAM Condition #24781 for bag leak detector.~~The owner/operator shall keep the exceedance records for at least 5 years and shall make the records available to District staff upon request.~~
~~(Regulation 2-6-501)~~

Compliance Assurance Monitoring (CAM) Permit Condition #24781

For the following sources:
S-141 Raw Mill 4-GM-1, abated by A-141 Dust Collector
S-142 Raw Mill 4-GM-2, abated by A-142 Dust Collector
S-154 Precalciner Kiln, abated by A-141, A-142Baghouses, and A-171, A-172 Dust Collectors and A-154 Slurry Dry/Lime Injection System;
A-156 Activated Carbon Injection System; and
A-157 Selective Non-Catalytic Reduction (SNCR) System
S-161 Clinker Cooler, abated by A-161 Dust Collector
S-171 Kiln Fuel Mills System, abated by A-171Dust Collector
S-172 Precalciner Fuel Mills System, abated by A-172 Dust Collector

For the purpose of this engineering evaluation, Parts 1 through 22 and 34 through 44 are not included and remain unchanged.

23. The owner/operator shall install 44 broken bag leak detectors including alarms at A-141, A-142, A-171, A-172, and A-161 in lieu of conducting the daily visual emissions testing to ensure compliance with BAAQMD Regulation 6-301. [Basis: 40 CFR 63 Subpart LLL]

24. The following definitions apply to the Compliance Assurance Monitoring plan for S-154 and S-161 to assure compliance with Regulation 6:
    a. Exceedance is defined as detecting particulate matter emissions at concentrations of greater than 10 milligrams per actual cubic meter.
    b. Excursion is defined as any 1 minute particulate matter emission concentration that meets the definition of exceedance.

    [Basis: 40 CFR Part 64.6(c)(2)]

25. The owner/operator shall equip A-141, A-142, A-171, A-172, and A-161 Dust Collectors with a broken bag leak detector or a continuous parameter monitoring system (CPMS) that must complete a minimum of one cycle of operation for each successive 15-minute period and a minimum of four successive cycles of operation to have a valid hour of data.[Basis: 40 CFR Part 64.6(c)(1)]

26. The concentration of particulate matter emissions that assures no visible emissions from A-141, A-142, A-171, A-172, and A-161 Dust Collectors shall be less than 10 milligrams per actual cubic meter. The broken bag leak detector must be certified by the manufacturer to be capable of detecting particulate matter emissions at concentrations of 10 or fewer milligrams per actual cubic meter. [Basis: 40 CFR Part 64.4(a)]

27. The owner/operator of for A-144 and S-161 must equip A-141, A-142, A-171, A-172, and A-161 with an alarm system that will alert an operator automatically when an increase in relative particulate matter emissions over a preset level is detected. [Basis: 40 CFR Part 64.3(b)(4)(iii)]

28. If an exceedance occurs at a broken bag leak detector installed at A-141, A-142, A-171, A-172, and A-161, the owner/operator shall determine the cause of the exceedance and if necessary restore operation of A-141, A-142, A-171, A-172, and A-161 to their normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. Lehigh must review the procedures used in response to an excursion or exceedance. If exceedances continue to occur, the District may require the owner/operator to develop and implement a Quality Improvement Plan (QIP). [Basis: 40 CFR Part 64.6(c)(3), 64.7(d)(2), 64.8]

29. The owner/operator must inspect the broken bag leak detector on a monthly basis according to the manufacture's specification to ensure the monitor is operating properly. [Basis: 40 CFR Part 64.3(b)(3), EPA -454/R-98-015 Guidance]

30. The owner/operator of S-144, S-161, A-141, A-142, A-171, A-172, and A-161 shall submit a semi-annual monitoring report to the District in accordance with 40 CFR Part 70.6(a)(3)(iii). The report shall include all of the following information:
    a. Summary information on the number, duration, and cause of excursions or exceedances and the corrective actions taken.

b. Summary information on the number, duration, and cause for monitor downtime incidents

[Basis: 40 CFR Part 64.6(c)(3) and 40 CFR Part 64.9(a)(2)]

31. The owner/operator shall inspect each dust collector based on the manufacturer's recommendations on a yearly basis. The owner/operator shall keep a record of all yearly inspections and any corrective action taken. [Basis: 40 CFR Part 64.6(c)(1)(iii)]

32. The owner/operator shall perform source tests for A-141, A-142, A-171, A-172, and A-161 at least once every year to demonstrate with compliance limits of Regulation 6-1. 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. All measurements, records and data required to be maintained by the owner/operator shall be retained and made available for inspection by the District for at least five years. [Basis: Regulation 2-1-403]

33. The owner/operator shall keep the records of the concentration, pressure drop, visible emission readings, calibrations, test results, excursions and exceedances required by the above conditions for at least 5 years and shall make the records available to District staff upon request. [Basis: Regulation 2-6-501 Recordkeeping]

~~The owner/operator shall use EPA Method 22 to conduct visible emission on A-141, A-142, A-161, A-171 and A-172 at least once every day to ensure compliance with BAAQMD Regulation 6-301. [Basis: NESHAP 40 CFR Part 63, Subpart LLL]~~

~~24. The following definitions apply to the Compliance Assurance Monitoring plan for S-141, S-142, S-154 and S-161 to assure compliance with Regulation 6:~~

~~Exceedance is defined as a pressure drop across the filter bags in inches of water column that is less than 0.5 inches or greater than 10 inches.~~

~~Excursion is defined as any 1 minute differential pressure manometer reading that meets the definition of exceedance.~~

~~[Basis: 40 CFR Part 64.6(c)(2)]~~

~~The following definitions apply to the Compliance Assurance Monitoring plan for S-171 and S-172 to assure compliance with Regulation 6:~~

~~Exceedance is defined as a pressure drop across the filter bags in inches of water column that is less than 0.5 inches or greater than 14 inches.~~

~~Excursion is defined as any 1 minute differential pressure manometer reading that meets the definition of exceedance.~~

~~[Basis: 40 CFR Part 64.6(c)(2)]~~

~~25. The owner/operator shall equip A-141, A-142, A-161, A-171 and A-172 Baghouses and Dust Collectors with differential pressure manometer gauges that measure the pressure drop across the filter bags in inches of water column. The gauges shall have a minimum accuracy of 0.5 inches water column. [Basis: 40 CFR Part 64.6(c)(1), 40 CFR Part 63.1350(m)(6)(iii)]~~

~~26. The indicator range that assures no visible emissions from A-141, A-142 and A-161 Dust Collectors shall be 0.5 to 10 inches of water column. The indicator range that assures no visible emissions from~~

A-171 and A-172 Dust Collectors shall be 0.5 to 14 inches of water column. [Basis: 40 CFR Part 64.4(a)]

27. The owner/operator of S-141, S-142, S-161, S-171 and S-172 shall take a reading of the differential pressure manometers installed pursuant to Part 26 manually at A-141, A-142, A-161, A-171 and A-172 Baghouses and Dust Collector at least once per week. The pressure reading shall be recorded in a District approved log on a weekly basis. [Basis: 40 CFR Part 64.3(b)(4)(iii)]

28. If an exceedance occurs at a manometer installed at A-141, A-142, A-161, A-171 and A-172, the owner/operator shall determine the cause of the exceedance and if necessary restore operation of S-154, S-161, S-171, S-172, A-141, A-142, A-161, A-171 and/or A-172 to their normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. Lehigh must review the procedures used in response to an excursion or exceedance. If exceedances continue to occur, the District may require the owner/operator to develop and implement a Quality Improvement Plan (QIP). [Basis: 40 CFR Part 64.6(c)(3), 64.7(d)(2), 64.8]

29. The manometer gauges installed at A-141, A-142, A-161, A-171 and A-172 shall be visually inspected prior to use and the owner/operator shall insure that the gauges are calibrated on a quarterly basis. [Basis: 40 CFR Part 64.3(b)(3)]

30. The owner/operator of S-141, S-142, S-154, S-161, S-171 and S-172 shall submit a semi-annual monitoring report to the District in accordance with 40 CFR Part 70.6(a)(3)(iii). The report shall include all of the following information:

a. Summary information on the number, duration, and cause of excursions or exceedances and the corrective actions taken.

b. Summary information on the number, duration, and cause for monitor downtime incidents

[Basis: 40 CFR Part 64.6(c)(3) and 40 CFR Part 64.9(a)(2)]

The owner/operator shall inspect each baghouse and dust collector based on the manufacturer's recommendations on a yearly basis. The owner/operator shall keep a record of all yearly inspections and any corrective action taken. [Basis: 40 CFR Part 64.6(c)(1)(iii)]

The owner/operator shall perform source tests for A-141, A-142, A-161, A-171 and A-172 at least once a year to demonstrate with compliance limits of Regulation 6-1. 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. All measurements, records and data required to be maintained by the owner/operator shall be retained and made available for inspection by the District for at least five years. [Basis: Regulation 2-1-403]

The owner/operator shall keep the records of the pressure drops, visible emission readings, calibrations, test results, excursions and exceedances required by the above conditions for at least 5 years and shall make the records available to District staff upon request. [Basis: Regulation 2-6-501 Recordkeeping]

VII. RECOMMENDATION

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

P-154 Cement Kiln Stack, 295 feet height x 15 feet diameter
P-166 Clinker Cooler Stack, 116 feet height x 7 feet diameter

_____

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

THB:H\Lehigh\HansonPermanente\26247e

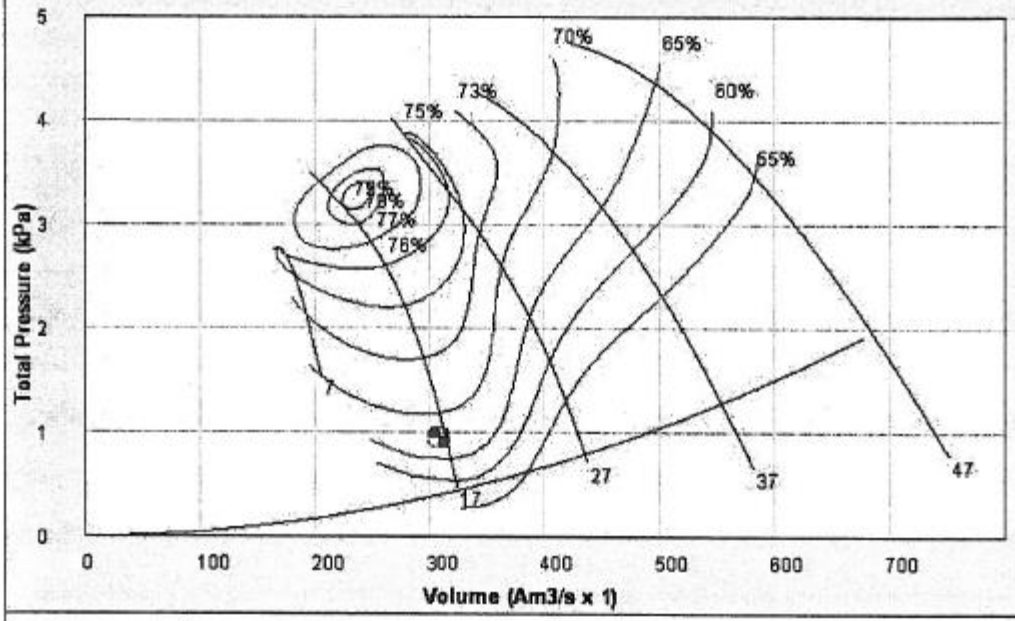
Attachment A

Booster Fan Curve

Performance Curve

Model TAF3 – Arr. 8

Diameter:	2800 mm	**Air Volume:**	308 Am3/s
No. of Blades:	18	**Total Pressure:**	0.96 kPa
Blade Angle:	16 deg	**Air Density:**	0.8 kg/m3
Speed:	890 rpm	**Power (hp):**	436 kW
Outlet Area:	9.78 m2	**Total Efficieny:**	67.7 %



Legend: ——— Volume ------ Total Efficiency ——— Velocity Pressure Line

Sound Data

Overall Predicted Noise Level = 104 dBA								
Octave Band	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
Inlet (Lw dB)	106	109	114	113	112	109	104	98
Inlet (Lp dB)	93	96	101	100	99	96	91	85
Free Field Conditions, Directivity = 1, Measurement Distance = 3 ft, Attenuation = 3 dB								

Fan sound power levels are certified by TCF to have been tested and rated in accordance with AMCA Standard 300. Sound pressure levels are estimates based on the installation conditions and attenuations as shown with noise from all other sources such as fan drives, duct radiation, etc. considered to be more than 8 db lower, and that on-job sound measurements are made off-axis of any air system inlet or outlet.

Exception is taken to specification requiring guarantee of sound pressure level because on-site conditions beyond TCF control deviate from the above conditions.

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

July 29, 2014

James Kertis
Environmental Manager
Lehigh Southwest Cement Company – Permanente Plant
24001 Stevens Creek Boulevard
Cupertino, California 95014

Dear Mr. Kertis:

The Bay Area Air Quality Management District (BAAQMD) has approved the inclusion of the TEKRAN Model 2537S mercury analyzer in Lehigh's existing Continuous Emission Monitoring System (CEMS). The analyzer will monitor mercury emissions from the precalciner kiln system (S-154) exhaust gases. The operational and procedural requirements of Regulation 1, Section 522 of the Rules and Regulations and Volume V of the Manual of Procedures are in effect. They include but are not limited to the following:

- Reg. 1-522.4: Report of instrument out of service
- Reg. 1-522.5: Daily monitor calibration
- Reg. 1-522.7: Report of indicated excess
- Reg. 1-522.8: Monthly report
- MOP, Volume V, Sec. 8.4.a. and b.: Monthly report includes emissions summary data, indicated excesses, monitor inoperative periods, and/or a negative declaration, if applicable

All monitors shall be maintained as recommended by the manufacturer.

You are reminded that the **Monthly Continuous Emission Monitoring Report** to the BAAQMD Source Test Section for mercury emissions from this source is now requirement. The reformatted **Monthly Report** for overall emissions submitted by Lehigh on February, 2014 is acceptable. Monthly report files should be named as: **five digit site designation-two digit month number-four digit year number.pdf (eg. A0017-03-2014.pdf)** and sent to the following mailbox address: **cemmonthly@baaqmd.gov**.

In addition to the requirements previously listed, you are mandated to follow feder law enacted by the Environmental Protection Agency under the National Emission Standards for Hazardous Air Pollutants for the Portland Cement Manufacturing Industry for Portland Cement Plants, Volume 78, Number 29; 40 CFR Parts 60 an 63; effective September 9, 2015. Sections 63.1348 (5) entitled Compliance

requirements – Mercury Compliance; and 63.1350 (k) entitled Monitoring requirements – Mercury Monitoring Requirements; must be followed in order the data generated by your mercury monitor for EPA compliance purposes.

Please contact me at rbartley@baaqmd.gov or (415) 749-4601 if you have any questions regarding this matter.

Sincerely,

Robert Bartley
Air Quality Engineering Manager

RB:WBH:wbh

ADDENDUM EVALUATION REPORT
Lehigh Southwest Cement Company
Applications 25447, 26350 and 26247 - Plant #17

24001 Stevens Creek Blvd.
Cupertino, CA 95014

BACKGROUND

Lehigh Southwest Cement Company has applied for Authorities to Construct/Permits to Operate for the following equipment:

A-157 Selective Non-Catalytic Reduction (SNCR) System to abate S-154 Precalciner Kiln

Before the issuance of the Authority to Construct for the new Cement Kiln Stack, the District imposed the six month, 24 -hour rolling average ammonia, dry, at 7% oxygen not to exceed 68 ppmv as the median ammonia limit based on the 6 months operation prior to the installation of the Selective Non-catalytic Reduction system (NOx control device). However, using a baseline between 50 and 70 ppmv will result in non-compliance with or without the NOx control device since the ammonia emissions from cement manufacturing are highly variable and may approach 200 ppmv in the exhaust due to the ammonia in the limestone.

After a long period of evaluating Lehigh's ammonia operation, the District set the ammonia limit at 106 ppmv at 7% oxygen (96 ppmv plus 10 ppmv) average 6 months, on a rolling 24-hour period. That is based on about two and half year look back immediately preceding the operation of the NOx control device instead of six months before NOx control. The long term look back is reasonable because Regulation 9-13-610.1 allows for longer baseline period – "The baseline period shall not be less than 6 months in duration".

At this time, Staff recommends to impose imposed the six month, 24 -hour rolling average ammonia (or 182-day rolling average), dry, at 7% oxygen not to exceed 106 ppmv in Condition 11780, Part C4 in place of 68 ppmv. In addition, if the ammonia's permit condition is exceeded that a permit application be submitted to the District to determine the source of this exceedance.

COND# 11780
For Source 154 Cement Kiln, Plant 17

The following federally enforceable conditions limit the emissions of nitrogen oxides (NOx) from the cement manufacturing facility operated by the owner/operator, Lehigh Southwest Cement Company (previously Hanson Permanente Cement, Inc.) located at 24001 Stevens Creek Boulevard, Cupertino, Cal. 95014, for the purpose of complying with Section 182(f) of the Federal Clean Air Act. These conditions represent reasonably available control technology (RACT) for this activity.

A) Definitions: (Basis: CAA Section 182(f) – RACT)

1. Breakdowns shall be handled according to provisions established in BAAQMD, Regulation 1, Section 112 and Section 431 through 434. (Basis: RACT)

2. Cement Kiln is a device for the calcining and clinkering of limestone, clay and other raw materials in the manufacture of cement. (Basis: Applicability)

3. Clinker is a mass of fused material produced in a cement kiln from which the finished cement is manufactured by milling and grinding. (Basis: Applicability)

4. Start-up is that period of time when fuel is first introduced into the kiln to heat it and when the kiln operating temperature reaches normal operating limits and raw material feed begins. A startup period shall not last longer than 36 hours. (Basis: Regulation 9-13)

5. Short ton is equivalent to 2,000 pounds. (Basis: Compliance Verification Component)

6. Shut-down is that period of time when kiln raw material feed and fuel to the kiln begin to be decreased to reduce the kiln operating temperature until both feed and fuel are no longer fed into the kiln and it has ceased operation. A shutdown period shall not last more than 24 hours. (Basis: Regulation 9-13)

B) Production and Throughput Limits: (Basis: Regulation 2-2-212)

1. The owner/operator shall not process more than 1.6 million short tons per year of clinker. (Basis: Regulation 2-2-212 Cumulative Increase)

2. The owner/operator shall ensure the total throughput of aqueous ammonia hydroxide at S-154 does not exceed 2,450,000 gallons in any calendar year. (Basis: Regulation 2-2-212 Cumulative Increase)

3. The owner/operator shall not exceed 410 ammonia hydroxide delivery trucks in any consecutive 12 month period. (Basis: Cumulative Increase)

4. 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 daily throughput of clinker and monthly throughput of ammonia hydroxide.
   d. Total monthly number of truck for ammonia hydroxide delivery and their delivery times.

   All records shall be retained on-site for at least 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)

C) Emission Limits: (Basis: Regulation 2-2-212)

1. Deleted. Replace by Part C3.

2. Deleted. Emission points definition.

3. The emission of Nitrogen Oxides into the atmosphere shall not exceed 2.3 lb/ton of clinker as determined on a 30-operating day rolling average. (Basis: Regulation 9-13)

4. The owner/operator of S-154 shall not exceed the six month, 24-hour rolling average (or 182-day rolling average) of ~~68~~106 ppmv of ammonia, dry at 7% oxygen (96 ppmv baseline plus 10 ppmv ammonia slip). This ammonia limit serves as an indication that A-157, Selective Non-catalytic Reduction (SNCR) system, may not be performing adequately. The owner/operator shall report any exceedance in the form of a permit application within 30 days of discovery to determine whether an ammonia slip (10 ppmv above the baseline) exceedance has occurred. (Basis: Cumulative, Regulation 9-13)

5. The owner/operator of S-154 Cement Kiln shall abate the NOx emissions from S-154 at all times it is in use with properly maintained A-157 Selective Non-Catalytic Reduction (SNCR) System. (Basis: Cumulative Increase, Regulation 9-13)

D) Compliance Determination: (Basis: RACT)

1. All emission determinations shall be made in the as-found operating condition, except no compliance determination shall be established during or using periods of start-up, shut-down, or under breakdown conditions. (Basis: RACT)

2. For the purposes of mass emission limits, Nitrogen Oxides (NOx) shall be calculated as NO2 on a dry basis. (Basis: RACT)

3. The following expression shall be used to convert uncorrected observed volume in parts per million of NOx to pounds of NOx per hour produced at standard conditions of 70 degrees F. and 29.92 inches of mercury: (Basis: RACT)

[(PPMvNOx)(46lb/lb mole)(Exhaust Flow Rate (sdcfm))(60 min/hr)]/ [386 cf/lb mole * 1E6] = lbs NOx/hr

E) Monitoring and Records: (Basis: RACT)

1. The owner/operator shall maintain in good working order and operate an in-stack continuous emission monitoring system (CEMS) to demonstrate compliance with the emission limit in Part C.3. and C.4 by measuring the emission of nitrogen oxides (NOx) and ammonia (NH3). The in-stack

continuous emission monitoring system shall be located on an emission point of the Kiln (P-154) and shall continuously monitor and record NOx and NH3 emissions in a manner approved by the APCO and the EPA Administrator whenever the kiln is operating as defined in Part D.1. above. (Basis: Cumulative Increase)

2. The owner/operator shall maintain daily records of clinker production and heat input including the type of fuel burned and the quantity of fuel burned expressed as millions of BTU per ton of clinker. The amount of clinker produced shall be totaled so that the limit in Part B is not exceeded. (Basis: RACT)

3. The owner/operator shall maintain hourly continuous emission monitoring records for the NOx and NH3 monitoring systems 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 NOx and ammonia 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.

4. The CEMS records as well as records of clinker production and heat input shall be maintained at the facility for at least five years and shall be made available to the APCO or the EPA Administrator upon request. (Basis: Cumulative Increase)

F) Manual of Procedures

1. Determination of Nitrogen Oxides: The methods by which samples of exhaust gases are collected and analyzed to determine concentrations of nitrogen oxides are set forth in the District Manual of Procedures, Volume IV, ST-13A or 13B. EPA Method 7E may also be used to determine compliance. A source shall be considered in violation if the emissions measured by any of the referenced test methods exceed the standards of this rule. (Basis: Manual of Procedures, Volume IV)

Determination of ammonia: The methods by which samples of exhaust gases are collected and analyzed to determine concentration of ammonia are set forth in the District Manual of Procedure, Volume IV, ST-1B and EPA method 350.3 and by the parametric monitors that have been installed pursuant to Section 9-13-501 and meet the requirements of EPA Preliminary Performance Specification PPS-001 for Ammonia CEMs.

2. The 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)

RECOMENDATION

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

A-157 Selective Non-Catalytic Reduction (SNCR) System to abate S-154 Precalciner Kiln

THB:H\Lehigh\HansonPermanente\25447, 26350 and 26247 amendment

ADDENDUM # 2 - EVALUATION REPORT
Lehigh Southwest Cement Company
Applications # 26247 - Plant #17

24001 Stevens Creek Blvd.
Cupertino, CA 95014

BACKGROUND

Lehigh Southwest Cement Company has applied for Authorities to Construct/Permits to Operate for the following equipment:

P-154 *Cement Kiln Stack, 295 feet height x 15 feet diameter*
P-166 *Clinker Cooler Stack, 116 feet height x 7 feet diameter*

Lehigh started up the two new stacks on February 13, 2015. Lehigh arranged a series of source tests to demonstrate compliance with all applicable requirements. Per letter dated February 11, 2015, the District added Parts 25 and 26 to Lehigh's Condition #603 to address commissioning period that is a normal part of startup for a Continuous Emission Monitor (CEM) until all source tests results and CEMs verified by the District Source Test Section.

On June 9, 2015, the District finalized the approval of the Lehigh's CEM system. The District certified the SICK Maihak Model MCS100E for NOx, SO2, FS100 flow monitors and Tekran Model 3300 (Tekran 2537 Mercury Analyzer) for mercury. Therefore, Lehigh satisfied the CEMs operational and procedural requirements of District Regulation 1, Section 522.

In February 2015, after the installation of two new stacks (Kiln P-154 and Clinker Cooler P-166), Avogadro Group performed all required source tests for Lehigh to demonstrate compliance with Regulation 9-13 standards. Lehigh met all Regulation 9-13 requirements under source test # OS-5698 through 5704.

STANDARDS AND CORRELATIONS

Lehigh established the following operating correlations in 2013 when Regulation 9-13 became effective and when the Authority to Construct was issued. Since the new stacks with new configuration were built and operated in February 2015, it is necessary for Lehigh to re-establish the operating parameters before the Permit to Operate is issued.

Revised THC and HAP Correlation in Condition #603, Part 21 – using the same calculation method as of 2013 correlation.

The new Regulation 9-13 requires Lehigh to develop a correlation to monitor total hydrocarbon (THC) and total organic hazardous air pollutants (HAP). This correlation is developed by taking actual HAP source tests and compared them to the THC data from CEM. According to NESHAP Subpart LLL guideline, the THC should be scaled as follows:

THC = 75% of HAP standard x (TWA of THC from CEM /TWA actual HAP)
= 9 ppmv x (56.66 ppmv/1.59 ppmv) = 322 ppmv as Propane (C_3H_8) at 7% O2

Where:
75 % of standard = 12 ppmv HAP x 75% = 9 ppmv
Time Weighted Average (TWA) = 85% mill on and 15 % mill off
See attached spread sheet for details. The THC and HAP should be reset at least once every 30 months by source testing.

Revised Dioxins/Furans (D/F) and Temperature in Condition #603, Part 22
The new Regulation 9-13 requires Lehigh to monitor D/F by using temperature as its surrogate. The temperature (200 ^{o}C or 392 ^{o}F) of the kiln exhaust gas at the inlet to the PM control device from source tests in the past is used to demonstrate compliance with D/F concentration below 0.02 ng-TEQ/dscm. This temperature will be reset at least once every 30 months.

No Change on Dry/slurry Lime Injection and HCl Correlation in Condition #603, Part 11
The new Regulation 9-13 requires Lehigh to monitor HCl. EPA finalized its Performance Specification 18 for HCl monitor. It went out for public review on May 14, 2014 and added to the Federal Register on July 7, 2015. Since the HCl specification is still in its early stage and all Lehigh verification tests were performed in February 2015, the District will continue to accept dry lime injection rate as a surrogate for HCl until the HCl CEM is verified and approved by District Source Test Section in the next scheduled test. Lehigh conducted trial tests from October 23 to 26, 2013 for slurry and dry lime injections. See attached Lehigh's trial conducted on October 23 through 26, 2013.

With one raw mill running and one raw mill down, 1.5 lb/min is injected in the side with one raw mill running and 3.5 lb/min is injected in the side with one mill down for a total of 5.0 lb/min. With both raw mills down, 3.5 lb/min is injected into each side for a total of 7.0 lb/min. Lehigh operates the raw mill at 77% mill on and 23 % mill off; therefore, the dry/slurry lime will be conditioned at 2.8 ton/day for both trains. With these rates, the HCl emissions will be less than 3 ppm per in-house study performed by Lehigh.

Mill On = 1.5 lb/min/train x 2 trains x 60 min/hr x 24 hr/day = 4,320 lb/day
Mill Off = 3.5 lb/min/train x 2 trains x 60 min/hr x 24 hr/day = 10,080 lb/day
Mill On/Off = 4,320 lb/day x 77% + 10,080 lb/day x 23% = 5,645 lb/day or 2.8 ton/day

Addition of PM and its Voltage in Condition #603, Parts 2 7 and 28
The new Regulation 9-13 requires Lehigh to perform source tests to demonstrate compliance with PM emissions of 0.04 lb/ton of clinker produced at the pre-calciner Kiln and Clinker Cooler. The rule allows Lehigh to use the average of 3 run tests to demonstrate compliance initially and annually. Lehigh demonstrated the compliance for PM10 emissions in February 2015 source tests.

Deletion of Adjusted Exhaust Concentration in Condition #603, Part 23
Lehigh verified that the new booster fan (700 bhp) installed at the kiln stack will not increase or dilute the exhaust air flow rate. It only served to boost the exhaust air out of the new tall stack. Therefore, the District will remove Condition #605, Part 23 that required Lehigh to adjust the diluted exhaust concentration.

Deletion of conditions for Commissioning Period during Startup in Condition #603, Parts 25 and 26
The District added Parts 25 and 26 to Lehigh's Condition #603 to address commissioning period that is a normal part of startup for a Continuous Emission Monitor (CEM) until all source tests results and CEMs verified by the District Source Test Section. In June 2015, Source Test Section has approved all source test reports, so Part 25 and Part 26 conditions are no longer valid and removed.

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, A/N 22953, A/N 25447, and A/N 26247

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 2.08 pounds of hexavalent chromium per any consecutive 12-month. (Basis: Toxics)

6. Deleted, (Part 8 replaces quarterly composition analysis of coke)

7. Deleted (flow meters maintenance and service)

*8. The owner/operator of S-154 shall conduct a source test at the exhausts (P-154) of Dust Collectors (A-141, A-142, A-171 and A-172) to demonstrate subsequent compliance with Parts 5, 11, 16, 21 and 22. 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, ammonia (NH3), Hydrochloric Acid (HCl), and total hydrocarbon (THC) at least once per calendar year. The owner/operator shall also test for dioxinsfurans (D/F), and total organic HAP (formaldehyde, benzene, toluene, styrene, m-xylene, p-xylene, o-xylene, acetaldehyde and napthalene) at least once every 30 months. 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. (Basis: Periodic Monitoring, Regulation 1-502, Toxics)

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 monthly. 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 of S-154 and A-154 Lime Dry/Slurry Injection System shall not exceed 3 ppmv of HCl, at 7 percent oxygen, over 30-operating day rolling average. The owner/operator may use the hydrate lime injection rate as a parametric monitor for HCl while the Performance Specification for HCl is being developed. The owner/operator of S-154 and A-154 shall not operate below 2.8 ton of dry/slurry lime injection per day, over 30-operating day rolling average. (Basis: Cumulative increase, NESHAP Subpart LLL ~~effective September 9, 2015~~, Regulation 9-13)

12. The owner/operator of the Lime Dry/Slurry Injection system (A-154) shall install, operate and maintain a District-approved continuous hydrochloric acid (HCl) emission monitors at the exhausts of Dust Collectors (P-154) as suggested by the manufacturer's recommendation. (Basis: Regulation 2-6-503, NESHAP Subpart LLL ~~effective September 9, 2015~~, Regulation 9-13).).

~~*~~13. The owner/operator shall maintain hourly continuous emission monitoring records for the Hg, HCl, THC, PM, Temperature, Opacity, and Volumetric Flow monitoring systems in a form suitable for inspection and approved by the APCO and the EPA administrator. Such records shall include, but are not limited to:

(ix) The continuous emission monitoring measurements for Hg, HCl and THC expressed in ppm (1-hour average);
(x) The production rates of clinker (tons/hr and tons/month);
(xi) 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,
(xii) The results of performance testing, evaluation, calibration, checks, adjustments, and maintenance of the continuous emission monitoring system.
(Basis: Recordkeeping~~H&S Code 44300 et seq.~~)

~~*~~14. The owner/operator shall maintain the Hg, HCl, THC, PM, Temperature, Opacity and Volumetric Flow 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~~, H&S Code 44300 et seq.)~~)

~~*~~15. The Hg, HCl, THC, PM, opacity and Volumetric Flow Continuous Emission Monitor System (CEMs) shall meet the requirements of District Manual of Procedures, Volume V, Continuous Emission Monitoring, Policy and Procedures. All CEMS shall be operated and maintained as suggested by the manufacturer's recommendations. (Basis: Regulation 1-522, 1-602; Manual of Procedures, Volume V)

~~*~~16. The owner/operator of S-154, S-171 and S-172 shall not emit more than the followings during normal operation:
(i) 55 pounds of mercury per million tons of clinker produced , over 30-operating day rolling average;
(ii) Maximum 88 pounds of mercury per year (12-month rolling average)
(Basis: ~~H&S Code 44300 et seq.,~~ Regulation 9-13, NESHAP Subpart LLL).

~~*~~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: Regulation 9-13, NESHAP Subpart LLL~~H&S Code 44300 et seq.).~~

*18. Deleted, interim mass balance for mercury before CEM is installed.

*19. Deleted, interim mass balance for mercury before CEM is installed

~~*~~20. The owner/operator of the Hg, NH3, HCl, THC, PM , opacity and Volumetric Flow 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.~~Regulation 9-13, NESHAP Subpart LLL)

~~*~~21. The owner/operator of S-154 shall not emit more than 12 ppmv of total organic HAPs, at 7 percent oxygen over 30-operating day rolling average. The owner/operator may use the total hydrocarbon (THC) CEMS as a parametric monitor for the total organic HAP as approved by the District and established by source tests. The owner/operator of S-154 and A-154 shall not exceed ~~13,500~~322 ppmv of THC, over 30-operating day rolling average. A correlation between total organic HAP and THC concentration shall be determined at least once every 30 months where the total HAP shall be set during that compliance period. (Basis: Cumulative increase, NESHAP Subpart LLL~~ effective September 9, 2015~~, Regulation 9-13)

~~*~~22. The owner/operator of S-154 shall not emit more than 0.2 ng-TEQ/dscm of dioxins and furans (D/F), at 7 percent oxygen over 24-hour rolling average. The owner/operator may use temperature CEMS as a parametric monitor for the D/F as approved by the District and established by source tests. The kiln exhaust gas at the inlet to the PM control device shall not exceed ~~198~~ 200 °C (~~388~~ 392 °F), over 24-hour rolling average. A correlation between D/F concentrations and temperature shall be determined at least once every 30 months where an operating temperature shall be set during that compliance period. (Basis: Cumulative increase, NESHAP Subpart LLL~~ effective September 9, 2015~~, Regulation 9-13)

23. ~~In order to adjust for the air dilution, the adjusted air flow rate will be calculated using the booster fan's curve in Attachment A. The owner/operator of the booster fan shall monitor and record the fan operating total pressure (kPa) or its volumetric flow rate in Standard Cubic Feet per Minute (SCFM) on a daily basis. The adjusted concentration in ppmv shall~~

be used to calculate total emissions and demonstrate compliance with Regulation 9-13 standards. The owner/operator of S-154 and S-161 shall adjust the measured concentration (ppmv) of all CEMS as follows: (Basis: Cumulative Increase)

ppmv (adjusted) = ppmv (measured) x [SCFM measured / (SCFM measured-SCFM fan)]Deleted, there was no air dilution.

24. The owner/operator of S-154 and S-161 shall produce the CEM results in the data format specified with the appropriate calculation method used as suggested by the District's Source Test Section. All monthly CEMS data shall be reported using the District approved same format. specified in the source test's letter in Attachment B. The Attachment B will be developed and approved by Source Test Section before the permit to operate for new stacks is issued (Basis: Cumulative Increase)

25. No later than two weeks from the start-up of the Kiln and Clinker Stacks (P-154 and P-166), the owner/operator shall conduct initial District approved source tests on P-154 and P-166 to determine compliance with all emission limits. Following these initial source tests, source tests shall be repeated at an interval of not greater than 21 calendar days until the Continuous Emission Monitors (CEMS) are certified by the District. The owner/operator shall notify the District's Source Test Section in writing of the source test protocols at least 7 days prior to the initial source testing, and at least 7 days prior to any further source testing if and only if the source test protocols differ from the initial source test protocols. At least 7 days prior to the initial source testing, the owner/operator shall notify the District's Source Test Section in writing of the projected test dates for initial and subsequent source tests described in this Part 25. The owner/operator shall submit a summary of source test results at the earliest opportunity to the District staff but no later than 45 days after the source test is completed. (Basis: Cumulative Increase, Regulation 1-522 and 1-523, Regulation 9-13)Deleted, startup condition.

26. If the owner/operator is unable to meet the schedule set forth in Part 25, due to events that are beyond its reasonable control, the owner/operator may request a modification of the schedule to address the unforeseen events. Events beyond the owner/operator's reasonable control include weather conditions, labor strikes, CEMS instrumentation failure, and the failure despite diligent efforts to schedule a source test by a third party company. The district may grant a request for a modified schedule without revising this permit condition. (Basis: Regulation 2-1-403)Deleted, startup condition.

RECOMENDATION

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

A-157 Selective Non-Catalytic Reduction (SNCR) System to abate S-154 Precalciner Kiln

Thu H. Bui
Senior Air Quality Engineer
Engineering Division

date:_____

THB:H\Lehigh\HansonPermanente\26247eAmendment#2

EVALUATION REPORT
Lehigh Southwest Cement Company
Application #26277 - Plant #17

24001 Steven Creek Blvd.
Cupertino, CA 95014

I. BACKGROUND

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

A-154 Lime Dry/Slurry Injection System abate existing Calciner Kiln (S-154)

Lehigh installed the lime slurry injection system to control the hydrochloric acid (HCl) emissions at the kiln to comply with District Regulation 9-13, and in anticipation of the revised Maximum Achievable Control Technology (MACT) standards for Portland Cement Manufacturing Industry (NESHAP - 40 CFR Parts 60 and 63), which will be effective in September 9, 2015. Hydrated lime and hydrated lime slurry injection has been utilized in the cement industry for SO2 emissions reduction related to higher sulfur containing raw materials. Lime utilization has also been shown to reduce plume intensity associated with the detached plumes at the exhaust stacks in the areas where the raw materials are high in ammonia. The initial application was intended to use the powder hydrate lime and mix it with water before spraying it into the kiln's exhaust flue gas at the downcomer of the Preheater/Calciner Tower at 400^{o}C or 752^{o}F.

Lehigh received the Authority to Construct for the Lime Slurry Injection System on August 2, 2012 under Application # 21753. During the startup period and trial study on October 23-26, 2013, Lehigh found the dry lime appears to have the same control efficiency as the slurry lime, between 20 and 30 percent. The dry lime system has less moving parts and less trouble to handle; thus it is more dependable. As a result, Lehigh would like to operate the dry lime injection system and retain the slurry lime injection system as a backup.

The new Regulation 9-13 requires Lehigh monitor HCl, but EPA has not adopted the Performance Specification for HCl. EPA is currently proposing Performance Specification 18 for HCl monitor. It is out for public review on May 14, 2014 and expected to be added to the Federal Register by September 9, 2015. In the meantime, the District will accept dry lime injection rate as a surrogate for HCl.

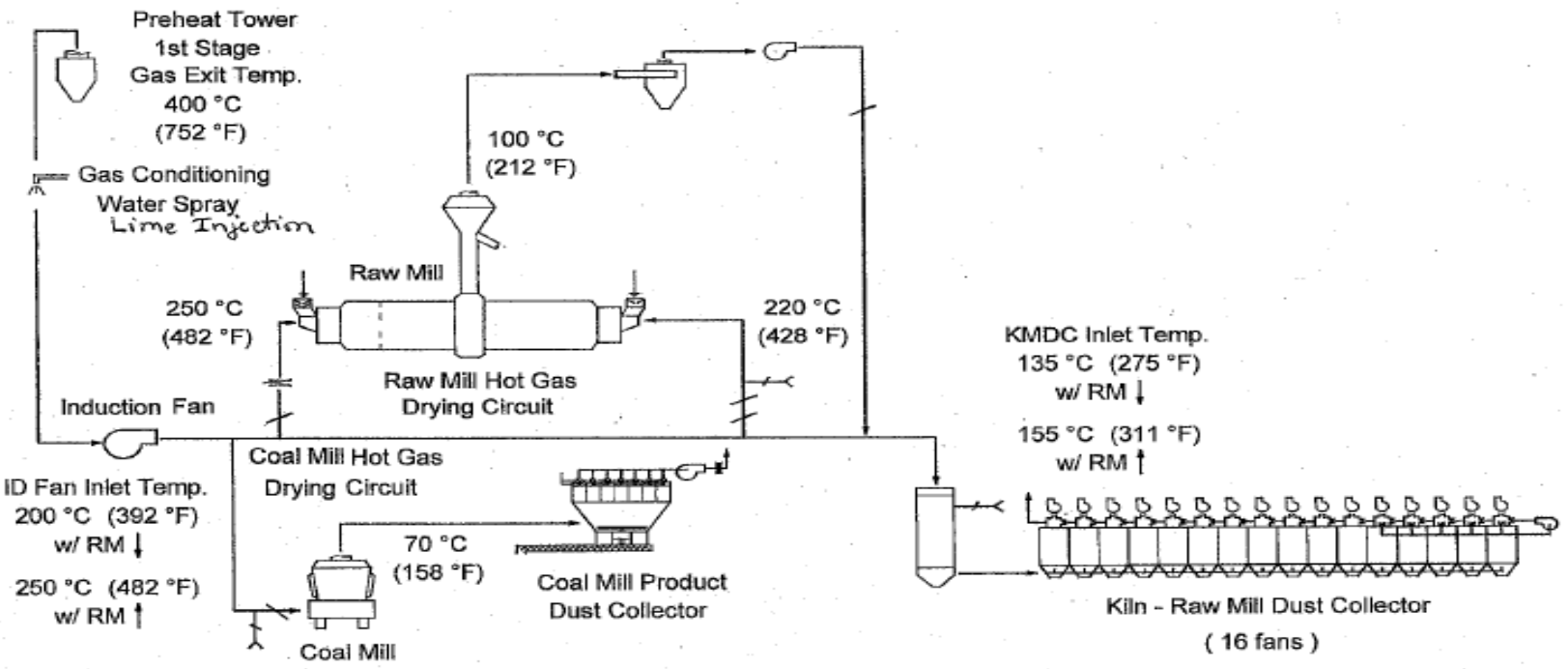
Lehigh injects the dry lime using the same duct as the slurry injection, but at 125 feet downstream of the slurry injection site. With a raw mill running on each side, 1.5 lb/min is injected in each side. With one raw mill running and one raw mill down, 1.5 lb/min is injected in the side with one raw mill running and 3.5 lb/min is injected in the side with one mill down for a total of 5.0 lb/min. With both raw mills down, 3.5 lb/min is injected into each side for a total of 7.0 lb/min. Lehigh operates the raw mill at 77% mill on and 23 % mill off; therefore, the dry/slurry lime will be conditioned at 2.8 ton/day for both trains. With these rates, the HCl emissions will be less than 3 ppm per in-house study performed by Lehigh. See attached Lehigh's trial conducted on October 23 through 26, 2013.

Mill On = 1.5 lb/min/train x 2 trains x 60 min/hr x 24 hr/day = 4,320 lb/day
Mill Off = 3.5 lb/min/train x 2 trains x 60 min/hr x 24 hr/day = 10,080 lb/day
Mill On/Off = 4,320 lb/day x 77% + 10,080 lb/day x 23% = 5,645 lb/day or 2.8 ton/day

Since there will not be any emission and health risk increases with the change of operation, the District will consider the dry lime injection as an alteration to the slurry lime permit application. Lehigh will import the same 5,800 tons of hydrated lime per year. Lehigh submitted the dry lime injection system under Permit Application #26277. This application serves as a record for the requested change and will be permitted in combination with Application # 21753 when the Permit to Operate is issued.

Kiln - Preheat Tower Exhaust Gas Flow

Diagram Illustrates One Of The Two Exhaust Gas Streams



II. EMISSION CALCULATIONS

This alteration project has no emission increase.

III. PLANT CUMULATIVE INCREASE SINCE 4/5/91

This alteration project has no emission increase.

IV. TOXIC SCREENING ANALYSIS

A risk screen is not required for this project because there is no toxic emission increase from this project per Regulation 2-5.

V. BEST AVAILABLE CONTROL TECHNOLOGY

BACT does not apply for an alteration project per Regulation 2-2-301.

VI. OFFSETS

Offsets are not required per Regulation 2-2-303. This alteration project has no emission increase.

VII. STATEMENT OF COMPLIANCE

The owner/operator of source S-154 and A-154 is expected to continue to comply with the requirements of District Regulations 9-13 "Portland Cement Manufacture", 1-301 "Public Nuisance" and District Regulation 6 "Particulate Matter and Visible Emissions". The sources that are abated by the baghouses are conditionally permitted to meet these requirements.

National Emissions Standards for Hazardous Air Pollutants Standards (NESHAPS)
The owner/operator of source S-154 is 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 considered to be categorically exempt from CEQA under Regulation 2-1-312.3 for permit applications for projects undertaken for the sole purpose of bringing an existing facility into compliance with newly adopted regulatory requirements of the District's Regulation 9-13 or of any other local, state or federal agency. Although, the NESHAP 40 CFR 60, Subpart LLL for Portland Cement will not be effective until 2015, that revision appears certain to occur, and Lehigh's efforts to achieve early compliance will benefit the environment. This project is also 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 over 1,000 ft from the nearest public school and is therefore not subject to the public notification requirements of Regulation 2-1-412.

PSD is not applicable because the project maximum air quality impacts of the lime dry/slurry project is not a major modification per Regulation 2-2-221 and do not exceed the significance levels for air quality impacts, as defined in Regulation 2-2-233.

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, ~~and~~ A/N 21753, and A/N 26277.

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]

13. 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]

14. 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]

15. The owner / operator ~~shall operate~~of S-154 and A-154 Lime Dry/Slurry Injection System shall not exceed 3 ppmv of HCl, at 7 percent oxygen, over 30-operating day rolling average. The owner/operator may use the hydrate lime injection rate as a parametric monitor for HCl while the Performance Specification for HCl is being developed. The owner/operator of S-154 and A-154 shall not opeate below 2.8 ton of dry/slurry lime injection per day, over 30-operating day rolling average. ~~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 September 9, 2015, Regulation 9-13). (Effective upon adoption of the revised NESHAP Subpart LLL and its compliance date).

16. 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 September 9, 2014, Regulation 9-13). ~~(Effective upon adoption of the revised NESHAP Subpart LLL and its compliance date).~~

13. 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.

14. 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)

15. 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)

IX. RECOMMENDATION

Issue a conditional Permit to Operate to Lehigh Southwest Cement Company for the following source and abatement devices:

A-154 Lime Dry/Slurry Injection System abate existing Calciner Kiln (S-154)

_____

Thu H. Bui
Senior Air Quality Engineer
Engineering Division

Date:_____

THB:disk-L\Lehigh\Hanson\26277\26277e\

EVALUATION REPORT
Lehigh Southwest Cement Company
Application #26350- Plant #17

24001 Stevens Creek Blvd.
Cupertino, CA 95014

I. BACKGROUND

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

A-157 Selective Non-Catalytic Reduction (SNCR) System to abate S-154 Precalciner Kiln

And to the Exemption of the following equipment:

S-158 Ammonia Hydroxide Storage Tank, 19% Ammonia Hydroxide, 30,000 gallons Capacity with Concrete Containment

Lehigh uses ammonia for the Selective Non-Catalytic Reduction (SNCR) system to control NOx emissions at the Kiln, S-154, which is required by Regulation 9-13 Portland Cement Manufacturing that was adopted on September 19, 2012 and becomes effective on September 9, 2013.

The 19% aqueous ammonia hydroxide will be trucked into Lehigh and stored in S-158, a fixed roof storage tank with concrete containment. Lehigh received the Authority to Construct the SNCR System on August 19, 2013 under Application 25447. At the same time, Lehigh also received the Exemption for Tank S-158 per Regulation 2-1-123.2 because S-158 stores or dispenses aqueous solution which contains less than 1 % (wt) of organic compounds.

Lehigh originally estimated the maximum amount of ammonia hydroxide usage would be 1,850,000 gallons per year. However, to ensure adequate removal of NOx, Lehigh would need 2,450,000 gallons per year of ammonia hydroxide. Therefore, Lehigh requested for an increase of 600,000 gallons per year of ammonia hydroxide at storage tank S-158. This would be an equivalent of 410 delivery trucks per year (an increase of 100 trunks per year), assuming each truck has approximately 6,000 tons capacity. Lehigh has previously discussed with the District about possible ammonia hydroxide's throughput increase if the estimated usage is not adequate for the purpose of NOx reduction before the Authority to Construct of SNCR Application # 25447 was issued.

This application will result in a small amount of PM10 emission increases from the dust entrainment from truck travel on dry paved roads within the plant. The maximum of one truck per day increase is expected for delivery of ammonia when the SNCR is installed. The proposed project is not expected to exceed the current level of service of the areas surrounding Lehigh. According to the CEQA (Initial Study/Negative Declaration for the District's Regulation 9-13), the ammonia slip limit of 10 ppmv and the traffic impacts associated with the proposed Regulation 9-13 will not cause substantial adverse environmental impacts.

Since ammonia is not a regulated pollutant and there will not be any health risk increases with the change of operation, the District considers this application as an alteration to the SNCR permit Application # 25447. This application serves as a record for the requested change and will be permitted in combination with Application # 25477 when its Permit to Operate is issued.

II. EMISSION CALCULATIONS

PM_{10} and $PM_{2.5}$ Dust Emissions Increase from 310 to 410 Trucks Travel within Lehigh

PM_{10} - 410 trucks (prorate from 310 trucks as shown below) = 410/310 x 23.5 = 31.08 lb/yr
$PM_{2.5}$ - 410 trucks (prorate from 310 trucks as shown below) = 410/310 x 5.76 = 7.61 lb/yr

PM_{10} and $PM_{2.5}$ Dust Emissions Increase from 310 Trucks Travel within Lehigh (taken from previous Application # 25447)

- PM_{10} emissions factors from the truck traffic on the paved roads within the plant are calculated from AP-42 Sections 13.2.1 (1/11).
- There will be water spraying on the unpaved road and the control efficiency is assumed to 70%.
- There are 0.28 x 2 = 0.56 vehicle miles traveled (VMT) per operating day and 0.56 VMT/day x 310 trucks/yr = 173.6 VMT/yr on the paved road.

Paved road:
E (PM_{10}) = $k[sL]^{0.91}[W]^{1.02}$ = 0.0022 $[8.2]^{0.91}$ X $[22.5]^{1.02}$ = 0.4505 lb/VMT (vehicle mile traveled) from Table 13.2.1-1 (Jan.11)
E ($PM_{2.5}$) = $k[sL]^{0.91}[W]^{1.02}$ = 0.0022 $[8.2]^{0.91}$ X $[22.5]^{1.02}$ = 0.1106 lb/VMT
k = particle size multiplier = 0.0022 for PM_{10}
k = particle zise multiplier = 0.00054 for $PM_{2.5}$
sL = road surface silt loading = 8.2 g/m^2
W = Average weight (ton) of travel vehicle the road = 22.5 tons

PM_{10} Daily Emissions = 0.4505 lb/VMT X 0.56 VMT/day X (1-0.7) = 0.076 lb/day

PM_{10} Annual Emissions = 0.4505 lb/VMT X 173.6 VMT/yr X (1-0.7) = **23.5 lb/yr**

$PM_{2.5}$ Daily Emissions = 0.1106 lb/VMT X 0.56 VMT/day X (1-0.7) = 0.019 lb/day

$PM_{2.5}$ Annual Emissions = 0.1106 lb/VMT X 173.6 VMT/yr X (1-0.7) = 5.76 lb/yr

III. PLANT CUMULATIVE INCREASE SINCE 4/5/91

The Databank shows the following cumulative increase for this plant.

	Current Ton/yr	New Ton/yr	New Total Lbs/yr	New Total Tons/yr
POC =	0.00	0.00	0.00	0.00
NO_X =	0.00	0.00	0.00	0.00
SO_2 =	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
PM_{10} =	0.012	0.003	7.58	0.0155
$PM_{2.5}$ =	0.0029	0.0009	1.86	0.0038

IV. TOXIC SCREENING ANALYSIS

A risk screen is not required for this project because there is no toxic emission increase from this project per Regulation 2-5.

V. BEST AVAILABLE CONTROL TECHNOLOGY

The installation of abatement A-157 SNCR is to reduce the NOx emissions at the cement kiln; therefore it did not trigger BACT per Regulation 2-2-301. BACT does not apply to S- 158 exempt tank per Regulation 2-2-301.

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 31.08 lbs/yr of PM_{10} from material handling of the SNCR system (both Application # 25447 and 26350). 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 and abatement A-157 is expected to continue to comply with the requirements of District Regulation 1-301 "Public Nuisance" and District Regulation 6-1 "Particulate Matter and Visible Emissions". The sources that are abated by the Dust Collectors are conditionally permitted to meet these requirements.

Source S-154 is subject to and expected to comply with Regulation 9-13-301.1 of 2.3 pounds per ton of clinker produced and Regulation 9-13-301.4 of 10ppmv, dry at 7% oxygen, above the baseline ammonia.

PSD

PSD does not apply because the emissions increases from the proposed project 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 and A-157 is 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 application is also for the sole purpose of bringing an existing facility into compliance with newly adopted regulatory requirements of the District per Regulation 2-1-312.3.

This project is expected to reduce NOx emissions. 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.

Compliance Assurance Monitoring (CAM) Plan

Source S-154 is subject to 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). The CAM plan will be revised in the next Title V revision.

VIII. CONDITIONS

COND # 11780

For Source 154 Cement Kiln, Plant 17

The following federally enforceable conditions limit the emissions of nitrogen oxides (NOx) from the cement manufacturing facility operated by the owner/operator, Lehigh Southwest Cement Company (previously Hanson Permanente Cement, Inc.) located at 24001 Stevens Creek Boulevard, Cupertino, Cal. 95014, for the purpose of complying with Section 182(f) of the Federal Clean Air Act. These conditions represent reasonably available control technology (RACT) for this activity.

A) Definitions: (Basis: CAA Section 182(f) – RACT)

1. Breakdowns shall be handled according to provisions established in BAAQMD, Regulation 1, Section 112 and Section 431 through 434. (Basis: RACT)

2. Cement Kiln is a device for the calcining and clinkering of limestone, clay and other raw materials in the manufacture of cement. (Basis: Applicability)

3. Clinker is a mass of fused material produced in a cement kiln from which the finished cement is manufactured by milling and grinding. (Basis: Applicability)

4. Start-up is that period of time when fuel is first introduced into the kiln to heat it and when the kiln operating temperature reaches normal operating limits and raw material feed begins. A startup period shall not last longer than 36 hours. (Basis: Regulation 9-13)

5. Short ton is equivalent to 2,000 pounds. (Basis: Compliance Verification Component)

5. Shut-down is that period of time when kiln raw material feed and fuel to the kiln begin to be decreased to reduce the kiln operating temperature until both feed and fuel are no longer fed into the kiln and it has ceased operation. A shutdown period shall not last more than 24 hours. (Basis: Regulation 9-13)

B) Production and Throughput Limits: (Basis: Regulation 2-2-212)

1. The owner/operator shall not process more than 1.6 million short tons per year of clinker. (Basis: Regulation 2-2-212 Cumulative Increase)

2. The owner/operator shall ensure the total throughput of aqueous ammonia hydroxide at S-154 does not exceed 2,450,000~~1,850,000~~ gallons in any calendar year. (Basis: Regulation 2-2-212 Cumulative Increase)

3. The owner/operator shall not exceed ~~310~~ 410 ammonia hydroxide delivery trucks in any consecutive 12 month period. (Basis: Cumulative Increase)

4. 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 daily throughput of clinker and monthly throughput of ammonia hydroxide.
   d. Total monthly number of truck for ammonia hydroxide delivery and their delivery times.

   All records shall be retained on-site for at least 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)

C) Emission Limits: (Basis: Regulation 2-2-212)

1. The maximum allowable emission rate for Nitrogen Oxides from all kiln emission points shall not exceed both (i) 527 lb/hour based on 30-operating day rolling average and (ii) a maximum concentration of 201 ppm (dry basis) based on 30-operating day rolling average without correction for oxygen. (Basis: RACT)

2. The kiln emission points affected include the stacks venting the kiln-mill system (dust collector 4-DC-7 through 4-DC-38), the kiln coal mill exhaust (dust collector 5-DC-5) and the precalciner coal mill exhaust (dust collector 5-DC-6). (Basis: RACT)

*3. The emission of Nitrogen Oxides into the atmosphere shall not exceed 2.3 lb/ton of clinker as determined on a 30-operatingday rolling average. (Basis: Regulation 9-13)

4. The owner/operator shall not exceed baseline emission level by more than 10 ppmv of ammonia, dry at 7% O2 on a 24-hour rolling average. The baseline ammonia must be established before the permit to operate for SNCR is issued. (Basis: Regulation 9-13).

D) Compliance Determination: (Basis: RACT)

1. All emission determinations shall be made in the as-found operating condition, except no compliance determination shall be established during or using periods of start-up, shut-down, or under breakdown conditions. (Basis: RACT)

2. For the purposes of mass emission limits, Nitrogen Oxides (NOx) shall be calculated as NO2 on a dry basis. (Basis: RACT)

3. The following expression shall be used to convert uncorrected observed volume in parts per million of NOx to pounds of NOx per hour produced at standard conditions of 70 degrees F. and 29.92 inches of mercury: (Basis: RACT)

[(PPMvNOx)(46lb/lb mole)(Exhaust Flow Rate (sdcfm))(60 min/hr)]/ [386 cf/lb mole * 1E6] = lbs NOx/hr

The exhaust flow rate using the readings from six new flow meters is calculated as follows:

[(flow11+ flow26)/2] x 20 + [(flow19 + flow34)/2] x12 – [(flow11 + flow19 + flow26 + flow34)/4] x2 + [flow from two Feed Mills] = Exhaust Flow Rate

There are 20 units that filter process air and exhaust to ambient
There are 12 units that filter process air and send approximately 85% to ambient and 15% to cleaning units
There are 2 units that are cleaning at any one time

E) Monitoring and Records: (Basis: RACT)

1. The owner/operator shall maintain in good working order and operate an in-stack continuous emission monitoring system (CEMS) to demonstrate compliance with the emission limit in Part C.1. and C.4 by measuring the emission of nitrogen oxides (NOx) and ammonia (NH3). The in-stack continuous emission monitoring system shall be located on an emission point of one of the Kiln-Mill baghouses and shall continuously monitor and record NOx and NH3 emissions in a manner approved by the APCO and the EPA Administrator whenever the kiln is operating as defined in Part D.1. above. (Basis: Cumulative Increase)

2. The owner/operator shall maintain daily records of clinker production and heat input including the type of fuel burned and the quantity of fuel burned expressed as millions of BTU per ton of clinker. The amount of clinker produced shall be totaled so that the limit in Part B is not exceeded. (Basis: RACT)

3. 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 NOx and ammonia 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.

4. The CEMS records as well as records of clinker production and heat input shall be maintained at the facility for at least five years and shall be made available to the APCO or the EPA Administrator upon request. (Basis: Cumulative Increase)

F) Manual of Procedures

1. Determination of Nitrogen Oxides: The methods by which samples of exhaust gases are collected and analyzed to determine concentrations of nitrogen oxides are set forth in the District Manual of Procedures, Volume IV, ST-13A or 13B. EPA Method 7E may also be used to determine compliance. A source shall be considered in violation if the emissions measured by any of the referenced test methods exceed the standards of this rule. (Basis: Manual of Procedures, Volume IV)

   Determination of ammonia: The methods by which samples of exhaust gases are collected and analyzed to determine concentration of ammonia are set forth in the District Manual of Procedure, Volume IV, ST-1B and EPA method 350.3 and by the parametric monitors that have been installed pursuant to Section 9-13-501 and meet the requirements of EPA Preliminary Performance Specification PPS-001 for Ammonia CEMs.

2. The 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)

VII. RECOMMENDATION

Issue a conditional alteration to Lehigh for the following equipment:

A-157 Selective Non-Catalytic Reduction (SNCR) System to abate S-154 Precalciner Kiln

And an exemption for the following equipment:

S-158 Ammonia Storage Tank, 19% ammonia hydroxide, 30,000 gallons capacity

2-1-123 Exemption, Liquid Storage and Loading Equipment: The following equipment is exempt from the requirements of Sections 2-1-301 and 302, provided that the source does not require permitting pursuant to Section 2-1-319.

123.2 Tanks, vessels and pumping equipment used exclusively for the storage or dispensing of any aqueous solution which contains less than 1 percent (wt) organic compounds. Tanks and vessels storing the following materials are not exempt.

- 2.1 Sulfuric acid with an acid strength of more than 99.0% by weight.
- 2.2 Phosphoric acid with an acid strength of more than 99.0% by weight.
- 2.3 Nitric acid with an acid strength of more than 70.0% by weight.
- 2.4 Hydrochloric acid with an acid strength of more than 30.0% by weight.
- 2.5 Hydrofluoric acid with an acid strength of more than 30.0% by weight.
- 2.6 More than one liquid phase, where the top phase contains more than one percent VOC (wt).

Thu H. Bui
Senior Air Quality Engineer
Engineering Division

*date:*_____

THB:E\Lehigh\HansonPermanente\26350e

ENGINEERING EVALUATION REPORT
LEHIGH SOUTHWEST CEMENT
APPLICATION NUMBER 027465

PROJECT SUMMARY:
Lehigh Southwest Cement (P# 17) has applied for an alteration of their permit to operate the following:

A-154: Lime Dry/Slurry Injection System abating Calciner Kiln (S-154)

The purpose of the alteration is to use the existing lime injection system to reduce sulfur dioxide (SO_2) from the cement kiln (in addition to hydrogen chloride (HCl). The proposed alteration will initially involve an increased lime injection rate and an evaluation of various injection points to optimize reductions in SO_2 emitted from the kiln stack. Once the optimal injection point(s) and injection rate(s) for maximum SO_2 control have been determined and the effectiveness of the system has been demonstrated, a 30-day rolling average emission limit for SO_2 (lb/ton of clinker) will be established for the kiln. The alteration may also eventually necessitate the need for a new Lime Storage Bin to augment the existing Lime Storage Bin S-167.

The application meets the requirements for and will be processed under the provisions of the Accelerated Permitting Program (Regulation 2-1-106).

BACKGROUND:
As part of an anticipated Consent Decree currently being negotiated with Lehigh over past violations of the Clean Air Act, US EPA intends to impose a "Test-and-Set" protocol on Lehigh to reduce SO_2 emissions from the cement kiln through enhanced lime injection. The protocol calls for Lehigh to design and optimize the kiln lime injection to substantially reduce SO_2 emissions from current levels. The Lime Injection System was initially designed to control emissions of HCl from the kiln in order to comply with the requirements of Regulation 9-13-301.8. However, hydrated lime and hydrated lime slurry is commonly used in the cement industry to control SO_2 emissions related to sulfur compounds indigenous to quarried limestone, the raw material for cement.

In accordance with the "test-and-set" requirements of the possible future Consent Decree Lehigh intends to expand and optimize the system to better control emissions of sulfur dioxide (SO_2). In order to do so, Lehigh needs flexibility from the BAAQMD to alter the existing system.

EMISSIONS DISCUSSION:
Except for a small potential increase of particulate from A-167* (the baghouse controlling emissions from the lime storage bin S-167) due to increased throughput, there will be no increase of pollutants from this project. A substantial decrease in SO_2 emissions from the kiln is anticipated although not yet quantifiable.

* PM10/truck load = 0.0013 gr/dscf x 1 lb/7000 grains x 2,000 scf/min x 60 min per truck
= 0.02 lb per additional lime truck load

It will be necessary to increase the number of lime delivery trucks to supply the increased injection rate, but the total number of trucks (cement, lime, activated carbon) to the facility will be maintained below the current facility limit of 70,000 per consecutive 12-month period (Condition #24626, part 5). Therefore, there is no expansion of truck traffic beyond what is currently allowed.

CUMULATIVE EMISSIONS INCREASE:
There is a negligible PM10 emissions increase from this alteration due to increased lime throughput.

CEQA:
In accordance with Regulation 2-1-312 “Other Categories of Exempt Projects” the proposed permit alteration is exempt from CEQA review as follows:

312.2 “Permit applications to install air pollution control or abatement equipment”.
312.3 “Permit applications for projects undertaken for the sole purpose of bringing an existing facility into compliance with newly adopted regulatory requirements of the District or of any other local, state or federal agency.
312.6 “Permit applications relating exclusively to the repair, maintenance or minor alteration of existing facilities, equipment or sources involving negligible or no expansion of use beyond that previously existing”.

Notice of Exemption from CEQA (State CEQA Guidelines)
BAAQMD has prepared a Notice of Exemption from CEQA to be filed with the Santa Clara County Clerk-Recorder as follows:

Finding of and Citation to Basis for Exemption: The Air District has determined that this action is exempt from CEQA because the permitting of the project involves no or negligible expansion of use beyond that existing at the time of the Air District’s CEQA determination (CEQA § 21084; Guidelines § 15301).

Reasons for Exemption: Issuance of this Permit Alteration does not authorize expansion of the existing use of the cement kiln. It will be necessary to increase the number of lime delivery trucks to supply the increased injection rate, but the total number of trucks (cement, lime, activated carbon) to the facility will be maintained below the current facility limit of 70,000 per consecutive 12-month period (Condition #24626, part 5). Therefore, there is no expansion of truck traffic beyond what is currently allowed. The permit action does not involve any change to the type or amount of material processed by the facility. As a consequence, this permit action is subject to the “Class 1” exemption (Guidelines § 15301) because it involves only a negligible or no expansion of the use of an existing facility.

REGULATION 2, RULE 2, NEW SOURCE REVIEW (NSR):
BACT, Offsets, and PSD requirements are not triggered by this application.

REGULATION 2, RULE 5, TOXICS NSR:
A health risk screening analysis (HRSA) is not required for this application. There will be no increase of toxic air contaminants.

PERMIT CONDITIONS:

COND# 24626
For S-167 Lime Bin, abated by A-167 dust collector
Amended by A/N 22953, A/N 27465

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)~~Deleted, (lime throughput increase potentially mandated by Consent Decree with US EPA to reduce SO2)

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 trucks, 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 trucks 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 test 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)

RECOMMENDATION:
It is recommended that a Permit Alteration be issued to Lehigh Southwest Cement for the following:

A-154: Lime Dry/Slurry Injection System abating Calciner Kiln (S-154)

By: _____
Ted Hull
Principal Air Quality Engineer

ENGINEERING EVALUATION REPORT
LEHIGH SOUTHWEST CEMENT
APPLICATION NUMBER 027936

PROJECT SUMMARY:

Lehigh Southwest Cement (P# 17) has applied for an alteration of their permit to operate the following:

A-154: Lime Dry/SIurry Injection System abating Calciner Kiln (S-154)

Lehigh has requested that the permit be altered to allow the use of Soda Ash (sodium carbonate) or Sodium Bicarbonate (in addition to Lime) to better control sulfur dioxide (S02) and hydrogen chloride (HCI) emissions from the cement kiln. The application also includes a request for an additional dry material storage bin as follows:

S-613: Storage Bin for Lime/ Soda Ash/ Sodium Bicarbonate; 55 Ton Capacity, Abated by A-613 Pulse Jet Baghouse

A-613: Dustex Pulse Jet Baghouse; 2,000 CFM

The application meets the requirements for and will be processed under the provisions of the Accelerated Permitting Program (Regulation 2-1-106).

BACKGROUND:

As part of an anticipated Consent Decree currently being negotiated with Lehigh over past violations of the Clean Air Act, US EPA intends to impose a "Test-and-Set" protocol on Lehigh to reduce S02 emissions from the cement kiln through enhanced lime injection. The protocol calls for Lehigh to design and optimize the kiln lime injection system to substantially reduce S02 emissions from current levels. This application adds Soda Ash and Sodium Bicarbonate as potential injectable materials to control S02.

In accordance with the "test-and-set" requirements of the possible future Consent Decree Lehigh intends to expand and optimize the system to better control emissions of sulfur dioxide (SO). In order to do so, Lehigh needs flexibility from the BAAQMD to alter the existing system.

EMISSIONS DISCUSSION:

The new Storage Bin S-613 will be used to augment the existing Storage Bin S-167 to allow the storage of additional dry materials (i.e. soda ash, sodium bicarbonate) in addition to dry lime. Emissions from the storage bins is in the form of PMI 0 from the baghouse each time the bin is filled. Since the total truck trips to the facility are limited to 70,000 per year, allowable truck trips are a limiting factor in PMIO emissions from S-167 and S-613. Controlled PMIO emissions from S-167 and S-613 are estimated as follows:

* PM10/truck load = 0.0013 gr/dscf x 1 lb/7000 grains x 2,000 scf/min x 60 min per truck
  = 0.02 1b per additional lime truck load

Since each truck takes approximately 1 hour to unload, the potential to emit for each storage bin is 175.2 lb/yr PM10 (8,760 hrs/yr x 0.02 lb/hr).

It will be necessary to increase the number of dry material delivery trucks to supply the increased injection rates, but the total number of trucks (cement, lime, activated carbon, soda ash, sodium bicarbonate) to the facility will be maintained below the current facility limit of 70,000 per consecutive 12-month period (Condition #24626, part 5). Therefore, there is no expansion of truck traffic beyond what is currently allowed.

CUMULATIVE EMISSIONS INCREASE:

As discussed above, the maximum potential PMIO increase for this application is 175.2 lb/yr (0.088 tons/yr).

CEQA:

In accordance with Regulation 2-1-312 "Other Categories of Exempt Projects" the proposed permit alteration is exempt from CEQA review as follows:

312.2 "Permit applications to install air pollution control or abatement equipment".
312.3 "Permit applications for projects undertaken for the sole purpose of bringing an existing facility into compliance with newly adopted regulatory requirements of the District or of any other local, state or federal agency.
312.6 "Permit applications relating exclusively to the repair, maintenance or minor alteration of existing facilities, equipment or sources involving negligible or no expansion of use beyond that previously existing".

Finding of and Citation to Basis for Exemption: The Air District has determined that this action is exempt from CEQA because the permitting of the project involves no or negligible expansion of use beyond that existing at the time of the Air District's CEQA determination (CEQA S 21084; Guidelines S 15301).

Reasons for Exemption: Issuance of this Permit Alteration does not authorize expansion of the existing use of the cement kiln. It will be necessary to increase the number of lime, soda ash, sodium bicarbonate delivery trucks to supply the increased injection rate, but the total number of trucks to the facility will be maintained below the current facility limit of 70,000 per consecutive 12-month period (Condition #24626, part 5). Therefore, there is no expansion of truck traffic beyond what is currently allowed. The permit action does not involve any change to the type or amount of material processed by the facility. As a consequence, this permit action is subject to the "Class 1" exemption (Guidelines S 15301) because it involves only a negligible or no expansion of the use of an existing facility.

REGULATION 2, RULE 2, NEW SOURCE REVIEW (NSR):

BACT: is not triggered by this application because highest day PMIO emissions are less than 10 lb/day.

Offsets: for PMIO are required for S-613 because there is a small cumulative increase and Lehigh has the potential to emit more than 100 tons per year of PM and S02. Offsets are to be deferred in accordance with Regulation 2-2-421. Offsets are to be provided at a 1:1 ratio.

PSD: is not triggered because the PM 10 increase is not "significant" as defined by Regulation 2-2-227.

REGULATION 2, RULE 5, TOXICS NSR:

A health risk screening analysis (HRSA) is not required for this application. There will be no increase of toxic air contaminants.

PERMIT CONDITIONS:

It is recommended that Permit Condition #24626 be modified as shown below to add the new Storage Bin and Dust Collector.

COND# 24626

For Dry Material Storage Bins s-167 and S-613, abated by Dust Collectors A-167 and A-613

Amended by A/N 22953, A/N 27465 A/N 27936

1. The owner/operator shall ensure visible particulate emissions from S-167 and S-613 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 and S-613 flow under negative pressure to Dust Collector A-167 or A-613. The owner/operator shall equip each 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 each Baghouse A-167 and A-613 does not exceed 0.0013 grain/dscf. (Basis: Regulation 2-2-212 Cumulative Increase)

4. Deleted, (lime throughput increase potentially mandated by Consent Decree with US EPA to reduce SO2)

5. The total amount of cement trucks, lime trucks, soda ash/sodium bicarbonate trucks and powdered activated carbon trucks shall not exceed 70,000 trucks in any consecutive 12 month period. (Basis: To Avoid Cumulative Increase of PMIO)

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 trucks 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 Baghouses, A-167 and A-613 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 A-613, and once every five years thereafter, the owner/operator shall conduct an initial District approved source test 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)

RECOMMENDATION:

It is recommended that a Permit Alteration be issued to Lehigh Southwest Cement for the following:

A-154: Lime/Carbonate Dry/SIurry Injection System abating Calciner Kiln (S-154)

It is also recommended that a Permit to Operate be issued for the following new source and abatement device:

S-613: Storage Bin for Lime/ Soda Ash/ Sodium Bicarbonate; 55 Ton Capacity, Abated by A-613 Pulse Jet Baghouse

A-613: Dustex Pulse Jet Baghouse; 2,000 CFM

By: _____ 8//2//(0

Ted Hull
Principal Air Quality Engineer

ENGINEERING EVALUATION REPORT
LEHIGH SOUTHWEST CEMENT
APPLICATION NUMBER 028788

PROJECT SUMMARY:
Lehigh Southwest Cement (P# 17) has requested an Exemption from Permitting for the following:

Final Water Treatment System – Quarry Water, Plant Process Water, Storm Water: Frontier "SeHAWK" Bioreactor Process, 1275 gpm, Removal of Selenium and Metals, Abated by Activated Carbon

Lehigh is required to construct and operate this system by Waste Discharge Requirements/ NPDES Permit, issued by the San Francisco Regional Water Quality Control Board (RWQCB) Order No. R2-2014-0010 (NPDES No. CA0030210) (NPDES Permit) and the associated Cease and Desist Order No. R2-2014-00110 (CDO), to conform to the Permit and CDO final facility configuration that mandate implementation of the Final Treatment System (FTS) no later than September 30, 2017.

The BAAQMD agrees that the Final Water Treatment System does not require a permit to operate and intents to issue a Letter of Exemption from Permitting and a formal Notice of Exemption from the California Environmental Quality Act (CEQA) to be filed with the Santa Clara County Clerk-Recorder.

EMISSIONS DISCUSSION:

Volatile Organic Compounds:
Lehigh is required by the San Francisco Regional Water Quality Control Board (RWQCB) Order No. R2-2014-0010 (NPDES No. CA0030210) (NPDES Permit) and the associated Cease and Desist Order No. R2-2014-00110 (CDO) to monitor and report annually the characterization of the effluent that will be feeding the Water Treatment System. This characterization includes an extensive list of Critical Organic Compounds including: (1) Volatile Organics, (2) Base Neutral and Acid Extractable Organics, and (3) Organochloride Pesticides and PCBs.

Lehigh has been reporting these parameters since 2014 on an annual basis. All Critical Organic Compounds have been reported to be below 1.0 ppm (volume).

Hydrogen Sulfide (H_2S):
An analysis of the treatment process by the manufacturer suggests that hydrogen sulfide gas may be emitted during the treatment process. In order to minimize emissions of H_2S from the treatment system, an activated carbon system will be installed. This carbon system is designed for a minimum H_2S removal efficiency of 99%. Therefore, the highest anticipated H_2S emissions from the treatment system will be as follows:

- Maximum total annual H_2S production = 2,420.8 lb/yr
- Minimum scrubber efficiency = 99%
- Total potential annual H_2S = 24.2 lb/yr

Regulation 9, Rule 2 "Hydrogen Sulfide" sets limitations on hydrogen sulfide (H_2S) as follows:

- 0.06 ppm averaged over three consecutive minutes, or
- 0.03 ppm average over any 60 consecutive minutes

These limits apply only to H_2S concentrations measured outside of the property boundary. The Final Water Treatment System is to be located to the south of the existing water storage ponds, at least 2,260 feet from the nearest property boundary. AERMOD dispersion modeling using on-site meteorological data and 10 meter resolution local terrain data indicates that the maximum 1-hour H_2S concentration at the nearest fence line location would be 7.1 E-06 ppm, well below the regulatory limits.

REGULATION 2, RULE 1, PERMITS, GENERAL REQUIREMENTS:
The BAAQMD has determined that the proposed Final Water Treatment System is exempt from permitting as follows:

The proposed system uses a Bioreactor and Biofilter system to remove selenium and metals from quarry water, plant process water, and storm water runoff. It is not an oil-water separator subject to Regulation 8, Rule 8. It is however subject to Regulation 9, Rule 2 "Hydrogen Sulfide" because it emits (abated) Hydrogen Sulfide (H_2S) from the Bioreactor Vessels and Post Treatment Aeration Tank.

The treatment system is not subject to Regulations 2-1-316 through 319, because:

- H_2S emissions are below the Chronic (3.9 E+02 lb/year) and Acute (9.3 E-02 lb/hour) trigger levels listed in Table 2-5-1 of Regulation 2-5.
- The treatment system is not a Public Nuisance Source or likely to be due to the distance to the property line (see Emissions Discussion, H_2S).
- The treatment system does not emit Hazardous Substances as described in 2-1-318 (> 10 tons per year of H_2S)
- The treatment system is not expressly subject to permitting as described in 2-1-319. (regulated air pollutant > 5 tons per year).

Because the treatment system is a unique piece of equipment that does not fall into any one of the pre-defined exemption categories in Regulation 2, Rule 1, Sections 103 through 127, the exemption basis is Section 128.19 "Any source or operation deemed by the APCO to be equivalent to a source or operation which is expressly exempted by Sections 2-1-113 through 128." In this case, the equivalent source or operation is "Liquid Storage and Loading Equipment".

2-1-123 Exemption, Liquid Storage and Loading Equipment: The following equipment is exempt from the requirements of Sections 2-1-301 and 302, provided that the source does not require permitting pursuant to Section 2-1-319.

123.2 Tanks, vessels and pumping equipment used exclusively for the storage or dispensing of any aqueous solution which contains less than 1 percent (wt) organic compounds. Tanks and vessels storing the following materials are not exempt.

2.1 Sulfuric acid with an acid strength of more than 99.0% by weight.
2.2 Phosphoric acid with an acid strength of more than 99.0% by weight. Bay Area Air Quality Management District Amended Regulation as adopted 12/19/2012 2-1-14
2.3 Nitric acid with an acid strength of more than 70.0% by weight.
2.4 Hydrochloric acid with an acid strength of more than 30.0% by weight.
2.5 Hydrofluoric acid with an acid strength of more than 30.0% by weight.
2.6 More than one liquid phase, where the top phase contains more than one percent VOC (wt).

Since ongoing water sampling consistently shows the content of organic compounds in the quarry water, plant process water, and storm water runoff to be treated in the Final Water Treatment System to be well below 1 percent (wt.), the exemption criterion is established.

2-1-128 Exemption, Miscellaneous Equipment: The following equipment is exempt from the requirements of Sections 2-1-301 and 302, provided that the source does not require permitting pursuant to Section 2-1-319.

128.19 Any source or operation deemed by the APCO to be equivalent to a source or operation which is expressly exempted by Sections 2-1-113 through 128.

CEQA EXEMPTION:

Notice of Exemption from CEQA (State CEQA Guidelines)
BAAQMD has prepared a Notice of Exemption from CEQA to be filed with the Santa Clara County Clerk-Recorder as follows:

Finding of and Citation to Basis for Exemption: The Air District has determined that this action is exempt from State CEQA Guidelines because the project is the result of an enforcement order by the San Francisco Regional Water Quality Control Board.

15307. Actions by Regulatory Agencies for Protection of Natural Resources
Class 7 consists of actions taken by regulatory agencies as authorized by state law or local ordinance to assure the maintenance, restoration, or enhancement of a natural resource where the regulatory process involves procedures for protection of the environment. Examples include but are not limited to wildlife preservation activities of the State Department of Fish and Game. Construction activities are not included in this exemption.

Note: Authority cited: Section 21083, Public Resources Code; Reference

15321. Enforcement Actions by Regulatory Agencies
Class 21 consists of:

(a) Actions by regulatory agencies to enforce or revoke a lease, permit, license, certificate, or other entitlement for use issued, adopted, or prescribed by the regulatory agency or enforcement of a law, general rule, standard, or objective, administered or adopted by the regulatory agency. Such actions include, but are not limited to, the following:

(1) The direct referral of a violation of lease, permit, license, certificate, or entitlement for use or of a general rule, standard, or objective to the Attorney General, District Attorney, or City Attorney as appropriate, for judicial enforcement;

(2) The adoption of an administrative decision or order enforcing or revoking the lease, permit, license, certificate, or entitlement for use or enforcing the general rule, standard, or objective.

(b) Law enforcement activities by peace officers acting under any law that provides a criminal sanction;

(c) Construction activities undertaken by the public agency taking the enforcement or revocation action are not included in this exemption.

Note: Authority cited: Section 21083, Public Resources Code; Reference: Section 21084, Public Resources Code.

Discussion: The exemption for law enforcement activities by peace officers acting under any law that provides a criminal sanction is based largely on the rationale explained by the court in *Pacific Water Conditioning Association v. City Council*, (1977) 73 Cal. App. 3d 546. There the court noted that enforcement actions are taken long after the public agency, or possibly the State Legislature, has exercised its discretion to set standards governing a certain kind of activity.

BAAQMD Regulation 2-1-312: Other Categories of Exempt Projects

Finding of and Citation to Basis for Exemption: In accordance with Regulation 2-1-312 “Other Categories of Exempt Projects” the proposed permit alteration is exempt from Air District CEQA review as follows:

312.3 “Permit applications for projects undertaken for the sole purpose of bringing an existing facility into compliance with newly adopted regulatory requirements of the District or of any other local, state or federal agency”.

312.5 “Permit applications submitted pursuant to the requirements of an order for abatement issued by the District's Hearing Board or of a judicial enforcement order”.

Reasons for Exemption:
Issuance of this Permit Exemption is consistent with both state and Air District CEQA exemptions for projects required by other regulatory agencies to achieve compliance or as a result of a judicial order.

RECOMMENDATION:
It is recommended that a Letter of Exemption from Permitting be issued to Lehigh Southwest Cement for the following:

Final Water Treatment System – Quarry Water, Plant Process Water, Storm Water: Frontier “SeHAWK” Bioreactor Process, 1275 gpm, Removal of Selenium and Metals

It is also recommended that a Notice of Exemption from CEQA be prepared for this project and filed with the Santa Clara County Clerk Recorder.

By: _____
Ted Hull
Principal Air Quality Engineer

APPENDIX C–

Compliance Assurance Monitoring (CAM) Applicability Analysis

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	
1	Gasoline Service Station, G9200	POC	CARB Certified Phase 1	SIP 8-7-301	Y	N	N	64.2(a)(3)	Pre-control PTE < MST	
			CARB Certified Phase 2	SIP 8-7-302						
17	Clinker Transfer Area	Opacity	10% opacity	63.1345	A-436 Dust Collector	Y	N	64.2(b)(1)(i)	NESHAP 40 CFR 63, Subpart LLL (9/9/2010)	M22 VE - P/M, Press Drop - P/Q, Inspection-P/A, Source Test-P/every 5 yrs, O&M Plan, CAM Condition # 24781
		Particulate Matter	Ringelmann 1.0 Limitation	SIP 6-301			Y		Compliance with NESHAP LLL monitoring requirements ensures compliance with SIP	
			Visible Particles	SIP 6-301					Compliance with NESHAP LLL monitoring requirements ensures compliance with SIP	
			FILTERABLE PARTICULATE: 0.15 gr/dscf	SIP 6-310						

			FILTERABLE PARTICULATE: $4.10P^{0.67}$ lb/hr. where P is process weight, ton/hr	SIP 6-310						
			Ringelmann 1.0 Limitation	BAAQMD Condition #16109 Part 1					Compliance with NESHAP LLL monitoring requirements ensures compliance with Condition	
		PM10	0.006 gr/dscf	BAAQMD Condition #16109 Part 3						
19	Clinker Storage Area	Opacity	10% opacity	63.1345	A-10, 447, 448, 449, 450 Dust Collectors	Y	N	64.2(b)(1)(i)	NESHAP 40 CFR 63, Subpart LLL (9/9/2010)	M22 VE - P/M, Press Drop - P/M, Inspection-P/A, Source Test-P/every 5 yrs, O&M Plan, CAM Condition # 24781
		Particulate Matter	Ringelmann 1.0 Limitation	SIP 6-301			Y		Compliance with NESHAP LLL monitoring requirements ensures compliance with SIP	
			Visible Particles	SIP 6-305						
			FILTERABLE PARTICULATE: 0.15 gr/dscf	SIP 6-310						
			FILTERABLE PARTICULATE: $4.10P^{0.67}$ lb/hr. where P is process weight, ton/hr	SIP 6-311						
			Ringelmann 1.0 Limitation	BAAQMD Condition #18475 Part 5					Compliance with NESHAP LLL monitoring requirements ensures	

									compliance with Condition	
21	Roll Press Clinker Surge Bin and Feeder	Opacity	10% opacity	63.1345	A-13 Dust Collector	Y	N	64.2(b)(1)(i)	NESHAP 40 CFR 63, Subpart LLL (9/9/2010)	M22 VE - P/M, Press Drop - P/M, Inspection-P/A, Source Test-P/every 5 yrs, O&M Plan, CAM Condition # 24781
		Particulate Matter	Ringelmann 1.0 Limitation	SIP 6-301			Y		Compliance with NESHAP LLL monitoring requirements ensures compliance with SIP	
			Visible Particles	SIP 6-305						
			FILTERABLE PARTICULATE: 0.15 gr/dscf	SIP 6-310						
			FILTERABLE PARTICULATE: $4.10P^{0.67}$ lb/hr. where P is process weight, ton/hr	SIP 6-311						
45	West Silo Top Cement Distribution Tower	Opacity	10% opacity	63.1345	A-433 Dust Collector	Y	N	64.2(b)(1)(i)	NESHAP 40 CFR 63, Subpart LLL (9/9/2010)	M22 VE - P/M, Press Drop - P/Q, Inspection-P/A, Source Test-P/every 5 yrs, O&M Plan, CAM Condition # 24781
		Particulate Matter	Ringelmann 1.0 Limitation	SIP 6-301			Y		Compliance with NESHAP LLL monitoring requirements ensures compliance with SIP	
			Visible Particles	SIP 6-305						
			FILTERABLE PARTICULATE: 0.15 gr/dscf	SIP 6-310						

			FILTERABLE PARTICULATE: $4.10P^{0.67}$ lb/hr. where P is process weight, ton/hr	SIP 6-311						
			Ringelmann 1.0 Limitation	BAAQMD Condition #16109 Part 1					Compliance with NESHAP LLL monitoring requirements ensures compliance with Condition	
		PM10	0.006 gr/dscf	BAAQMD Condition #16109 Part 3						
46	Middle West Silo Top Cement Distribution Tower	Opacity	10% opacity	63.1345	A-434 Dust Collector	Y	N	64.2(b)(1)(i)	NESHAP 40 CFR 63, Subpart LLL (9/9/2010)	M22 VE - P/M, Press Drop - P/Q, Inspection-P/A, Source Test-P/every 5 yrs, O&M Plan, CAM Condition # 24781
		Particulate Matter	Ringelmann 1.0 Limitation	SIP 6-301			Y		Compliance with NESHAP LLL monitoring requirements ensures compliance with SIP	
			Visible Particles	SIP 6-305						
			FILTERABLE PARTICULATE: 0.15 gr/dscf	SIP 6-310						
			FILTERABLE PARTICULATE: $4.10P^{0.67}$ lb/hr. where P is process weight, ton/hr	SIP 6-311						
			Ringelmann 1.0 Limitation	BAAQMD Condition #16109 Part 1					Compliance with NESHAP LLL monitoring requirements ensures compliance with	

									Condition	
		PM10	0.006 gr/dscf	BAAQMD Condition #16109 Part 3						
47	East Silo Top Cement Distribution Tower	Opacity	10% opacity	63.1345	A-435 Dust Collector	Y	N	64.2(b)(1)(i)	NESHAP 40 CFR 63, Subpart LLL (9/9/2010)	M22 VE - P/M, Press Drop - P/M, Inspection-P/A, Source Test-P/every 5 yrs, O&M Plan, CAM Condition # 24781
		Particulate Matter	Ringelmann 1.0 Limitation	SIP 6-301			Y		Compliance with NESHAP LLL monitoring requirements ensures compliance with SIP	
			Visible Particles	6-305					Compliance with NESHAP LLL monitoring requirements ensures compliance with SIP	
			FILTERABLE PARTICULATE: 0.15 gr/dscf	6-310						
			FILTERABLE PARTICULATE: $4.10P^{0.67}$ lb/hr. where P is process weight, ton/hr	6-311						
			Ringelmann 1.0 Limitation	BAAQMD Condition #16109 Part 1					Compliance with NESHAP LLL monitoring requirements ensures compliance with Condition	

		PM10	0.006 gr/dscf	BAAQMD Condition #16109 Part 3						
48	Bulk Cement Loadout Tank #1 and #2	Opacity	10% opacity	63.1345	A-420, 421, 422, 428 Dust Collectors	Y	N	64.2(b)(1)(i)	NESHAP 40 CFR 63, Subpart LLL (9/9/2010)	M22 VE - P/M, Press Drop - P/M, Inspection-P/A, Source Test-P/every 5 yrs, O&M Plan, CAM Condition # 24781
		Particulate Matter	Ringelmann 1.0 Limitation	SIP 6-301			Y		Compliance with NESHAP LLL monitoring requirements ensures compliance with SIP	
			Visible Particles	6-305					Compliance with NESHAP LLL monitoring requirements ensures compliance with SIP	
			FILTERABLE PARTICULATE: 0.15 gr/dscf	6-310						
			FILTERABLE PARTICULATE: $4.10P^{0.67}$ lb/hr. where P is process weight, ton/hr	6-311						
			Ringelmann 1.0 Limitation	BAAQMD Condition #16109 Part 1					Compliance with NESHAP LLL monitoring requirements ensures compliance with Condition	
		PM10	0.006 gr/dscf	BAAQMD Condition #16109 Part 3						
49	Bulk Cement Loadout Tank #28	Opacity	10% opacity	63.1345	A-423, 424, 427, 429 Dust Collectors	Y	N	64.2(b)(1)(i)	NESHAP 40 CFR 63, Subpart LLL (9/9/2010)	M22 VE - P/M, Press Drop - P/M,

		Particulate Matter	Ringelmann 1.0 Limitation	SIP 6-301			Y		Compliance with NESHAP LLL monitoring requirements ensures compliance with SIP	Inspection-P/A, Source Test-P/every 5 yrs, O&M Plan, CAM Condition # 24781
			Visible Particles	6-305						
			FILTERABLE PARTICULATE: 0.15 gr/dscf	6-310						
			FILTERABLE PARTICULATE: $4.10P^{0.67}$ lb/hr. where P is process weight, ton/hr	6-311						
			Ringelmann 1.0 Limitation	BAAQMD Condition #16109 Part 1					Compliance with NESHAP LLL monitoring requirements ensures compliance with Condition	
		PM10	0.006 gr/dscf	BAAQMD Condition #16109 Part 3						
50	Bulk Cement Loadout Tank #29	Opacity	10% opacity	63.1345	A-425, 426, 427, 429 Dust Collectors	Y	N	64.2(b)(1)(i)	NESHAP 40 CFR 63, Subpart LLL (9/9/2010)	M22 VE - P/M, Press Drop - P/M, Inspection-P/A, Source Test-P/every 5 yrs, O&M Plan, CAM Condition # 24781
		Particulate Matter	Ringelmann 1.0 Limitation	SIP 6-301			Y		Compliance with NESHAP LLL monitoring requirements ensures compliance with SIP	
			Visible Particles	6-305						
			FILTERABLE PARTICULATE: 0.15 gr/dscf	6-310						

			FILTERABLE PARTICULATE: $4.10P^{0.67}$ lb/hr. where P is process weight, ton/hr	6-311						
			Ringelmann 1.0 Limitation	BAAQMD Condition #16109 Part 1					Compliance with NESHAP LLL monitoring requirements ensures compliance with Condition	
		PM10	0.006 gr/dscf	BAAQMD Condition #16109 Part 3						
54	Cement Packer #1	Opacity	10% opacity	63.1348	A-430 Dust Collector	N	N	64.2(a)(3)	Pre-control PTE < MST	Pressure Drop-P/Q-Condition # 20751, Source Test - P/every 5 yrs-Condition # 24621 per 40 CFR 70.6(c)
		Particulate Matter	Ringelmann 1.0 Limitation	SIP 6-301						
			Visible Particles	SIP 6-305						
			FILTERABLE PARTICULATE: 0.15 gr/dscf	SIP 6-310						
			FILTERABLE PARTICULATE: $4.10P^{0.67}$ lb/hr. where P is process weight, ton/hr	SIP 6-311						
			Ringelmann 1.0 Limitation	BAAQMD Condition #16109 Part 1						
		PM10	0.006 gr/dscf	BAAQMD Condition #16109 Part 3						

55	Cement Packer #2	Opacity	10% opacity	63.1348	A-431 Dust Collector	N	N	64.2(a)(3)	Pre-control PTE < MST	Pressure Drop-P/Q-Condition # 20751, Source Test - P/every 5 yrs-Condition # 24621 per 40 CFR 70.6(c)
		Particulate Matter	Ringelmann 1.0 Limitation	6-301						
			Visible Particles	6-305						
			FILTERABLE PARTICULATE: 0.15 gr/dscf	6-310						
			FILTERABLE PARTICULATE: $4.10P^{0.67}$ lb/hr. where P is process weight, ton/hr	6-311						
			Ringelmann 1.0 Limitation	BAAQMD Condition #16109 Part 1						
		PM10	0.006 gr/dscf	BAAQMD Condition #16109 Part 3						
74	Type II Mechanical Transfer System	Opacity	10% opacity	63.1345	A-58 Dust Collector	Y	N	64.2(b)(1)(i)	NESHAP 40 CFR 63, Subpart LLL (9/9/2010)	M22 VE - P/M, Press Drop - P/M, Inspection-P/A, Source Test-P/every 5 yrs, O&M Plan, CAM Condition # 24781
		Particulate Matter	Ringelmann 1.0 Limitation	SIP 6-301			Y		Compliance with NESHAP LLL monitoring requirements ensures compliance with SIP	
			Visible Particles	SIP 6-305					Compliance with NESHAP LLL monitoring requirements ensures compliance with SIP	

			FILTERABLE PARTICULATE: 0.15 gr/dscf	SIP 6-310						
			FILTERABLE PARTICULATE: $4.10P^{0.67}$ lb/hr. where P is process weight, ton/hr	SIP 6-311						
			Ringelmann 1.0 Limitation	BAAQMD Condition #6655 Part 1					Compliance with NESHAP LLL monitoring requirements ensures compliance with SIP	
		PM10	0.006 gr/dscf	BAAQMD Condition #6655 Part 4						
100	Precalciner Kiln Fuel Handling System	Opacity	< 20% opacity	60.252	A-100 Water Spray System	N	N	64.2(a)(3)	Pre-control PTE < MST	
		Particulate Matter	Ringelmann 1.0 Limitation	SIP 6-301						
			Visible Particles	SIP 6-305						
			Ringelmann Number 1 Limitation	BAAQMD Condition # 23942 part 1						
111	Rail Unloading System Area 1	Opacity	< 20% opacity	60.252	A-111 Dust Collector	N	N	64.2(a)(3)	Pre-control PTE < MST	Pressure Drop-P/Q-Condition # 20751, Source Test - P/every 5 yrs-Condition # 24621 per 40 CFR 70.6(c)
		Particulate Matter	Ringelmann 1.0 Limitation	SIP 6-301						
			Visible Particles	SIP 6-305						
			FILTERABLE PARTICULATE: 0.15 gr/dscf	SIP 6-310						

			FILTERABLE PARTICULATE: $4.10P^{0.67}$ lb/hr. where P is process weight, ton/hr	SIP 6-311						
112	Additive Hopper Transfer System Area 1	Opacity	< 20% opacity	60.252	A-112 Dust Collector	N	N	64.2(a)(3)	Pre-control PTE < MST	Pressure Drop-P/Q-Condition # 20751, Source Test - P/every 5 yrs-Condition # 24621 per 40 CFR 70.6(c)
		Particulate Matter	Ringelmann Number 1 Limitation	SIP 6-301						
			Visible Particles	SIP 6-305						
			Particulate Weight Limitation 0.15 gr/dscf	SIP 6-310						
			FILTERABLE PARTICULATE: $4.10P^{0.67}$ lb/hr. where P is process weight, ton/hr	SIP 6-311						
113	Additive Bin Transfer Facilities Area 1	Opacity	< 20% opacity	60.252	A-113, 114 Dust Collectors	N	N	64.2(a)(3)	Pre-control PTE < MST	Pressure Drop-P/Q-Condition # 20751, Source Test - P/every 5 yrs-Condition # 24621 per 40 CFR 70.6(c)
		Opacity	Ringelmann 1.0 Limitation	SIP 6-301						
		Particulate Matter	Visible Particles	SIP 6-301						
			FILTERABLE PARTICULATE: 0.15 gr/dscf	SIP 6-310						
			FILTERABLE PARTICULATE: $4.10P^{0.67}$ lb/hr. where P is process weight, ton/hr	SIP 6-310						
115	Additive Storage Tripper	Opacity	< 20% opacity	60.252	A-115 Dust Collector	N	N	64.2(a)(3)	Pre-control PTE < MST	Pressure Drop-P/Q-Condition # 20751, Source Test - P/every 5 yrs-
		Particulate Matter	Ringelmann Number 1 Limitation	SIP 6-301						

			Visible Particles	SIP 6-305						Condition # 24621 per 40 CFR 70.6(c)
			Particulate Weight Limitation 0.15 gr/dscf	SIP 6-310						
			FILTERABLE PARTICULATE: $4.10P^{0.67}$ lb/hr. where P is process weight, ton/hr	SIP 6-311						
121	Tertiary Scalping Screen 2-VS-1, 2-VS-2	Opacity	< 10% opacity	60.62	A-121 Dust Collector	Y	N	60.672(a)	NESHAP 40 CFR 60, Subpart OOO (4/28/2009)	M22 VE - P/Q, Press Drop - P/Q, Inspection-P/A, Source Test-P/every 5 yrs, CAM Condition # 24781
		Particulate Matter	Ringelmann Number 1 Limitation	SIP 6-301			Y		Compliance with NEPS OOO monitoring requirements ensures compliance with SIP	
			Visible Particles	SIP 6-305						
			Particulate Weight Limitation 0.15 gr/dscf	SIP 6-310						
			FILTERABLE PARTICULATE: $4.10P^{0.67}$ lb/hr. where P is process weight, ton/hr	SIP 6-311						
122	Tertiary Crusher 2-CR-1	Opacity	< 10% opacity	60.62	A-121, 122 Dust Collectors	Y	N	60.672(a)	NESHAP 40 CFR 60, Subpart OOO (4/28/2009)	M22 VE - P/Q, Press Drop - P/Q, Inspection-P/A, Source Test-P/every 5 yrs,CAM Condition # 24781
		Particulate Matter	Ringelmann Number 1 Limitation	SIP 6-301			Y		Compliance with NEPS OOO monitoring requirements ensures compliance with	

									SIP	
			Visible Particles	SIP 6-305						
			Particulate Weight Limitation 0.15 gr/dscf	SIP 6-310						
			FILTERABLE PARTICULATE: $4.10P^{0.67}$ lb/hr. where P is process weight, ton/hr	SIP 6-311						
123	Rock Conveying System Area 2	Opacity	< 10% opacity	60.62	A-122, 123 Dust Collectors	N	N	64.2(a)(3)	Pre-control PTE < MST	Pressure Drop-P/Q-Condition # 20751, Source Test - P/every 5 yrs-Condition # 24621 per 40 CFR 70.6(c)
		Particulate Matter	Ringelmann Number 1 Limitation	SIP 6-301						
			Visible Particles	6-305						
			Particulate Weight Limitation 0.15 gr/dscf	SIP 6-310						
			FILTERABLE PARTICULATE: $4.10P^{0.67}$ lb/hr. where P is process weight, ton/hr	SIP 6-311						
131	Rock Sampling System Area 3	Opacity	< 10% opacity	60.62	A-131 Dust Collector	N	N	64.2(a)(3)	Pre-control PTE < MST	Pressure Drop-P/Q-Condition # 20751, Source Test - P/every 5 yrs-Condition # 24621 per 40
		Particulate Matter	Ringelmann Number 1 Limitation	SIP 6-301						
			Visible Particles	SIP 6-305						

			Particulate Weight Limitation 0.15 gr/dscf	SIP 6-310						CFR 70.6(c)
			FILTERABLE PARTICULATE: $4.10P^{0.67}$ lb/hr. where P is process weight, ton/hr	SIP 6-311						
132	Preblend	Opacity	< 10% opacity	60.62	A-132, 133 Dust Collectors	N	N	64.2(a)(3)	Pre-control PTE < MST	Pressure Drop-P/Q-Condition # 20751, Source Test - P/every 5 yrs-Condition # 24621 per 40 CFR 70.6(c)
		Particulate Matter	Ringelmann Number 1 Limitation	SIP 6-301						
			Visible Particles	SIP 6-305						
			Particulate Weight Limitation 0.15 gr/dscf	SIP 6-310						
			FILTERABLE PARTICULATE: $4.10P^{0.67}$ lb/hr. where P is process weight, ton/hr	SIP 6-311						
134	Preblend Storage Bin 4-S-1, 4-S-2	Opacity	< 10% opacity	60.62	A-134 Dust Collector	N	N	64.2(a)(3)	Pre-control PTE < MST	Pressure Drop-P/Q-Condition # 20751, Source Test - P/every 5 yrs-Condition # 24621 per 40 CFR 70.6(c)
		Particulate Matter	Ringelmann Number 1 Limitation	SIP 6-301						
			Visible Particles	SIP 6-305						
			Particulate Weight Limitation 0.15 gr/dscf	SIP 6-310						
			FILTERABLE PARTICULATE: $4.10P^{0.67}$ lb/hr. where P is process weight, ton/hr	SIP 6-311						

135	High Grade Storage Bin 4-S-3, 4-S-4	Opacity	< 10% opacity	60.62	A-135 Dust Collector	N	N	64.2(a)(3)	Pre-control PTE < MST	Pressure Drop-P/Q-Condition # 20751, Source Test - P/every 5 yrs-Condition # 24621 per 40 CFR 70.6(c)
		Particulate Matter	Ringelmann Number 1 Limitation	SIP 6-301						
			Visible Particles	SIP 6-305						
			Particulate Weight Limitation 0.15 gr/dscf	SIP 6-310						
			FILTERABLE PARTICULATE: $4.10P^{0.67}$ lb/hr. where P is process weight, ton/hr	SIP 6-311						
141	Raw Mill 4-GM-1	Opacity	10% opacity	63.1343	A-141 Dust Collector	Y	N	64.2(b)(1)(i)	NESHAP 40 CFR 63, Subpart LLL (9/9/2010)	M22 VE - P/D, Press Drop - P/W, Inspection-P/A, Source Test-P/A, O&M Plan, CAM Condition # 24781
		Particulate Matter	Ringelmann 1.0 Limitation	SIP 6-301			Y		Compliance with NESHAP LLL monitoring requirements ensures compliance with SIP	
			Visible Particles	SIP 6-305						
			FILTERABLE PARTICULATE: 0.15 gr/dscf	SIP 6-310						
			FILTERABLE PARTICULATE: $4.10P^{0.67}$ lb/hr. where P is process weight, ton/hr	SIP 6-311						
		PM10	36 lb/hr and 0.02 gr/DSCF	BAAQMD Condition #2786 Part B1						

		NOx	All kiln emission points <1158 lb/hr and <615 ppm averaged for 2 hr	BAAQMD Condition #11780 Part C1	N	Y	N	64.2(a)(2)	N - No Control Device	NOx and SO2 CEMs from the Kiln is used to calculate NOX and SO2 emissions
			<6.4 lb/ton clinker on a 24-hr basis (averaged over 30 days)	BAAQMD Condition #11780 Part C3		Y				
		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	SIP 9-1-301	N	Y				
			SO2: 300 ppm (dry)	SIP 9-1-304		Y				
			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 A1		Y				
		THC (effective 9/9/2013)	24 ppmvd or 9 ppmvd of total organic HAP (effective 9/92013)	63.1343	N	N	N	64.2(a)(3)	Pre-control PTE < MST	THC CEM or HAP Test every 30 months (Effective 9/9/2013)
142	Raw Mill 2 4-GM-2	Opacity	10% opacity	63.1343	A-142 Dust Collector	Y	N	64.2(b)(1)(i)	NESHAP 40 CFR 63, Subpart LLL (9/9/2010)	M22 VE - P/D, Press Drop - P/W, Inspection-P/A, Source Test-P/A, CAM Condition #
		Particulate Matter	Ringelmann 1.0 Limitation	SIP 6-301			Y		Compliance with NESHAP LLL monitoring requirements	

									ensures compliance with SIP	24781
			Visible Particles	SIP 6-305						
			FILTERABLE PARTICULATE: 0.15 gr/dscf	SIP 6-310						
			FILTERABLE PARTICULATE: $4.10P^{0.67}$ lb/hr. where P is process weight, ton/hr	SIP 6-311						
		PM10	36 lb/hr and 0.02 gr/DSCF	BAAQMD Condition #2786 Part B1						
		NOx	All kiln emission points <1158 lb/hr and <615 ppm averaged for 2 hr	BAAQMD Condition #11780 Part C1	N	Y	N	64.2(a)(2)	N - No Control Device	NOx and SO2 CEMs from the Kiln is used to calculate NOX and SO2 emissions
			<6.4 lb/ton clinker on a 24-hr basis (averaged over 30 days)	BAAQMD Condition #11780 Part C3		Y				
		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	SIP 9-1-301	N	Y				
			SO2: 300 ppm (dry)	SIP 9-1-304		Y				

			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 A1		Y				
		THC (effective 9/9/2013)	24 ppmvd or 9 ppmvd of total organic HAP (effective 9/92013)	63.1343	N	N	N	64.2(a)(3)	Pre-control PTE < MST	THC CEM or HAP Test every 30 months (Effective 9/9/2013)
143	Raw Mill 1 Separator System 4-SE-3	Opacity	10% opacity	63.1343	A-143 Dust Collector	Y	N	64.2(b)(1)(i)	NESHAP 40 CFR 63, Subpart LLL (9/9/2010)	M22 VE - P/D, Press Drop - P/W, Inspection-P/A, Source Test-P/Every 5 yrs, CAM Condition # 24781
		Particulate Matter	Ringelmann 1.0 Limitation	SIP 6-301			Y			
			Visible Particles	SIP 6-305						
			FILTERABLE PARTICULATE: 0.15 gr/dscf	SIP 6-310						
			FILTERABLE PARTICULATE: $4.10P^{0.67}$ lb/hr. where P is process weight, ton/hr	SIP 6-311						
144	Raw Mill 2 Separator Circuit 4-SE-4	Opacity	10% opacity	63.1343	A-144 Dust Collector	Y	N	64.2(b)(1)(i)	NESHAP 40 CFR 63, Subpart LLL (9/9/2010)	M22 VE - P/D, Press Drop - P/W, Inspection-P/A, Source Test-P/Every 5 yrs, CAM Condition # 24781
		Particulate Matter	Ringelmann 1.0 Limitation	SIP 6-301			Y			
			Visible Particles	SIP 6-305						
			FILTERABLE PARTICULATE: 0.15 gr/dscf	SIP 6-310						

			FILTERABLE PARTICULATE: $4.10P^{0.67}$ lb/hr. where P is process weight, ton/hr	SIP 6-311						
151	Homogenizer 5-S-1, 5-S-2	Opacity	10% opacity	63.1345	A-151, 152 Dust Collectors	Y	N	64.2(b)(1)(i)	NESHAP 40 CFR 63 Subpart LLL (9/9/2010)	M22 VE - P/M, Press Drop - P/M, Inspection-P/A, Source Test-P/every 5 yrs, O&M Plan, CAM Condition # 24781
		Particulate Matter	Ringelmann 1.0 Limitation	SIP 6-301			Y		Compliance with NESHAP LLL monitoring requirements ensures compliance with SIP	
			Visible Particles	SIP 6-305						
			FILTERABLE PARTICULATE: 0.15 gr/dscf	SIP 6-310						
			FILTERABLE PARTICULATE: $4.10P^{0.67}$ lb/hr. where P is process weight, ton/hr	SIP 6-311						
153	Kiln Feed System	Opacity	10% opacity	63.1345	A-153 Dust Collector	Y	N	64.2(b)(1)(i)	NESHAP 40 CFR 63, Subpart LLL (9/9/2010)	M22 VE - P/M, Press Drop - P/M, Inspection-P/A, Source Test-P/every 5 yrs, O&M Plan, CAM Condition # 24781
		Particulate Matter	Ringelmann 1.0 Limitation	SIP 6-301			Y		Compliance with NESHAP LLL monitoring requirements ensures compliance with SIP	
			Visible Particles	SIP 6-305						
			FILTERABLE PARTICULATE: 0.15 gr/dscf	SIP 6-310						

			FILTERABLE PARTICULATE: $4.10P^{0.67}$ lb/hr. where P is process weight, ton/hr	SIP 6-311							
154	Calciner Kiln (Natural Gas, Fuel Oil, Coal and Coke)	Opacity	20% opacity	60.62(a)(2)	A-141, 142 Dust Collectors; A-154 Lime Dry/Slurry Injection System; A-171, 172 Pulse Jet Dust Collectors	Y	N	64.2(b)(1)(i)	NESHAP 40 CFR 60 Subpart F (9/9/2010)	M9 VE - P/D, Pressure Drop - P/W, Inspection-P/A, Source Test-P/A, O&M Plan, CAM Condition # 24781
		PM10	0.30 lb/ton of feed (dry basis) to kiln	60.62(a)(1)(i)			N	64.2(b)(1)(i)	NESHAP 40 CFR 60 Subpart F (9/9/2010)	
			36 lb/hr and 0.02 gr/DSCF	BAAQMD Condition #2786 Part B1			Y			
		Particulate Matter (effective 9/9/2013)	0.04 lb/ton clinker-normal operaiton, 0.004 gr/dscf-startup, shutdown (effective 9/9/2013)	63.1343			N	64.2(b)(1)(i)	NESHAP 40 CFR 63 Subpart LLL (9/9/2010)	
		Particulate Matter	Ringelmann 1.0 Limitation	SIP 6-301			Y		Compliance with NSPS Subpart F monitor requriements ensures compliance with SIP	
			Visible Particles	SIP 6-305						
			FILTERABLE PARTICULATE: 0.15 gr/dscf	SIP 6-310						
			FILTERABLE PARTICULATE: $4.10P^{0.67}$ lb/hr. where P is process weight, ton/hr	SIP 6-311						

NOx	~~All kiln emission points <527 lb/hr and <201 ppm, 30 day average~~	~~BAAQMD Condition #11780 Part C1~~	A-157 Selective Non-Catalytic Reduction	~~Y~~	~~Y~~			NOx CEM
	<2.3 lb/ton clinker on a 24-hr basis (averaged over 30 days)	BAAQMD Condition #11780 Part C3		Y				
NH3	< 270 ppmvd, 182-operating day average	9-1-301	N	N	N	64.2(a)(2)	N- No Control Device	NH3 CEM
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	9-1-301	N	Y	N	64.2(a)(2)	N- No Control Device	SO2 CEM
	SO2: 300 ppm (dry)	9-1-304		Y	N	64.2(a)(2)		
Sulfur	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	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		N	N	64.2(a)(2)		

				monitored						
		D/F	0.2 ng/dscm (TEQ) or 0.4 ng/dscm (TEQ) when average baghouse's inlet temp is 204 Celcius (400 F) or less	63.1343	N	N	N	64.2(a)(2)	No - No control device	Subpart LL - source test P/every 30 months

		Mercury (Effective 9/9/2013)	55 lb/MM tons clinker-normal Operation @ 30 days rolling avg., 10 ug/dscm (TEQ) @ 7 days rolling avg.-startup & shutdown (Effective 9/9/2013)	63.1343	N	N	N	64.2(b)(i)	NESHAP 40 CFR 63, Subpart LLL (9/9/2010)	Hg CEM or Sorbant Trap CEM (Effective 9/9/2013)
		THC (Effective 9/9/2013)	24 ppmvd or 9 ppmvd of total organic HAP@ 30 days rooling avg.-normal operation, 24 ppmvd @ 7 days rolling avg.-startup & shutdown (effective 9/92013)	63.1343	N	N	N	64.2(b)(i)	NESHAP 40 CFR 63, Subpart LLL (9/9/2010)	THC CEM or HAP Test every 30 months (Effective 9/9/2013)
		HCl (Effective 9/9/2013)	3 ppmvd @ 30 days rolling avg.-normal operation, 3 pmmvd @ 7 days rolling avg.-startup & shutdown (Effective 9/9/2013)	63.1343	A-154 Slurry Lime Injection	N	N	64.2(b)(i)	NESHAP 40 CFR 63, Subpart LLL (9/9/2010)	HCl CEM (Effective 9/9/2013)
161	Clinker Cooler 5-CC-1	Opacity	10% opacity	62.62(b)(2)	A-161 Dust Collector	Y	N	64.2(b)(1)(i)	NESHAP 40 CFR 60 Subpart F (9/9/2010)	M9 VE - P/D, Pressure Drop - P/W, Inspection-P/A, Source Test-P/A, O&M Plan, CAM Condition # 24781
		Particulate Matter	0.10 lb/ton dry feed	62.62(b)(1)(ii)				64.2(b)(1)(i)	NESHAP 40 CFR 60 Subpart F (9/9/2010)	
		Particulate Matter	0.04 lb/ton clinker-normal operaiton, 0.004 gr/dscf-startup, shutdown (effective 9/9/2013)	63.1343				64.2(b)(1)(i)	NESHAP 40 CFR 63 Subpart LLL (9/9/2010)	

			Ringelmann 1.0 Limitation	SIP 6-301					Compliance with NSPS Subpart F monitor requriements ensures compliance with SIP	
			Visible Particles	SIP 6-305						
			FILTERABLE PARTICULATE: 0.15 gr/dscf	SIP 6-310			Y			
			FILTERABLE PARTICULATE: $4.10P^{0.67}$ lb/hr. where P is process weight, ton/hr	SIP 6-311						
		PM10	8 lb/hr and 0.01 gr/DSCF	BAAQMD Condition #2786 Part B3						
162	Clinker Silo A 5-S-11	Opacity	10% opacity	63.1345	A-162 Dust Collector	Y	N	64.2(b)(1)(i)	NESHAP 40 CFR 63 Subpart LLL (9/9/2010)	M22 VE - P/M, Press Drop - P/M, Inspection-P/A, Source Test-P/every 5 yrs, O&M Plan, CAM Condition # 24781
		Particulate Matter	Ringelmann 1.0 Limitation	SIP 6-301			Y		Compliance with NESHAP LLL monitoring requirements ensures compliance with SIP	
			Visible Particles	SIP 6-305						
			FILTERABLE PARTICULATE: 0.15 gr/dscf	SIP 6-310						
			FILTERABLE PARTICULATE: $4.10P^{0.67}$ lb/hr. where P is process weight, ton/hr	SIP 6-311						

163	Clinker Silo B 5-S-12	Opacity	10% opacity	63.1345	A-163 Dust Collector	Y	N	64.2(b)(1)(i)	NESHAP 40 CFR 63 Subpart LLL (9/9/2010)	M22 VE - P/M, Press Drop - P/M, Inspection-P/A, Source Test-P/every 5 yrs, O&M Plan, CAM Condition # 24781
		Particulate Matter	Ringelmann 1.0 Limitation	SIP 6-301			Y		Compliance with NESHAP LLL monitoring requirements ensures compliance with SIP	
			Visible Particles	SIP 6-305						
			FILTERABLE PARTICULATE: 0.15 gr/dscf	SIP 6-310						
			FILTERABLE PARTICULATE: $4.10P^{0.67}$ lb/hr. where P is process weight, ton/hr	SIP 6-311						
164	Free lime Storage Bin	Opacity	10% opacity	63.1345	A-164 Dust Collector	Y	N	64.2(b)(1)(i)	NESHAP 40 CFR 63 Subpart LLL (9/9/2010)	M22 VE - P/M, Press Drop - P/M, Inspection-P/A, Source Test-P/every 5 yrs, O&M Plan, CAM Condition # 24781
		Particulate Matter	Ringelmann 1.0 Limitation	SIP 6-301			Y		Compliance with NESHAP LLL monitoring requirements ensures compliance with SIP	
			Visible Particles	SIP 6-305						
			FILTERABLE PARTICULATE: 0.15 gr/dscf	SIP 6-310						
			FILTERABLE PARTICULATE: $4.10P^{0.67}$ lb/hr.	SIP 6-311						

			where P is process weight, ton/hr							
165	Clinker Transfer System	Opacity	10% opacity	63.1348	A-165 & A-190 Dust Collectors	Y	N	64.2(b)(1)(i)	NESHAP 40 CFR 63 Subpart LLL (9/9/2010)	M22 VE - P/M, Press Drop - P/M, Inspection-P/A, Source Test-P/every 5 yrs, O&M Plan, CAM Condition # 24781
		Particulate Matter	Ringelmann 1.0 Limitation	SIP 6-301			Y		Compliance with NESHAP LLL monitoring requirements ensures compliance with SIP	
			Visible Particles	SIP 6-305						
			FILTERABLE PARTICULATE: 0.15 gr/dscf	SIP 6-310						
			FILTERABLE PARTICULATE: $4.10P^{0.67}$ lb/hr. where P is process weight, ton/hr	SIP 6-311						
167	Lime Bin	Opacity	< 7% opacity	60.672(f)	A-167 Dust Collector	N	N	64.2(a)(3)	Pre-control PTE < MST	Pressure Drop-P/M, Source Test - P/every 5 yrs-Condition # 24626 per 40 CFR 70.6(c)
		Particulate Matter	Ringelmann 1.0 Limitation	SIP 6-301						
			Visible Particles	SIP 6-305						
			FILTERABLE PARTICULATE: 0.15 gr/dscf	SIP 6-310						
			FILTERABLE PARTICULATE: $4.10P^{0.67}$ lb/hr. where P is process weight, ton/hr	SIP 6-311						
			Ringelmann 1.0 Limitation	BAAQMD Condition #24626 Part 1						
		PM10	6.6 lb/hr and 0.02 gr/dscf	BAAQMD Condition #24626 Part 3						

171	Kiln Fuel Mill System	Opacity	< 20% opacity	60.252(a)(2)	A-171 Baghouse, Pulse Jet Dust Collector is inherent to process	Y	Y		NSPS 40 CFR 60 Subpartt Y (10/7/2000)	M22 VE - P/D, Press Drop - P/W, Inspection-P/A, Source Test-P/every 5 yrs, O&M Plan, CAM Condition # 24781 - Subject to the same requirement of S-154 since S-171 and S-172 share the same abatement with S-154
		Particulate Matter	0.031 gr/dscf	60.252(a)(1)					NSPS 40 CFR 60 Subpartt Y (10/7/2000)	
			Ringelmann 1.0 Limitation	SIP 6-301						
			Visible Particles	SIP 6-305						
			Particulate Weight Limitation 0.15 gr/dscf	SIP 6-310						
			FILTERABLE PARTICULATE: $4.10P^{0.67}$ lb/hr. where P is process weight, ton/hr	SIP 6-311						
		PM10	6.6 lb/hr and 0.02 gr/dscf	BAAQMD Condition #2786 Part B2						
172	Precalciner Fuel Mill System	Opacity	< 20% opacity	60.252(a)(2)	A-172 Baghouse, Pulse Jet Dust Collector is inherent to process	Y	Y		NSPS 40 CFR 60 Subpartt Y (10/7/2000)	M22 VE - P/D, Press Drop - P/W, Inspection-P/A, Source Test-P/every 5 yrs, O&M Plan, CAM Condition # 24781 - Subject to the same requirement of S-154 since S-171 and S-172
		Particulate Matter	0.031 gr/dscf	60.252(a)(1)					NSPS 40 CFR 60 Subpartt Y (10/7/2000)	
			Ringelmann 1.0 Limitation	SIP 6-301						
			Visible Particles	SIP 6-305						
			Particulate Weight Limitation 0.15 gr/dscf	SIP 6-310						

			FILTERABLE PARTICULATE: $4.10P^{0.67}$ lb/hr. where P is process weight, ton/hr	SIP 6-311						share the same abatement with S-154
		PM10	6.6 lb/hr and 0.02 gr/dscf	BAAQMD Condition #2786 Part B2						
176	Rock Plant 1 Storage Pile	Opacity	Ringelmann 1.0 Limitation	SIP 6-301	N	NE	N	64.2(a)(2)	No - No control device	Pressure Drop-P/Q-Condition # 20751, Source Test - P/every 5 yrs-Condition # 24621 per 40 CFR 70.6(c)
		Particulate Matter	Visible Particles	SIP 6-305						
187	Sand Hopper and Storage Bin	Opacity	Ringelmann 1.0 Limitation	SIP 6-301	N	NE	N	64.2(a)(2)	No - No control device	
		Particulate Matter	Visible Particles	SIP 6-305						
			FILTERABLE PARTICULATE 0.15 gr/dscf	SIP 6-310						
			FILTERABLE PARTICULATE: $4.10P^{0.67}$ lb/hr. where P is process weight, ton/hr	SIP 6-311						
201	Primary Crusher	Opacity	Ringelmann 1.0 Limitation	SIP 6-301	N	NE	N	64.2(a)(2)	No - No control device	
		Particulate Matter	Visible Particles	SIP 6-305						
202	Secondary Crusher	Opacity	Ringelmann 1.0 Limitation	SIP 6-301	N	NE	N	64.2(a)(2)	No - No control device	
		Particulate Matter	Visible Particles	SIP 6-305						

			FILTERABLE PARTICULATE0.15 gr/dscf	SIP 6-310						
			FILTERABLE PARTICULATE: $4.10P^{0.67}$ lb/hr. where P is process weight, ton/hr	SIP 6-311						
		Opacity	Ringelmann 1.0 Limitation	BAAQMD Condition # 23896 Part 2						
210	Finish Mill (6-GM-1)	Opacity	10% opacity	63.1343	A-210 Dust Collector	Y	N	64.2(b)(1)(i)	NESHAP 40 CFR 63, Subpart LLL (9/9/2010)	Broken Bag Leak Detector (BLD) inspection-P/M, Dust Collector Inspection-P/A, Source Test-P/every 5 yrs, O&M Plan, CAM Condition # 24781
		Particulate Matter	Ringelmann 1.0 Limitation	SIP 6-301			Y		Compliance with NESHAP LLL monitoring requirements ensures compliance with SIP	
			Visible Particles	SIP 6-305						
			FILTERABLE PARTICULATE 0.15 gr/dscf	SIP 6-310						
			FILTERABLE PARTICULATE: $4.10P^{0.67}$ lb/hr. where P is process weight, ton/hr	SIP 6-311						
		PM10	0.006 gr/dscf or 0.9 lb/hr	BAAQMD Condition # 779 Part 2						
		Opacity	Ringelmann 1.0 Limitation	BAAQMD Condition # 779 Part 4					Compliance with NESHAP LLL monitoring requirements ensures compliance with	

									SIP	
211	Separator (6-SE-2)	Opacity	10% opacity	63.1343	A-211 Dust Collector	Y	N	64.2(b)(1)(i)	NESHAP 40 CFR 63, Subpart LLL (9/9/2010)	BLD inspection-P/M, Dust Collector Inspection-P/A, Source Test-P/every 5 yrs, O&M Plan, CAM Condition # 24781
		Particulate Matter	Ringelmann 1.0 Limitation	SIP 6-301			Y		Compliance with NESHAP LLL monitoring requirements ensures compliance with SIP	
			Visible Particles	SIP 6-305						
			FILTERABLE PARTICULATE 0.15 gr/dscf	SIP 6-310						
			FILTERABLE PARTICULATE: $4.10P^{0.67}$ lb/hr. where P is process weight, ton/hr	SIP 6-311						
		PM10	0.006 gr/dscf or 3.6 lb/hr of	BAAQMD Condition # 1545 Part 2						
216	6-GM-1 Cake Conveyor (6-BC-13)	Opacity	10% opacity	63.1348	A-216 Dust Collector	N	N	64.2(a)(3)	Pre-control PTE < MST	Pressure Drop-P/Q-Condition # 20751, Source Test - P/every 5 yrs-Condition # 24621 per 40 CFR 70.6(c)
		Particulate Matter	Ringelmann 1.0 Limitation	SIP 6-301						
			Visible Particles	SIP 6-305						
			FILTERABLE PARTICULATE: 0.15 gr/dscf	SIP 6-310						

			FILTERABLE PARTICULATE: $4.10P^{0.67}$ lb/hr. where P is process weight, ton/hr	SIP 6-311						
			Ringelmann 1.0 Limitation	BAAQMD Condition # 4996 Part 1						
		PM10	0.0013 gr/dscf	BAAQMD Condition # 4996 Part 4						
217	6GM1 Cake Conveyor (6-BC-15)	Opacity	10% opacity	63.1348	A-217 Dust Collector	N	N	64.2(a)(3)	Pre-control PTE < MST	Pressure Drop-P/Q-Condition # 20751, Source Test - P/every 5 yrs-Condition # 24621 per 40 CFR 70.6(c)
		Particulate Matter	Ringelmann 1.0 Limitation	SIP 6-301						
			Visible Particles	SIP 6-305						
			FILTERABLE PARTICULATE: 0.15 gr/dscf	SIP 6-310						
			FILTERABLE PARTICULATE: $4.10P^{0.67}$ lb/hr. where P is process weight, ton/hr	SIP 6-311						
			Ringelmann 1.0 Limitation	BAAQMD Condition # 4996 Part 1						
		PM10	0.006 gr/dscf	BAAQMD Condition # 4996 Part 3						
218	6-GM-1 Air Separator (6-SE-1)	Opacity	10% opacity	63.1343	A-218 Dust Collector	Y	N	64.2(b)(1)(i)	NESHAP 40 CFR 63, Subpart LLL (9/9/2010)	BLD inspection-P/M, Dust Collector Inspection-P/A, Source Test-P/every 5 yrs, O&M Plan,
		Particulate Matter	Ringelmann 1.0 Limitation	SIP 6-301			Y		Compliance with NESHAP LLL monitoring requirements ensures	

									compliance with SIP	CAM Condition # 24781
			Visible Particles	SIP 6-305						
			FILTERABLE PARTICULATE: 0.15 gr/dscf	SIP 6-310						
			FILTERABLE PARTICULATE: $4.10P^{0.67}$ lb/hr. where P is process weight, ton/hr	SIP 6-311						
			Ringelmann 1.0 Limitation	BAAQMD Condition # 4997 Part 1					Compliance with NESHAP LLL monitoring requirements ensures compliance with Condition	
		PM10	0.006 gr/dscf	BAAQMD Condition # 4997 Part 3						
220	6-GM-2 Mill and Peripherals	Opacity	10% opacity	63.1343	A-220 Dust Collector	Y	N	64.2(b)(1)(i)	NESHAP 40 CFR 63, Subpart LLL (9/9/2010)	BLD inspection-P/M, Dust Collector Inspection-P/A, Source Test-P/every 5 yrs, O&M Plan, CAM Condition # 24781
		Particulate Matter	Ringelmann 1.0 Limitation	SIP 6-301			Y		Compliance with NESHAP LLL monitoring requirements ensures compliance with SIP	
			Visible Particles	SIP 6-305						
			FILTERABLE PARTICULATE: 0.15 gr/dscf	SIP 6-310						

			FILTERABLE PARTICULATE: $4.10P^{0.67}$ lb/hr. where P is process weight, ton/hr	SIP 6-311						
			Ringelmann 1.0 Limitation	BAAQMD Condition # 4998 Part 2					Compliance with NESHAP LLL monitoring requirements ensures compliance with Condition	
		PM10	0.006 gr/dscf	BAAQMD Condition # 4998 Part 3						
221	6-GM-2 Cake Feeder (6WF2)	Opacity	10% opacity	63.1345	A-221 Dust Collector	N	N	64.2(a)(3)	Pre-control PTE < MST	Pressure Drop-P/Q-Condition # 20751, Source Test - P/every 5 yrs-Condition # 24621 per 40 CFR 70.6(c)
		Particulate Matter	Ringelmann 1.0 Limitation	SIP 6-301						
			Visible Particles	SIP 6-305						
			FILTERABLE PARTICULATE: 0.15 gr/dscf	SIP 6-310						
			FILTERABLE PARTICULATE: $4.10P^{0.67}$ lb/hr. where P is process weight, ton/hr	SIP 6-311						
			Ringelmann 1.0 Limitation	BAAQMD Condition # 4996 Part 1						
		PM10	0.0013 gr/dscf	BAAQMD Condition # 4996 Part 4						
222	6-GM-2 Gypsum Feeder (6WF4)	Opacity	10% opacity	63.1345	A-222 Dust Collector	N	N	64.2(a)(3)	Pre-control PTE < MST	Pressure Drop-P/Q-Condition # 20751, Source Test - P/every 5 yrs-
		Particulate Matter	Ringelmann 1.0 Limitation	SIP 6-301						
			Visible Particles	SIP 6-305						

			FILTERABLE PARTICULATE: 0.15 gr/dscf	SIP 6-310						Condition # 24621 per 40 CFR 70.6(c)
			FILTERABLE PARTICULATE: $4.10P^{0.67}$ lb/hr. where P is process weight, ton/hr	SIP 6-311						
			Ringelmann 1.0 Limitation	BAAQMD Condition # 4995 Part 1						
		PM10	0.0013 gr/dscf	BAAQMD Condition # 4995 Part 3						
230	6-RP-1 Roller Press and Peripherals	Opacity	10% opacity	63.1343	A-230 Dust Collector	Y	N	64.2(b)(1)(i)	NESHAP 40 CFR 63 Subpart LLL (9/9/2010)	BLD inspection-P/M, Dust Collector Inspection-P/A, Source Test-P/every 5 yrs, O&M Plan, CAM Condition # 24781
		Particulate Matter	Ringelmann 1.0 Limitation	SIP 6-301			Y		Compliance with NESHAP LLL monitoring requirements ensures compliance with SIP	
			Visible Particles	SIP 6-305						
			FILTERABLE PARTICULATE: 0.15 gr/dscf	SIP 6-310						
			FILTERABLE PARTICULATE: $4.10P^{0.67}$ lb/hr. where P is process weight, ton/hr	SIP 6-311						

			Ringelmann 1.0 Limitation	BAAQMD Condition # 4999 Part 1					Compliance with NESHAP LLL monitoring requirements ensures compliance with Condition	
		PM10	0.006 gr/dscf	BAAQMD Condition # 4999 Part 3						
231	Pressed Cake Bin (6-SS-2)	Opacity	10% opacity	63.1345	A-231 Dust Collector	N	N	64.2(a)(3)	Pre-control PTE < MST	Pressure Drop-P/Q-Condition # 20751, Source Test - P/every 5 yrs-Condition # 24621 per 40 CFR 70.6(c)
		Particulate Matter	Ringelmann 1.0 Limitation	SIP 6-301						
			Visible Particles	SIP 6-305						
			FILTERABLE PARTICULATE: 0.15 gr/dscf	SIP 6-310						
			FILTERABLE PARTICULATE: $4.10P^{0.67}$ lb/hr. where P is process weight, ton/hr	SIP 6-311						
			Ringelmann 0.5 Limitation	BAAQMD Condition # 4996 Part 1						
		PM10	0.006 gr/dscf	BAAQMD Condition # 4996 Part 3						
240	Additive Conveyor/Bins	Opacity	10% opacity	63.1345	A-240 Dust Collector	N	N	64.2(a)(3)	Pre-control PTE < MST	Pressure Drop-P/Q-Condition # 20751, Source Test - P/every 5 yrs-Condition # 24621 per 40 CFR 70.6(c)
		Particulate Matter	Ringelmann 1.0 Limitation	SIP 6-301						
			Visible Particles	SIP 6-305						
			FILTERABLE PARTICULATE: 0.15 gr/dscf	SIP 6-310						

			FILTERABLE PARTICULATE: $4.10P^{0.67}$ lb/hr. where P is process weight, ton/hr	SIP 6-311						
			Ringelmann 1.0 Limitation	BAAQMD Condition # 4995 Part 1						
		PM10	0.0013 gr/dscf	BAAQMD Condition # 4995 Part 3						
242	6-GM-1 Cake Feeder (6-WF-3)	Opacity	10% opacity	63.1345	A-242 Dust Collector	N	N	64.2(a)(3)	Pre-control PTE < MST	Pressure Drop-P/Q-Condition # 20751, Source Test - P/every 5 yrs-Condition # 24621 per 40 CFR 70.6(c)
		Particulate Matter	Ringelmann 1.0 Limitation	SIP 6-301						
			Visible Particles	SIP 6-305						
			FILTERABLE PARTICULATE: 0.15 gr/dscf	SIP 6-310						
			FILTERABLE PARTICULATE: $4.10P^{0.67}$ lb/hr. where P is process weight, ton/hr	SIP 6-311						
			Ringelmann 0.5 Limitation	BAAQMD Condition # 4996 Part 1						
		PM10	0.0013 gr/dscf	BAAQMD Condition # 4996 Part 4						
243	6-GM-1 Gypsum Feeder (6-WF-9) - Reclaimed Cement	Opacity	10% opacity	63.1345	A-243 Dust Collector	N	N	64.2(a)(3)	Pre-control PTE < MST	Pressure Drop-P/Q-Condition # 20751, Source Test - P/every 5 yrs-
		Particulate Matter	Ringelmann 1.0 Limitation	SIP 6-301						

			Visible Particles	SIP 6-305						Condition # 24621 per 40 CFR 70.6(c)
			FILTERABLE PARTICULATE: 0.15 gr/dscf	SIP 6-310						
			FILTERABLE PARTICULATE: $4.10P^{0.67}$ lb/hr. where P is process weight, ton/hr	SIP 6-311						
			Ringelmann 1.0 Limitation	BAAQMD Condition # 4995 Part 1						
		PM10	0.0013 gr/dscf	BAAQMD Condition # 4995 Part 3						
244	6GM1 Pozzolan Feeder (6-WF-7)	Opacity	10% opacity	63.1345	A-244 Dust Collector	N	N	64.2(a)(3)	Pre-control PTE < MST	Pressure Drop-P/Q-Condition # 20751, Source Test - P/every 5 yrs-Condition # 24621 per 40 CFR 70.6(c)
		Particulate Matter	Ringelmann 1.0 Limitation	SIP 6-301						
			Visible Particles	SIP 6-305						
			FILTERABLE PARTICULATE: 0.15 gr/dscf	SIP 6-310						
			FILTERABLE PARTICULATE: $4.10P^{0.67}$ lb/hr. where P is process weight, ton/hr	SIP 6-311						
			Ringelmann 1.0 Limitation	BAAQMD Condition # 4995 Part 1						
		PM10	0.0013 gr/dscf	BAAQMD Condition # 4995 Part 3						

245	6-GM-1 Clay Feeder (6-WF-5) - Gypsum	Opacity	10% opacity	63.1345	A-245 Dust Collector	N	N	64.2(a)(3)	Pre-control PTE < MST	Pressure Drop-P/Q-Condition # 20751, Source Test - P/every 5 yrs-Condition # 24621 per 40 CFR 70.6(c)
		Particulate Matter	Ringelmann 1.0 Limitation	SIP 6-301						
			Visible Particles	SIP 6-305						
			FILTERABLE PARTICULATE: 0.15 gr/dscf	SIP 6-310						
			FILTERABLE PARTICULATE: $4.10P^{0.67}$ lb/hr. where P is process weight, ton/hr	SIP 6-311						
			Ringelmann 1.0 Limitation	BAAQMD Condition # 4995 Part 1						
		PM10	0.0013 gr/dscf	BAAQMD Condition # 4995 Part 3						
300	Wet Aggregate Storage Piles	Particulate Matter	< 10% opacity	60.672(b)	N	N	N	64.2(a)(3)	Pre-control PTE < MST	As A-300 is a mobile water truck is not regulated under Part 70 or title I
			Ringelmann 1.0 Limitation	SIP 6-301						
			Visible Particles	SIP 6-305						
			Ringelmann 1.0 Limitation	BAAQMD Condition # 7252, part 1						
301	Rail Loadout System	Opacity	10% opacity	63.1348	A-301 Dust Collector	N	N	64.2(a)(3)	Pre-control PTE < MST	Pressure Drop-P/Q-Condition # 20751, Source Test - P/every 5 yrs-Condition # 24621 per 40 CFR 70.6(c)
		Particulate Matter	Ringelmann 1.0 Limitation	SIP 6-301						
			Visible Particles	SIP 6-305						
			FILTERABLE PARTICULATE: 0.15 gr/dscf	SIP 6-310						

			FILTERABLE PARTICULATE: $4.10P^{0.67}$ lb/hr. where P is process weight, ton/hr	SIP 6-311						
			Ringelmann 1.0 Limitation	BAAQMD Condition # 7837 Part 2						
		PM10	0.01 gr/dscf	BAAQMD Condition # 7837 Part 5						
340	Coarse Rock Withdrawal System (8-BC-50, 8-BC51)	PM10	0.022 gr/dscf	60.672(a)	A-340 Baghouse	N	N	64.2(a)(3)	Pre-control PTE < MST	Pressure Drop-P/Q-Condition # 20751, Source Test - P/every 5 yrs-Condition # 24621 per 40 CFR 70.6(c)
		Opacity	< 7% opacity	60.672(a)						
		Particulate Matter	Ringelmann 1.0 Limitation	SIP 6-301						
			Visible Particles	SIP 6-305						
			Particulate Weight Limitation 0.15 gr/dscf	SIP 6-310						
			FILTERABLE PARTICULATE: $4.10P^{0.67}$ lb/hr. where P is process weight, ton/hr	SIP 6-311						
			Ringelmann 1.0 Limitation	BAAQMD Condition # 7247 Part 1						
		PM10	0.0013 gr/dscf	BAAQMD condition # 7247 Part 3						
341	Pre-Crushing Screens Rock Plant 3 (8-VS-	PM10	0.022 gr/dscf	60.672(a)	A-341 Baghouse	N	N	64.2(a)(3)	Pre-control PTE < MST	Pressure Drop-P/Q-Condition # 20751,
		Opacity	< 7% or 10% opacity	60.672(a)						

	50)	Particulate Matter	Ringelmann 1.0 Limitation	SIP 6-301						Source Test - P/every 5 yrs- Condition # 24621 per 40 CFR 70.6(c)
			Visible Particles	SIP 6-305						
			Particulate Weight Limitation 0.15 gr/dscf	SIP 6-310						
			FILTERABLE PARTICULATE: $4.10P^{0.67}$ lb/hr. where P is process weight, ton/hr	SIP 6-311						
			Ringelmann 1.0 Limitation	BAAQMD Condition # 7247 Part 1						
		Pm10	0.0013 gr/dscf	BAAQMD condition # 7247 Part 3						
342	Coarse Rock Crushing System 2 ea. Symons 5.5 Ft	PM10	0.022 gr/dscf	60.672(a)	A-342 Baghouse	N	N	64.2(a)(3)	Pre-control PTE < MST	BLD, Source Test - P/every 5 yrs, Condition # 24621 per 40 CFR 70.6(c)
		Opacity	< 7% opacity	60.672(a)						
		Particulate Matter	Ringelmann 1.0 Limitation	SIP 6-301						
			Visible Particles	SIP 6-305						
			Particulate Weight Limitation 0.15 gr/dscf	SIP 6-310						
			FILTERABLE PARTICULATE: $4.10P^{0.67}$ lb/hr. where P is process weight, ton/hr	SIP 6-311						
			Ringelmann 1.0 Limitation	BAAQMD Condition # 7246, part 1						

		PM10	0.0013 gr/dscf	BAAQMD Condition # 7246, part 2						
343	Crushed Rock Returns Conveyor	PM10	0.022 gr/dscf	60.672(a)	A-341 Baghouse	N	N	64.2(a)(3)	Pre-control PTE < MST	Pressure Drop-P/Q-Condition # 20751, Source Test - P/every 5 yrs-Condition # 24621 per 40 CFR 70.6(c)
		Opacity	< 7% opacity	60.672(a)						
		Particulate Matter	Ringelmann 1.0 Limitation	SIP 6-301						
			Visible Particles	SIP 6-305						
			Particulate Weight Limitation 0.15 gr/dscf	SIP 6-310						
			FILTERABLE PARTICULATE: $4.10P^{0.67}$ lb/hr. where P is process weight, ton/hr	SIP 6-311						
			Ringelmann 1.0 Limitation	BAAQMD Condition # 7247 Part 1						
		Opacity	0.0013 gr/dscf	BAAQMD condition # 7247 Part 3						
344	Wet Screening Feed Conveyor	Opacity	< 10% opacity	60.672(b)	N - A-350 Water Spray is inherent to process	N	N	64.2(a)(3)	Pre-control PTE < MST	Water spray system is considered inherent process equipment not a control device and pre-control PTE < MST.
		Pre-control PTE < MST	Ringelmann 1.0 Limitation	SIP 6-301						
			Visible Particles	SIP 6-305						
			Ringelmann 1.0 Limitation	BAAQMD Condition # 7248, part 1						
350	Wet Screening and Conveying	Opacity	< 10% opacity	60.672(b)	N - A-350 Water Spray is inherent to process	N	N	64.2(a)(3)	Pre-control PTE < MST	Water spray system is considered inherent
		Particulate Matter	Ringelmann Number 1 Limitation	SIP 6-301						

			Visible Particles	SIP 6-305						process equipment not a control device and pre-control PTE < MST.
			Ringelmann 1.0 Limitation	BAAQMD Condition # 7249, part 1						
360	Wet Aggregate Loadout System (8-BC-60)	Opacity	< 10% opacity	60.672(b)	N - A-360 Water Spray is inherent to process	N	N	64.2(a)(3)	Pre-control PTE < MST	Water spray system is considered inherent process equipment not a control device and pre-control PTE < MST.
		Particulate Matter	Ringelmann Number 1 Limitation	SIP 6-301						
			Visible Particles	SIP 6-305						
			Ringelmann 0.5 or 10% opacity	BAAQMD Condition # 7250, part 1						
370	Class 2 Aggregate Additive Transfer System (8-BC-35, 8-BC-37)	Particulate Matter	Ringelmann 1.0 Limitation	SIP 6-301	N - A-370 Water Spray is inherent to process	N	N	64.2(a)(3)	Pre-control PTE < MST	As A-370 is a mobile water truck is not regulated under Part 70 or title I
			Visible Particles	SIP 6-305						
			Ringelmann 1.0 Limitation	BAAQMD Condition # 7250, part 1						
380	Sand Transfer Class 2 Hopper	Opacity	< 10% opacity	60.672(b)	N	N	N	64.2(a)(2)	No - No control device	Note, permit does mention a haul road sprinkler system but that is used on the unpaved roadways associated with this source, not to control emissions from this source.
		Particulate Matter	Ringelmann 1.0 Limitation	SIP 6-301						
			Visible Particles	SIP 6-305						
			Ringelmann 1.0 Limitation	BAAQMD Condition # 7250, part 1						
381	Sand Storage Pile and Conveyor (8-BC-72)	Opacity	< 10% opacity	60.672(b)	N	N	N	64.2(a)(2)	No - No control device	Note, permit does mention a haul road sprinkler
		Particulate Matter	Ringelmann 1.0 Limitation	SIP 6-301						

			Visible Particles	SIP 6-305						system but that is used on the unpaved roadways associated with this source, not to control emissions from this source.
			Ringelmann 1.0 Limitation	BAAQMD Condition # 7250, part 1						
382	Water Clarifier Fines Shipment (8-CLAR-70, 8-BC-70, 8-BC-71)	Opacity	< 10% opacity	60.672(b)	N	N	N	64.2(a)(2)	No - No control device	Note, permit does mention a haul road sprinkler system but that is used on the unpaved roadways associated with this source, not to control emissions from this source.
		Particulate Matter	Ringelmann 1.0 Limitation	SIP 6-301						
			Visible Particles	SIP 6-305						
			Ringelmann 1.0 Limitation	BAAQMD Condition # 7250, part 1						
383	Rock Plant 2 Conveyors	Opacity	Ringelmann 1.0 Limitation	SIP 6-301	A-384 Baghouse	N	N	64.2(a)(3)	Pre-control PTE < MST	Included since it shares the same abatement device as S-384 and S-384 is subject to CAM
		Particulate Matter	Visible Particles	SIP 6-305						
			Particulate Weight Limitation 0.15 gr/dscf	SIP 6-310						
			FILTERABLE PARTICULATE: $4.10P^{0.67}$ lb/hr. where P is process weight, ton/hr	SIP 6-311						
384	Rock Plant 2 Screens - 16 & 17	Opacity	Ringelmann 1.0 Limitation	SIP 6-301	A-384 Baghouse	Y	Y			M22 VE - P/Q, Press Drop - P/Q, Inspection-P/A, Source Test-P/every 5 yrs, CAM Condition
		Particulate Matter	Visible Particles	SIP 6-305						

			Particulate Weight Limitation 0.15 gr/dscf	SIP 6-310						# 24781
			FILTERABLE PARTICULATE: $4.10P^{0.67}$ lb/hr. where P is process weight, ton/hr	SIP 6-311						
390	Conveyor Belt 15-M	Opacity	Ringelmann 1.0 Limitation	SIP 6-301	A-390 Baghouse	N	Y	64.2(a)(3)	Pre-control PTE < MST	Pressure Drop-P/Q-Condition # 20751, Source Test - P/every 5 yrs-Condition # 24621 per 40 CFR 70.6(c)
		Particulate Matter	Visible Particles	SIP 6-305						
			Particulate Weight Limitation 0.15 gr/dscf	SIP 6-310						
			FILTERABLE PARTICULATE: $4.10P^{0.67}$ lb/hr. where P is process weight, ton/hr	SIP 6-311						
			Ringelmann 1.0 Limitation	BAAQMD Condition # 7247 Part 1						
		PM10	0.0013 gr/dscf	BAAQMD condition # 7247 Part 3						
412	Finish Mill 6GM3	Opacity	10% opacity	63.1343	A-218 Dust Collector	N	N	64.2(a)(3)	Pre-control PTE < MST	BLD, Source Test - P/every 5 yrs, Condition # 24621 per 40 CFR 70.6(c) - This is subject to CAM because sharing A-218 with S-218
		Particulate Matter	Ringelmann 1.0 Limitation	SIP 6-301						
			Visible Particles	SIP 6-305						
			FILTERABLE PARTICULATE: 0.15 gr/dscf	SIP 6-310						

			FILTERABLE PARTICULATE: $4.10P^{0.67}$ lb/hr. where P is process weight, ton/hr	SIP 6-311						
			Ringelmann 1.0 Limitation	BAAQMD Condition # 13900 Part 2						
		PM10	0.006 gr/dscf	BAAQMD Condition # 13900 Part 3						
414	Kiln Dust Additive Bin	Opacity	10% opacity	63.1345	A-413 Dust Collector	Y	N	64.2(b)(1)(i)	NESHAP 40 CFR 63 Subpart LLL (9/9/2010)	M22 VE - P/M, Press Drop - P/M - Condition #13982, Inspection-P/A, Source Test-P/every 5 yrs, CAM Condition # 24781
		Particulate Matter	Ringelmann 1.0 Limitation	SIP 6-301			Y		Compliance with NESHAP LLL monitoring requirements ensures compliance with SIP	
			Visible Particles	SIP 6-305						
			FILTERABLE PARTICULATE: 0.15 gr/dscf	SIP 6-310						
			FILTERABLE PARTICULATE: $4.10P^{0.67}$ lb/hr. where P is process weight, ton/hr	SIP 6-311						
			Ringelmann 1.0 Limitation	BAAQMD Condition # 13982 Part 1					Compliance with NESHAP LLL monitoring requirements ensures compliance with Condition	

		PM10	0.01 gr/dscf	BAAQMD Condition # 13982 Part 3						
415	Finish Mill Building Conveyor	Opacity	10% opacity	63.1345	A-415 Dust Collector	N	N	64.2(a)(3)	Pre-control PTE < MST	Pressure Drop-P/Q-Condition # 20751, Source Test - P/every 5 yrs-Condition # 24621 per 40 CFR 70.6(c)
		Particulate Matter	Ringelmann 1.0 Limitation	SIP 6-301						
			Visible Particles	SIP 6-310						
			FILTERABLE PARTICULATE: 0.15 gr/dscf	SIP 6-310						
		PM10	FILTERABLE PARTICULATE: $4.10P^{0.67}$ lb/hr. where P is process weight, ton/hr	SIP 6-311						
		Opacity	0.006 gr/dscf	BAAQMD Condition # 21345 Part 3						
444	Emergency Clinker Conveyor	Opacity	10% opacity	63.1345	A-444 Water Spray System	N	N	64.2(a)(3)	Pre-control PTE < MST	
		Particulate Matter	Ringelmann 1.0 Limitation	SIP 6-301						
			Visible Particles	SIP 6-305						
			Ringelmann 1	BAAQMD Condition # 23416 Part 1						
501	Emergency Diesel Generator	Particulate Matter	Ringelmann 2.0 Limitation	SIP 6-303	N	N	N	64.2(b)(2)	Backup Utility unit exemption	
			Visible Particles	SIP 6-305						
			Particulate Weight Limitation 0.15 gr/dscf	SIP 6-310						

			FILTERABLE PARTICULATE: $4.10P^{0.67}$ lb/hr. where P is process weight, ton/hr	SIP 6-311						
		SO2	< 0.5 ppm continuously for 3 consecutive minutes or 0.25ppm averaged over 60 consecutive minutes, or 0.05 ppm averaged over 24 hours.	SIP 9-1-301		N				
		Sulfur	Sulfur content of liquid fuel ≤ 0.5% by weight	SIP 9-1-304		N				
502	Emergency Diesel Generator	Particulate Matter	Ringelmann 2.0 Limitation	SIP 6-303	N	N	N	64.2(b)(2)	Backup Utility unit exemption	
			Visible Particles	SIP 6-305						
			Particulate Weight Limitation 0.15 gr/dscf	SIP 6-310						
			FILTERABLE PARTICULATE: $4.10P^{0.67}$ lb/hr. where P is process weight, ton/hr	SIP 6-311						
		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.	SIP 9-1-301		N				
		Sulfur	Sulfur content of liquid fuel ≤ 0.5% by weight	SIP 9-1-304		N				

600	Quarry Blasting and Mobile Operations	Particulate Matter	Ringelmann 1.0 Limitation	SIP 6-301	N	N	N	64.2(a)(3)	Pre-control PTE < MST	
			Visible Particles	SIP 6-305						
			Particulate Weight Limitation 0.15 gr/dscf	SIP 6-310						
			FILTERABLE PARTICULATE: $4.10P^{0.67}$ lb/hr. where P is process weight, ton/hr	SIP 6-311						
			Ringelmann 1.0 Limitation	BAAQMD Condition # 2125, part 2						
601	Rock Hopper (9-DH-1)	Particulate Matter	Ringelmann 1.0 Limitation	6-301, BAAQMD Condition # 23896 Part 2	A-4501 Water Spray System	N	N	64.2(a)(3)	Pre-control PTE < MST	
		PM10	Visible Particles	SIP 6-305						
602	Conveyor System (9-PAF-1, 9-BC-1, 9-BC-2)	Opacity	< 10 % opacity	60.672(b)	A-4501 Water Spray System	N	N	64.2(a)(3)	Pre-control PTE < MST	
		Particulate Matter	Ringelmann 1.0 Limitation	SIP 6-301						
			Visible Particles	SIP 6-305						
			Particulate Weight Limitation 0.15 gr/dscf	SIP 6-310						
			FILTERABLE PARTICULATE: $4.10P^{0.67}$ lb/hr. where P is process weight, ton/hr	SIP 6-311						
			Ringelmann 1.0 Limitation	BAAQMD Condition # 23896 Part 1						

		PM10	0.0013 gr/dscf	BAAQMD Condition # 23896 Part 2						
603	Vibrating Grizzly (9-VG-1)	Opacity	< 10% opacity	60.672(b)	A-4501 Water Spray System	N	N	64.2(a)(3)	Pre-control PTE < MST	
		Particulate Matter	Ringelmann 1.0 Limitation	SIP 6-301						
			Visible Particles	SIP 6-305						
			Particulate Weight Limitation 0.15 gr/dscf	SIP 6-310						
			FILTERABLE PARTICULATE: $4.10P^{0.67}$ lb/hr. where P is process weight, ton/hr	SIP 6-311						
			Ringelmann 1.0 Limitation	BAAQMD Condition # 23896 Part 1						
		PM10	0.0013 gr/dscf	BAAQMD Condition # 23896 Part 2						
606	Storage Piles Area 1	Opacity	< 10% opacity	60.672(b)	N	N	N	64.2(a)(3)	Pre-control PTE < MST	As A-606 is a mobile water truck is not regulated under Part 70 or title I
		Particulate Matter	Ringelmann 1.0 Limitation	SIP 6-301						
			Visible Particles	SIP 6-305						
			Ringelmann 1.0 Limitation	BAAQMD Condition # 24274 Part 2						
607	Storage Piles Area 2	Opacity	< 10% opacity	60.672(b)	N	N	N	64.2(a)(3)	Pre-control PTE < MST	As A-607 is a mobile water truck is not regulated under Part 70
		Particulate Matter	Ringelmann 1.0 Limitation	SIP 6-301						
			Visible Particles	SIP 6-305						

			Ringelmann 1.0 Limitation	BAAQMD Condition # 24274 Part 2						or title I
608	Hopper/Grizzly Feeder	Particulate Matter	Ringelmann 1.0 Limitation	SIP 6-301	A-608 Water Suppression System	N	N	64.2(a)(3)	Pre-control PTE < MST	
			Visible Particles	SIP 6-305						
		PM10	0.0013 gr/dscf	BAAQMD Condition #25380 Part 3						
609	Primary Crusher	Particulate Matter	Ringelmann 1.0 Limitation	SIP 6-301	A-609 Dust Collector	N	N	64.2(a)(3)	Pre-control PTE < MST	Pressure Drop-P/Q-Condition # 25380, Source Test - P/every 5 yrs-Condition # 24621 per 40 CFR 70.6(c)
			Visible Particles	SIP 6-305						
		PM10	0.0013 gr/dscf	BAAQMD Condition #25380 Part 3						
610	Conveyor System	Particulate Matter	Ringelmann 1.0 Limitation	SIP 6-301	A-610 Dust Collector	N	N	64.2(a)(3)	Pre-control PTE < MST	Pressure Drop-P/Q-Condition # 25380, Source Test - P/every 5 yrs-Condition # 24621 per 40 CFR 70.6(c)
			Visible Particles	SIP 6-305						
		PM10	0.0013 gr/dscf	BAAQMD Condition #25380 Part 3						
611	Vibrating Screen	Particulate Matter	Ringelmann 1.0 Limitation	SIP 6-301	A-611 Dust Collector	N	N	64.2(a)(3)	Pre-control PTE < MST	Pressure Drop-P/Q-Condition # 25380, Source Test - P/every 5 yrs-Condition # 24621 per 40 CFR 70.6(c)
			Visible Particles	SIP 6-305						
		PM10	0.0013 gr/dscf	BAAQMD Condition #25380 Part 3						
612	Secondary Crusher	Particulate Matter	Ringelmann 1.0 Limitation	SIP 6-301	A-612 Dust Collector	N	N	64.2(a)(3)	Pre-control PTE < MST	Pressure Drop-P/Q-Condition # 25380, Source Test - P/every 5 yrs-Condition # 24621 per 40 CFR 70.6(c)
			Visible Particles	SIP 6-305						
		PM10	0.0013 gr/dscf	BAAQMD Condition #25380 Part 3						

613	Lime/Soda Ash/Sodium Bicarbonate Storage Bin	Particulate Matter	Ringelmann 1.0 Limitation	SIP 6-301	A-167, A-613 Dust Collectors	N	N	64.2(a)(3)	Pre-control PTE < MST	
			Visible Particles	SIP 6-305						
			Ringelmann 1.0 Limitation	BAAQMD Condition # 24626 Part 1						
		PM10	0.0013 gr/dscf	BAAQMD Condition # 24626 Part 3						