LEHIGH
HEIDELBERGCEMENT Group

Lehigh Southwest Cement Company
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October 30, 2012

Hand Delivered this Date

RECEIVED
OCT 30 2012
SHASTA COUNTY AQMD

Ross Bell, Air Quality District Manager
Air Quality Management District
1855 Placer Street, Suite 101
Redding CA 96001

RE: Title V Renewal Application

Dear Mr. Bell:

The Title V renewal application for Lehigh Southwest Cement Company – Redding facility is enclosed.

The due date is October 30, 2012.

If you require any additional information or have any questions please do not hesitate to contact Olivia Allsman at (530) 275-1581, ext. 3317.

Sincerely,

James E. Ellison
Plant Manager

Enclosure as referenced above

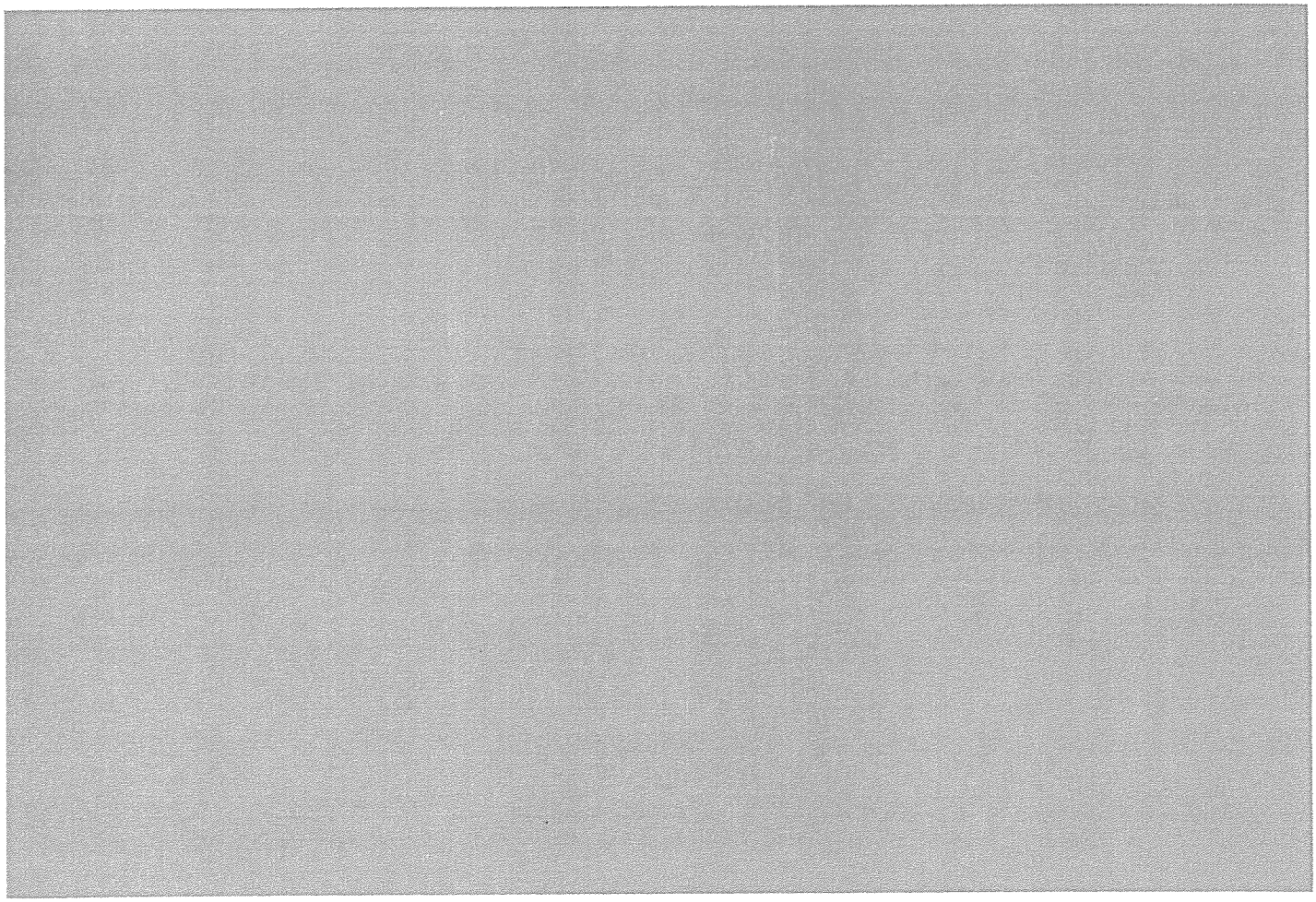
AECOM Environment

Prepared for:
Lehigh Southwest Cement Company
Redding, California

Prepared by:
AECOM
Camarillo, CA
60276440
October 2012

Lehigh Southwest Cement Company

Title V Renewal Application



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Lehigh Southwest Cement Company

Title V Renewal Application

Karin Fickerson

Prepared By: Karin Fickerson

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1.0 Overview and Background

Lehigh Southwest Cement Company (Lehigh) is submitting this Title V permit renewal application package to the Shasta County Department of Resource Management Air Quality Management District (SCAQMD) for the facility located in Redding, California. The Title V operating permit number is 02-VP-07 and was issued August 5, 2009. To satisfy SCAQMD Rule requirements, this Title V renewal application is being submitted less than 18 months and more than 6 months prior to the expiration date of April 30, 2013.

The facility emits criteria pollutants comprised of oxides of nitrogen (NOx), carbon monoxide (CO), particulate matter less than 10 microns in diameter (PM10), volatile organic hydrocarbons (VOC), and sulfur dioxide (SO2), as well as toxic air contaminants (TACs) and greenhouse gas (GHG) emissions.

The SCAQMD Title V application forms have been completed and are included in Appendix A.

1.1 Facility Contact Information

The facility contact information is as follows:

Facility Contact:
James Ellison
Plant Manager
Lehigh Southwest Cement Company
15390 Wonderland Boulevard
Redding, California 96003
(530) 275-1581 x. 3301
JEllison@LEHIGHCEMENT.COM

1.2 Project Contact Information

The project contact information is as follows:

Permitting Contact:
AECOM Environment
Karin Fickerson, Senior Project Manager
(805) 764-4034 (phone)
(805) 388-3577 (fax)
karin.fickerson@aecom.com

2.0 Process and Equipment Descriptions

2.1 Overview

The Lehigh facility in Redding is comprised of the following equipment categories:

- Quarries and Crushing Department;
- Raw Milling and Kiln Department;
- Finish Grinding Department;
- Storage and Shipping Department; and
- Emergency Standby Internal Combustion Engines.

Crushed shale, limestone, silaceous material, and other necessary raw materials from the Quarries and Crushing Department are combined in the Raw Mill Feeding System and ground in the Raw Mill System. The Quarries and Crushing Department includes two limestone crushers, two shale crushers, a quarry drill, a pre-blending dome building, and eight dust collectors.

The crushed blend, kiln feed, is managed in the Raw Feed Blending and Storage System. The kiln feed is routed to the Rotary Kiln and Preheater System for cement clinker production. The kiln fuels are managed and processed in the Kiln Fuels Processing System. The Raw Milling and Kiln Department is comprised of a cement kiln/raw mill with dust collector, a shredded tire and automated whole tire fuel feed system, a coal unloading facility, a closed clinker cooler system, a secondary fuel system, and 12 additional dust collectors.

The Finish Grinding Department includes finish mills with six dust collectors and six additional dust collectors. The Storage and Shipping Department includes 11 dust collectors. Clinker is handled by the Clinker Transport and Storage System. Clinker is milled in the finish Grinding Department. The clinker is stored and shipped in the Storage and Shipping Department. Six emergency diesel-fired emergency internal combustion engines (ICEs) also support the facility. The remaining equipment is comprised compliance monitoring devices and the insignificant sources identified below in Section 2.2.

2.1.1 Quarry and Crushing

The Quarry and Crushing Department is comprised of two limestone crushers, two shale crushers, a quarry drill, and a pre-blending dome building. There are two quarry drill diesel-fired ICEs (200 horsepower [hp] and 400 hp). The quarry drill is controlled by dust collectors R-115 (insignificant) and R-116. The shale jaw crusher is controlled by dust collector C36. Dust collection is also provided by dust collectors B-13, B-25, C-34, C-36, and C-38. Note that for dust collector C-34, Title V Permit Condition F1b includes a limit of 0.05 grains per standard cubic feet (gr/dscf) whereas Title V Permit Condition A7 provides a limit of 0.1 gr/dscf). Lehigh requests that this inconsistency be clarified once the Title V permit is renewed.

2.1.2 Raw Mill Feed System

The Raw Mill Feed System consists of raw material storage silos, weigh feeders for each silo, and a belt conveyor, which feeds the roller mill. The different raw materials enter storage silos via belt conveyor from the Quarries and Crushing Department. Weigh feeders at each silo are set to achieve a satisfactory raw material chemistry. If necessary, iron ore or other raw material additives can be added onto the conveyor that feeds the roller mill.

Dust collection for the belt transfer into the raw material storage silos is provided by dust collector C172. Dust collection for the belt transfer from the silos onto the roller mill feed belt is provided by dust collector S210. The R-1 silo is used for storage of synthetic gypsum. Duct collectors G231 and G244 are insignificant. Dust collection for the deep bucket conveyor is provided by dust collector G425.

2.1.3 Raw Mill System

The Raw Mill System receives a prescribed feed from the Raw Mill Feed System. A roller mill crushes and grinds the feed to prescribed fineness. Exhaust gases from the kiln are swept through the mill and carry the crushed product into cyclones. The overhead cyclone discharge recombines with kiln gases, discussed in the Rotary Kiln and Preheater section below. Cyclone bottoms are routed to the Raw Feed Blending and Storage System, which is described below. There is also a 67-hp diesel-fired welder that operates up to 80 hours per year.

2.1.4 Raw Feed Blending and Storage System

Blending silos are filled with Raw Mill System product. Kiln feed storage silos are filled from the blending silos. Material is transferred from either silo to the Rotary Kiln and Preheater section below. Dust collectors S253, F184, F173 service this system.

2.1.5 Rotary Kiln and Preheater

The Rotary Kiln is fed from the Raw Feed Blending and Storage System. Feed is preheated in a four-stage cyclonic preheater using the kiln exhaust gases. The kiln is heated by the combustion of fossil and alternate fuels and is described in the Kiln Fuels Processing section below. Mineral formation occurs in the kiln to produce cement clinker, which is managed by the Clinker Transport and Storage System described below. Dust collector F350 services the equipment necessary for the introduction of raw feed into this system.

The exhaust gases from the preheater are cooled in a spray tower and routed to the facility's main baghouse (S260). A portion of the gas may be swept through the roller mill and recovered prior to S260. The dust recovered by the main baghouse and the spray tower bottoms are re-introduced as kiln feed. The baghouse exhaust is routed to a 277-foot stack.

2.1.6 Kiln Fuels Processing

The kiln is fueled from the combustion of various materials. Mill processing and associated storage/delivery systems exist to prepare solid organic fossil-based and petroleum-based fuels (e.g., coal, coke, etc.). Dust collection for the coal silo is provided by dust collector G206. Dust collection for the indirect coal firing system is provided by dust collector G465. Storage and delivery systems exist for processing agricultural waste fuels (e.g., rice hulls, wood chips, etc.). The agricultural waste unloading facility is controlled by dust collectors G228F, G228G, and G228NA. Conveyance systems exist for processing agricultural waste fuels (e.g., rice hulls, wood chips, etc.) and whole and chipped rubber tires. The conveyance systems are described below.

Solid Fuels

The raw solid fuel, usually coal and coke, is delivered by rail or truck and conveyed to a storage silo or deposited onto the ground as a pile. Dust collection for the silo is provided by G206. The raw fuel is reclaimed from outside storage piles or conveyed from the silo at a specified rate to a roller-type mill. A portion of the kiln inlet gases are swept through the mill and carry the crushed product to dust collector G465. The recovered crushed product is routed to feed bins. The crushed fuel is pneumatically conveyed from the bins to either the kiln burner pipe or the kiln preheater. Fluid coke is received via trucks and pneumatically conveyed to storage silo G271 and on to the burner pipe. The portable silo is equipped with a ladder with cage, full railing, a manway, and a pneumatic fill line. This process is controlled by dust collector G270.

Sawdust

Sawdust is delivered by truck and unloaded in an existing enclosed receiving station (G225). The receiving station is vented by dust collector G228-F. The material drops into a 4,000-cubic foot discharge hopper (G227) where the material is transferred into a storage silo. After the material enters the silo it is then conveyed from the bottom of the silo through a discharge auger and into a prehopper, where the material is then transferred into the kiln's main burner pipe.

Scrap Tires

Scrap whole and chipped tires can be delivered to the kiln preheater using conventional conveying techniques. The delivery rate is prescribed and controlled. Dust collection is not necessary for this operation.

2.1.7 Finish Grinding

The finish grinding department includes finish mills controlled by dust collectors EA87, EA92/93, EB147/148, EB142, E35/34, and E30. The C Mill Feed Elevator is controlled by dust collector E12. The C Mill Gypsum Weigh Feed is controlled by dust collector E230. The C Mill Clinker Weigh Feeder is controlled by E231. The Gypsum Elevator is controlled by dust collector D34. The Synthetic Gypsum Loading System is controlled by dust collectors D122 and D123.

2.1.8 Clinker Transport and Storage System

Clinker from the Rotary Kiln and Preheater System is conveyed to the Finish Mill Department, or the clinker storage hall, utilizing this system. The equipment is serviced by dust collectors G418-1, G425, D87, D88, and D89. D87, 88, D89 exhaust into the clinker storage hall and are not considered controlled emission points.

Clinker in the storage hall enters the Finish Mill Department utilizing an overhead crane to direct the material into the respective finish mill feed bins or by a reclaiming conveyor inside the storage hall. The storage and shipping department is controlled by dust collectors J159, J162, J165, J168, J174, J321, J345, J350, J387, J257, J294, J390, J44A, J52A, and J61A.

Process flow diagrams are included in Appendix B.

2.1.9 Emergency Internal Combustion Engines

Six emergency diesel-fired ermegency ICE also support the facility. The 489-hp unit (R100) operates up to 30 hours per year for maintenance and testing. The five 2,132-hp units (R151, R152, R153, R154, R155) operate up to 40 hours per year each for maintenance and testing.

2.2 Insignificant Activities

The following emission devices are insignificant sources per SCAQMD Rule 5 Attachment 1.

Quarries and Crushing Department

- Dust Collectors R115, C160, C162
- Belt Conveyor Transfer Points B18, B19
- Motor Oil Storage Tanks
- Hydraulic Oil Storage Tanks
- Diesel Storage Tanks
- Quarries and Crushing Department Mobile Equipment
- Outdoor Storage Piles
- Quarry Drills (except R-116)

Raw Milling and Kiln Department

- Coal/Coke Offloading System
- Whole Tire Feed System
- Agricultural Waste Fuels Offloading System
- Clinker Emergency Discharge System
- Dust Collectors D87, D88, D89
- Laboratory Equipment

Finish Grinding Department

- Ball Sorter
- Calcium Sulfate Rail Car Unloading System
- Air Entraining Reagent Storage Tank
- Grinding Aid Storage Tanks
- Mill Building Ventilating Fans

Storage and Shipping Department

- Spring Conveyors for Sacked Cement J130, J131
- Building Ventilating Fans

Facility-wide Operations

- Solvent Degreasing Tanks
- Painting Operations
- Air Conditioners
- Gasoline Storage Tanks

3.0 Emissions

The facility-wide potential to emit (PTE) has been calculated for criteria pollutant, TAC, and GHG emissions. The emission quantification methods for criteria and TAC pollutants, as well as GHG emissions are described in this section. Emission calculations are provided in detail in Appendix C of this application.

3.1 Criteria Pollutant Emissions

Criteria pollutants include NOx, CO, PM10, VOC, and SO2. Sources of combustion criteria pollutants are the kiln, quarry drills, welders and emergency ICEs. Sources of PM10 emissions include the dust collectors, paved and unpaved roads, piles, crushing, and quarry blasting. Detailed emission calculations are provided in Appendix C.

A summary of criteria pollutant emissions is provided in Table 3-1 below.

Table 3-1 Summary of Criteria Emissions

Equipment	NOx (TPY)	CO (TPY)	SOx (as SO2) (TPY)	PM10 (TPY)	VOC (as TOC) (TPY)
Kiln [a]	954	5,067	101	--	18
Dust Collectors	--	--	--	962	--
Internal Combustion	88	19	6	6	7
Fugitives	--	--	--	56	--
TOTAL	**1,042**	**5,086**	**107**	**1,025**	**25**

a) Kiln PM10 emissions are included in the dust collector emissions

3.2 Hazardous Air Pollutant Emissions

Hazardous Air Pollutant (HAP) emissions from the facility include arsenic, benzene, beryllium, cadmium, chromium, hexavalent chromium, dioxins, formaldehyde, furans, hydrogen chloride, lead, manganese, mercury, nickel, poly aromatic hydrocarbons (PAH), naphthalene, polychlorinated biphenyls (PCB), selenium, and vinyl chloride. Emission calculations are provided in Appendix C. The results are shown in Table 3-2 below.

Table 3-2 Summary of HAP Emissions

HAP	Annual PTE (TPY)
Arsenic	0.0001
Benzene	0.15
Beryllium	0.00001
Cadmium	0.0001
Chromium	0.0006
Chromium (hex)	0.0002
Dioxins	0.0000002
Formaldehyde	0.61
Furans	0.00000003
Hydrogen Chloride	15.97
Lead	0.001
Manganese	0.03
Mercury	0.04
Nickel	0.001
PAH	0.0006
Naphthalene	0.03
PCB	0.0001
Selenium	0.0001
Vinyl Chloride	0.07
TOTAL	**16.90**

As shown in Table 3-2, hydrogen chloride exceeds the major HAP threshold of 10 tons per year (TPY) and the total facility-wide HAP does not exceed the threshold of 25 TPY. Since the individual HAP threshold is exceeded, the facility is a major source of HAP.

3.3 Greenhouse Gas Emissions

GHG emissions from the kiln and ICEs include carbon dioxide (CO2), nitrous oxide (N2O), and methane (CH4). GHG emissions were calculated in accordance with the emission factors, procedures and tables provided in Title 40 of the Code of Federal Regulations (CFR) 98 Subpart C. The carbon dioxide equivalent (CO2e) was calculated by applying the global warming potential of each substance and then summing the emissions. Emission calculations are provided in Appendix C. The results are shown in Table 3-3 below. As shown in the table below, GHG emissions exceed the 250 TPY threshold, as well as the 100,000 TPY CO2e threshold.

Table 3-3 Summary of GHG Emissions

Results in short tons per year (st/yr)				
	CO2 (st/yr)	CH4 (st/yr)	N2O (st/yr)	CO2e (st/yr)
Kiln	743,877	--	--	743,877
ICE Combustion	3,255	0	0	3,266
TOTAL	**747,132**	**0**	**0**	**747,143**

4.0 Rule Compliance Determination

This section of the application describes rule applicability and presents specific information used to make rule applicability and compliance determinations. Proposed SCAQMD rules and U.S. Environmental Protection Agency (EPA) regulations are also discussed.

4.1 Local Regulatory Requirements

4.1.1 Rule II Permits

Rule 2:1 Permits Required

This rule requires the facility to obtain an Authority to Construct (ATC) from the SCAQMD prior to construction of new equipment located within the Sacramento Valley Air Basin (SVAB) that may cause or control the issuance of air contaminants. This permit shall remain in effect until an operating permit is granted or denied or the application is canceled.

This rule also requires the source to obtain a permit to operate (PTO) from the SCAQMD for new equipment located within the SVAB that may cause or control the issuance of air contaminants. Lehigh has been issued a Title V Operating Permit and is submitting this application for permit renewal. Compliance with this rule is anticipated.

Rule 2:6 Open Burning – General Provisions

This rule establishes permit requirements and restrictions on open burning for the disposal of vegetation or wood waste. A valid permit, issued by the Air Pollution Control Officer (APCO), must be obtained and kept on site for open burning activities. Lehigh will conduct on-site burning activities in accordance with rule requirements; therefore, compliance is anticipated.

Rule 2:7 Conditions for Open Burning

This rule establishes conditions and restrictions for on-site open burning events. The facility must obtain a permit, adhere to permit requirements, limit burning based on meteorological conditions, and process and arrange material per rule requirements. Lehigh will conduct on-site burning activities in accordance with rule requirements; therefore, compliance is anticipated.

Rule 2:11 Fees

Subpart (a)(2) establishes fees by device or process for permit renewal applications. The applicable fee has been included with this application.

Subpart (a)(3)(f) establishes a fee and emissions testing schedule for new, existing, or modified stationary facilities. The applicable test schedule for Lehigh is once every 3 years, applicable to facilities which emit between 25 and 50 TPY. Prior to the emissions test, the facility shall provide 30-day notification to SCAQMD to allow for testing observation. These requirements apply to Lehigh's clinker handling dust collector (G418-1), coal mill gas thermal dryer, and kiln/roller mill stack (S260). These requirements are incorporated into the existing Title V Operating Permit under Condition B9, B10, and B19. Therefore, compliance is anticipated.

Rule 2:14 Testing Facilities

This rule establishes requirements for facilities to demonstrate, through sampling and testing, the nature, extent, quantity, or degree of air contaminants discharged into the atmosphere from the emissions units described in the ATC or PTO. Lehigh is not proposing to operate new or modified equipment as part of this application. Compliance with this rule is anticipated.

Rule 2:16 Conditional Approval

The rule establishes authorization for the APCO to grant conditional approval for operating permits. ATCs are deemed complete with SCAQMD-specified conditions designed to ensure operational compliance with all SCAQMD rules. Information required to demonstrate compliance with conditions must be made available to the APCO upon request. Lehigh currently maintains compliance with all permit conditions. Therefore, compliance is anticipated.

Rule 2:21 Transfer

This rule establishes the requirement for written authorization from the APCO for the transfer or sale of ATCs or PTOs. In the event that permitted equipment were planned for sale or transfer, Lehigh would follow all requirements. Compliance is anticipated.

Rule 2:23 Posting of Permit to Operate

This rule establishes requirements for posting of PTOs within 25 feet of the operational source, or be readily available at all times on the premises. Compliance with this rule is anticipated.

Rule 2:24 Defacing Permit

This rule protects permit integrity and disallows defacing, altering, forging, counterfeiting, or falsifying a PTO. Compliance with this rule is anticipated.

Rule 2:25 Public Records – Trade Secrets

This rule establishes the difference between public record and trade secrets. Public records include source information, design specification, and air monitoring data. Trade secrets include (but are not limited to) any formula, plan, pattern, process, tool, mechanism, compound, procedure, production data, or compilation of information that is not patented, only known to certain individuals, and that gives users a business advantage. Compliance with this rule is anticipated.

Rule 2:26 Revocation of Permit

The rule establishes APCO authority to revoke an existing ATC or PTO in the event the permittee violates the permit conditions designed to ensure compliance with applicable rules and regulations. Compliance with this rule is anticipated.

4.1.2 Rule III Prohibitions and Enforcement

Rule 3:1 Applicability of State Laws

This rule incorporates each and every provision of Federal or State law or applicable Air Basin Plan that regulates the discharge of any air contaminant. Compliance with this rule is anticipated.

Rule 3:2 Specific Air Contaminants

This rule establishes criteria pollutant emission limits and test method requirements for ensuring compliance with the limits presented in Table 1 of Rule 3:2. The emission sources existing prior to 7.1.86 are subject to 0.1 gr/dscf. The most stringent standard of 0.05 gr/dscf applies to dust collectors installed more recently and is incorporated into the existing Title V Operating Permit under Condition A3, C1, D1, D4, and F3. Therefore, compliance is anticipated.

Rule 3:4 Industrial Use of Organic Solvents

This rule establishes daily atmospheric discharge limits of 40 pounds for processes which use organic or photochemically reactive solvents. This rule is incorporated into the existing Title V Operating Permit Condition F2. Therefore, compliance is anticipated.

Rule 3:6 Circumvention

This rule prohibits the use of equipment that conceals an emission that would otherwise result in an increase in total release of air contaminants to the atmosphere. Lehigh will not operate equipment that would conceal an emission, per existing Title V Operation Permit Condition G5. Compliance is anticipated.

Rule 3:10 Excess Emissions

This rule establishes notification requirements in the event of an emissions exceedance above the permitted limit or scheduled maintenance. Exceedances may occur due to maintenance and testing, emergency, or breakdown. Notification shall be provided to the APCO within 4-hours of the exceedance and 24-hours prior to a scheduled maintenance event, whether or not an exceedance occurs. Corrective action is required within 24-hours of an emissions exceedance. This rule is incorporated into the Title V Operating Permit Conditions F5 and F6. Therefore, compliance is anticipated.

Rule 3:16 Fugitive, Indirect, or Non-Traditional Sources

This rule prohibits any active operations, open storage piles or disturbed surface area from causing dust emissions that extend beyond the facility's fence line or prohibits dust emission that exceed 20 percent opacity if it is the result of movement of a motorized vehicle. The rule also prohibits active operations without utilizing the applicable best available control measures to minimize fugitive dust emissions from each fugitive dust source type within the active operation. Lehigh is an active operation as defined under Rule 3:16 and is subject to the provisions or the control requirements of Table 1 in this rule. Lehigh will employ the best available control measures listed in Table 1 of this rule to control fugitive dust emissions from open storage piles, unpaved roads, and/or disturbed surface area. Therefore, compliance with this rule is anticipated.

This rule also prohibits the discharge from sources whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to a considerable number of persons or to the public or which endangers the comfort, repose, health or safety of any such persons or the public or which cause or have a natural tendency to cause injury or damage to business or property. This rule is incorporated into the Title V Operating Permit Condition G4. Therefore, compliance is anticipated.

Rule 3:28 Stationary Internal Combustion Engines

This rule establishes emissions limits for stationary ICEs rated greater than 300 brake horsepower (BHP) at 600 and 4,500 parts per million (ppm), for NOx and CO, respectively. The rule also includes opacity limits of 20 percent, requirements for initial and annual emissions testing, and recordkeeping for operational activities. These requirements apply to Lehigh's five Caterpillar Model ZW3516-CAT diesel engines and one Detroit Model V-71 diesel engine and have been incorporated into the Title V Operating Permit Condition E3. Therefore, compliance is anticipated.

4.1.3 Rule V Title V

Rule 5: Additional Procedures for Issuing Permits to Operate for Sources Subject to Title V of the Federal Clean Air Act Amendments of 1990

This rule applies to major emission sources or sources with an acid rain unit and implements the requirements of Title V of the Federal Clean Air Act. These requirements apply to Lehigh's Title V Operating Permit per Conditions B16, F8, F10, G6-G15, and G17.

Subpart V(D)(1) establishes requirements for notification and public review of the permit and/or renewal application for Title V facilities. The APCO is responsible for providing written notice of the public review period; the APCO and/or facility is responsible for publishing public notice of permit/permit renewal in at least one newspaper within the area, and must include specific information such as facility name and location, facility and SCAQMD contact information, and duration of public review period. Lehigh will publish notification in the local newspaper following APCO written notification of permit renewal upon the APCO's request. Therefore, compliance is anticipated.

4.1.4 Proposed Local Rules

At the time of the application, proposed rules within SVAB include control measures for in-use, stationary diesel engines, which are used in agriculture. Based on equipment and processes at Lehigh, the proposed rule and requirements are not applicable. There are also proposed amendments to Rule 3:16. Lehigh will comply with the new rule revisions as required.

4.2 Federal Regulatory Requirements

4.2.1 40 CFR Part 60 Standards of Performance for New Stationary Sources

4.2.1.1 Subpart A – General Provisions

§60.7 Notification and Recordkeeping (a)(4) establishes notification requirements for any physical or operational change to an existing facility which may result in an increase in emissions, unless the change is exempted under an applicable subpart. The notification shall be submitted 60 days prior to the proposed operational change. These requirements apply to Lehigh's Title V Operating Permit per Conditions B17 and F9. Therefore, compliance is anticipated.

§60.7 (d) establishes requirements for the owner/operator to submit a summary report form in the event of an emissions exceedance above the permitted limit. If the duration of the emissions exceedance is 1 percent or greater of the total operating time for the reporting period, the summary report form and excess emission report must be submitted. Excess emissions as measured by

Lehigh's kiln opacity monitor are required to be reported to the EPA Administrator, per Condition B23 of the existing Title V Operating Permit. Therefore, compliance is anticipated.

§60.7 (f) establishes monitoring and measurement recordkeeping requirements for an owner/operator. Performance testing, evaluations, calibration checks, adjustments and maintenance, and continuous monitoring records must be maintained on site for a minimum of 2 years. Compliance is anticipated.

§60.8 Performance tests (d) establishes notification requirements at least 30-days prior to performance testing. The notification shall be submitted to the EPA Administrator to allow opportunity for testing observation. If the performance testing is delayed from the date presented in the initial notification, the facility shall provide at least 7-days notice to the Administrator to allow for re-schedule. These requirements are incorporated into the existing Title V Operating Permit under Condition F11. Therefore, compliance is anticipated.

§60.8 (e) establishes requirements for performance testing including adequate sampling port, safe sampling platforms, safe access to sampling platform, and utilities for sampling and testing equipment. These requirements are incorporated into the existing Title V Operating Permit under Condition F11. Therefore, compliance is anticipated.

§60.11 Compliance with standards and maintenance requirements (b) establishes the methodology for demonstrating compliance with opacity standards. The approved methodology is performance testing in accordance with EPA Method 9. These requirements are incorporated into the existing Title V Operating Permit under Condition F13. Therefore, compliance is anticipated.

§60.12 Circumvention prohibits the use of equipment that conceals an emission that would otherwise result in an increase in total release of air contaminants to the atmosphere. Lehigh will not operate any equipment that would conceal an emission, per existing Title V Operation Permit Condition G5. Compliance is anticipated.

§60.13 Monitoring Requirements establishes operating requirements and design specifications for continuous emissions monitoring systems (CEMS). Requirements include verification of operational status in accordance with manufacturer's specifications, as well as installation and operation prior to conducting performance testing. Calibration requirements include daily inspections and implementation of a written procedure. CEMS shall be in continuous operation and shall meet minimum frequency of operation requirements. These requirements apply to the in-line kiln/raw mill stack (S260) and are incorporated into the existing Title V Operating Permit under Condition B1. Therefore, compliance is anticipated.

4.2.1.2 Subpart F Standards of Performance for Portland Cement Plants

§60.60 Applicability and Designation of Affected Facility establishes regulatory applicability and affected facilities in Portland cement plants, including kiln, clinker cooler, raw mill system, finish mill system, raw mill dryer, raw material storage, clinker storage, finished product storage, conveyor transfer points, bagging and bulk loading and unloading systems. Appendix A of this subpart establishes requirements for Method 9 visible emissions/opacity testing. Method 9 of Appendix A shall be used for follow-up visible emissions testing of Lehigh's finish mills if visible emission using EPA Method 22 are observed.

§60.62 (a)(1) establishes PM emission standards for kiln gas, on and after the performance test, of 0.01 pound per ton of clinker on a 30-operating day rolling average if construction, reconstruction, or modification of the kiln commenced after June 16, 2008. If construction, reconstruction, or modification occurred before June 16, 2008, the applicable PM emission standard is 0.30 pounds per ton of feed (dry basis).

§60.62 (a)(2) establishes opacity standards for kiln gas of 20 percent. This opacity limit does not apply if the kiln is equipped with a PM CEMS. These requirements apply to Lehigh's CEMS for the in-line kiln/raw mill stack (S260) and clinker cooler; the requirements are incorporated into the existing Title V Operating Permit under Conditions B1, B12, and B16. Therefore, compliance is anticipated.

§60.62 (b) establishes PM emission standards for clinker cooler, on and after the performance test, of 0.01 pound per ton of clinker on a 30-operating day rolling average if construction, reconstruction, or modification of the clinker cooler commenced after June 16, 2008. If construction, reconstruction, or modification occurred before June 16, 2008, the applicable PM emission standard is 0.10 pounds per ton of feed (dry basis). These requirements do not apply to Lehigh's clinker cooler since the clinker cooler exhaust feeds into the kiln.

§60.62 (b)(2) establishes opacity standards for clinker cooler of 10 percent. These requirements do not apply if PM CEM is installed. Therefore, the facility is in compliance.

§60.63 Monitoring of Operations (c) establishes monitoring requirements for PM emissions generated during operation of kiln or clinker cooler. Emissions may be monitored using a PM CEMS, annual audit, or based on 30-day rolling average and system readings. These requirements apply to Lehigh's in-line kiln/raw mill stack (S260) and are incorporated into the existing Title V Operating Permit under Condition B17. Therefore, compliance is anticipated.

§60.65 Recordkeeping and Reporting Requirements (a) establishes monitoring and reporting requirements for owners/operators required to install a continuous opacity monitoring system. These requirements apply to Lehigh's in-line kiln/raw mill stack (S260) and are incorporated into the existing Title V Operating Permit under Condition B17. Therefore, compliance is anticipated.

§60.65 (c) establishes semi-annual reporting requirements to document malfunction information. These requirements apply to Lehigh's in-line kiln/raw mill stack (S260) and are incorporated into the existing Title V Operating Permit under Condition B17. Therefore, compliance is anticipated.

4.2.1.3 Subpart OOO – Standards of Performance for Nonmetallic Mineral Processing Plants

§60.670 Applicability and Designation of Affected Facility establishes regulatory applicability, opacity testing, monitoring and recordkeeping requirements for mineral processes. Continuous monitoring for opacity shall be completed using EPA Method 9; monitoring records shall be maintained on site for a minimum of 5-years. This subpart applies to Lehigh's shale crusher, operated with quarry and crushing processes. These requirements are incorporated into the existing Title V Operating Permit under Condition A2. Therefore, compliance is anticipated.

4.2.2 40 CFR Part 63 National Emission Standards for Hazardous Air Pollutants from Source Categories

4.2.2.1 Subpart A General Provisions

National Emission Standards for Hazardous Air Pollutants (NESHAPs) apply to stationary sources that emit or have the potential to emit any hazardous air pollutant listed in or pursuant to section 112(b) and are subject to standard, limitation, prohibition, or other federally enforcement requirement.

§63.6 Compliance with Standards and Maintenance Requirements (e)(3) establishes requirements to develop and implement a written plan for operating and maintaining the source during startup, shutdown, and malfunction events. The operator must document and maintain records demonstrating that response measures were conducted consistently with the established written plan. Requirements are incorporated into the existing Title V Operating Permit under Condition F15. Therefore, compliance is anticipated.

§63.8 Monitoring Requirements establishes requirements for monitoring emissions during operation. Opacity shall be monitored through visible observations and an opacity monitor, in accordance with existing Title V Operating Permit Condition F13. Compliance is anticipated.

§63.9 Notification Requirements establishes notification requirements for affected sources. This requirement applies to the Lehigh Detroit Model V-71 Diesel Engine and has been incorporated into the Title V Operating Permit Conditions E4 and F14.

§63.10 Recordkeeping and Reporting Requirements establishes reporting requirements for facilities regulated under NESHAPs. Reports shall be submitted to the Regional Office of the EPA or delegated State authority, depending on state-level regulations. Recordkeeping requirements include maintaining operating and breakdown reports, notifications, and corrective actions on site for a minimum of 5 years. These requirements are incorporated into the existing Title V Operating Permit under Condition F10. Therefore, compliance is anticipated.

§63.11 Control device and work practice requirements (d) establishes alternative work practice standards for monitoring equipment for identifying and repairing leaking equipment. These requirements are incorporated into the existing Title V Operating Permit under Condition F13 and G3. Therefore, compliance is anticipated.

4.2.2.2 Subpart T – MACT Standards for Halogenated Solvent Cleaning Operations

§63.460 establishes requirements for receipt of APCO approval prior to using a halogenated solvent in the cold cleaning solvent degreaser. These requirements are incorporated into the existing Title V Operating Permit under Condition G33. Therefore, compliance is anticipated.

4.2.2.3 Subpart LLL National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry

§63.1343 establishes emissions limits during normal operations, startup, and shutdown for kilns, clinker coolers, and raw material dryers. These requirements are incorporated into the existing Title V Operating Permit under Condition B2. On September 9, 2010, new emission limits for PM and dioxins/furans (D/F) were implemented and are applicable to the kiln, clinker cooler, and raw material dryers; limits for mercury, hydrogen chloride (HCL), and total hydrocarbons (THC) were also established. Emission limits in effect prior to September 9, 2010, apply until September 9, 2013 or otherwise as deemed by USEPA. Compliance with current and future applicable emissions limits is anticipated.

§63.1344 Affirmative defense for exceedance of emission limit during malfunction establishes procedural requirements for demonstrating an emissions exceedance occurred as a result of a malfunction. Facilities must document and notify the EPA Administrator within 2 business days of the incident; documentation must include the cause, duration, and response or corrective action to the emissions exceedance. These requirements are incorporated into the existing Title V Operating Permit under Condition B2 and B21. Therefore, compliance is anticipated.

§63.1348 Compliance Requirements establishes requirements for test methods and procedures required to demonstrate initial and continuous compliance with emission standards for PM, opacity, THC, and mercury. Continuous compliance requirements include monitoring and collecting data using a continuous opacity monitor for visible emissions (opacity) effective through September 9, 2013 or otherwise as deemed by USEPA, and recordkeeping for hourly production (clinker). This rule applies to sources with visible emission limits. These requirements are incorporated into the existing Title V Operating Permit under Condition A1, A2, B2, B15, C2, C3, and D2. Therefore, compliance is anticipated.

§63.1349 Performance Testing Requirements (b)(2) and (b)(3) establishes performance testing requirements for facilities with an opacity limit and D/F emission limit, respectively. For opacity, testing Method 9 of Appendix A-4 shall be used to demonstrate emission limit compliance. For D/F, testing Method 23 of Appendix A-7 to part 60 shall be utilized and must include three separate runs conducted under representative operational conditions; hourly and run average temperatures must be calculated to demonstrate compliance with the applicable temperature limit. These requirements apply to the kiln exhaust stack (S260). Requirements are incorporated into the existing Title V Operating Permit under Condition B2, B21, C3, and F13. Therefore, compliance is anticipated.

§63.1349 (c) and (d) establishes performance testing frequency and reporting requirements. Testing must be completed every 30-months of operation; reporting must occur within 60 days of testing. Lehigh intends to perform testing and complete reporting requirements in accordance with this subpart. Compliance is anticipated.

§63.1349 (e) establishes performance testing requirements including testing under representative operating conditions and requires that documentation be maintained on site and made available to the Administrator upon request. Requirements are incorporated into the existing Title V Operating Permit under Condition F9 and F13. Therefore, compliance is anticipated.

§63.1350 Monitoring Requirements establishes requirements to monitor emissions. These requirements apply to the in-line kiln/raw mill exhaust stack (S260), and to the finish mills and material handling processes. Requirements are incorporated into the existing Title V Operating Permit under Condition B21, C3, F13, F14, F15, and F16. Therefore, compliance is anticipated.

§63.1353 Notification Requirements establishes notification requirements for initial operation, performance testing, opacity and visible emission observations, CEMS performance evaluation, and compliance status. Requirements are incorporated into the existing Title V Operating Permit under Condition F14. Therefore, compliance is anticipated.

§63.1354 Reporting Requirements establishes reporting requirements for performance testing, opacity results, progress reports, semiannual reporting, and continuous monitoring results. These requirements are incorporated into the existing Title V Operating Permit under Condition B2, B21, C3, F5, and F14. Therefore, compliance is anticipated.

§63.1355 Recordkeeping Requirements establishes recordkeeping requirements including all notifications (initial and operational), daily production and feed rate records (clinker and kiln), startup/shutdown, and malfunctions. These requirements are incorporated into the existing Title V Operating Permit under Conditions F10 and F14. Therefore, compliance is anticipated.

4.2.2.4 Subpart ZZZZ National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

This Subpart establishes emission limits and operating requirements for existing reciprocating internal combustion engines (RICE) rated less than 500 BHP and that are located at a major HAP source. Per 63.6590(b)(3)(iii), the five 2,132 hp emergency engines are not subject to Subpart ZZZZ. The 489 hp emergency engine is subject to the maintenance requirements, but not subject to the emission limitations. Maintenance requirements include oil and filter changes every 500 hours of operation, or annually; air cleaner inspections every 1,000 hours or annually; and, hose and belt inspections every 500 hours or annually. These maintenance requirements must be in place no later than October 19, 2013. Lehigh will be in compliance with the operating requirements when they take effect.

4.2.3 40 CFR Part 70 State Operating Permit Programs

§70.6 Permit Content (a) establishes requirements and standards for issued Title V permits including emissions limits and standards, active permit duration of 5 years, monitoring, recordkeeping, and reporting requirements.

§70.6 (c) establishes compliance requirements including authorizing inspection and entry of EPA Administrator, development of compliance schedule, progress reports, and compliance certification. This rule applies to Lehigh's shale/limestone crushers, dust collectors, and transfer points and is incorporated into the existing Title V Operating Permit under Condition A7. Compliance with this rule is anticipated.

4.2.4 40 CFR Part 82 Protection of Stratospheric Ozone Subpart F – Recycling and Emissions Reductions

§82.156 Required Practices establishes requirements for recovering, recycling, handling, and disposing of refrigerants used in the operation and disassembly of heating, ventilation, and air conditioning units (HVACs). These requirements are incorporated into the existing Title V Operating Permit under Condition G31. Therefore, compliance is anticipated.

§82.158 Standards for Recycling and Recovery Equipment establishes standards for equipment used to maintain, service, or repair HVAC units during refrigerant recycling and recovery. These requirements are incorporated into the existing Title V Operating Permit under Condition G32. Therefore, compliance is anticipated.

§82.161 Technician Certification establishes certification requirements for technicians authorized to maintain, service, or repair HVAC and other medium- to high-pressure appliances. These requirements are incorporated into the existing Title V Operating Permit under Condition G30. Therefore, compliance is anticipated.

4.2.5 Proposed Federal Rules

The EPA has proposed several rules and rule modification related to GHG quantification and reporting requirements for major sources of GHGs. On March 8, 2012, the EPA proposed to maintain the applicability threshold for GHG-emitting sources at the current levels. The EPA also proposed to allow permitting authorities to issues GHG plant-wide applicability limitations on either a mass basis or a CO2e basis, as an alternative approach to determine if a project is a major modification and whether GHG emissions are subject to regulations. The proposed rule also intends to allow the EPA authority to issue synthetic minor limitations GHGs in areas subject to GHG PSD Federal Implementation Plan.

EPA proposed amendments to the Portland cement NESHAP and New Source Performance Standard in June, 2012. The amendments would extend the compliance date from September 2013 to September 2015 for new emission limits established in 40 CFR 63 Part LLL, increase PM emission limits, require source testing to demonstrate compliance instead of the operation of a PM CEMS, and require operation of a PM continuous parametric monitoring system instead of a PM CEMS to demonstrate continued compliance. The proposed amendments have not been finalized. Upon final publication of 40 CFR 63 Subpart LLL standards, Lehigh will file an addendum to this application.

5.0 Compliance Plan and Schedule

The equipment at the Lehigh facility in Redding is in compliance with the applicable Federal requirements as demonstrated in the table included in Appendix A. The Lehigh facility in Redding will continue to comply with the applicable federal requirements that the facility is currently in compliance with as identified in the table included in Appendix A.

The Lehigh facility in Redding will comply on a timely basis with applicable Federal requirements that become effective during the permit term.

No compliance plan is needed at this time.

Proposed revisions to the Operation and Maintenance Plan are included in Appendix D.

Appendix A

SCAQMD Permit Application Forms

Form 5-A1 & Form 5-A2

Form 5-B

STATIONARY SOURCE SUMMARY
(FORM 5-A1)

DISTRICT: Shasta County Air Quality Management District

COMPANY NAME: Lehigh Southwest Cement Company

< DISTRICT USE ONLY =

District ID:

Application #:

Application Received:

Application Filing Fee:

Application Deemed Complete:

I. FACILITY IDENTIFICATION

1. Facility Name: Lehigh Southwest Cement Company
2. Four digit SIC Code: 3241 EPA Plant ID: 0608900501
3. Parent Company (if different than Facility Name): Lehigh Hanson Inc.
4. Mailing Address: 15390 Wonderland Blvd., Redding, CA 96003
5. Street Address or Source Location: 15390 Wonderland Blvd., Redding, CA 96003
6. UTM Coordinates (if required): _____
7. Source located within: 50 miles of the state line [ ] Yes [ ] No
   50 miles of a Native American Nation [ ] Yes [ ] No [ ] Not Applicable
8. Type of Organization: [X] Corporation [ ] Sole Ownership [ ] Government [ ] Partnership [ ] Utility Company
9. Legal Owner's Name: Lehigh Cement Company LLC
10. Owner's Agent Name (if any): _____
11. Responsible Official: James Ellison
12. Plant Site Manager/Contact: James Ellison Telephone #: (530) 275-1581 x. 3301
13. Type of facility: Portland Cement Manufacturing
14. General description of processes/products: See Title V renewal application
15. Does your facility store, or otherwise handle, greater than threshold quantities of any substance on the Section 112(r) List of Substances and their Thresholds (see attachment A)? [ ] Yes [X] No
16. Is a Federal Risk Management Plan [pursuant to Section 112(r)] required? [X] Not Applicable [ ] Yes [ ] No
    (If yes, attach verification that Risk Management Plan is registered with appropriate agency or description of status of Risk Management Plan submittal.)

STATIONARY SOURCE SUMMARY
(FORM 5-A2)

DISTRICT:	< DISTRICT USE ONLY =
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME: Lehigh Southwest Cement Company	FACILITY NAME:

II. TYPE OF PERMIT ACTION

	CURRENT PERMIT (permit number)	EXPIRATION (date)
G Initial Title V Application		
G Permit Renewal	02-VP-07a	4-30-13
G Significant Permit Modification		
G Minor Permit Modification		
G Administrative Amendment		

III. DESCRIPTION OF PERMIT ACTION

1. Does the permit action requested involve: a: [ ] Portable Source [ ] Voluntary Emissions Caps
   [ ] Acid Rain Source [ ] Alternative Operating Scenarios
   [ ] Source Subject to MACT Requirements [Section 112]

   b: [X] None of the options in 1.a. are applicable

2. Is source operating under Compliance Schedule? [ ] Yes [X] No

3. For permit modifications, provide a general description of the proposed permit modification:_____

TOTAL STATIONARY SOURCE EMISSIONS
(FORM 5-B)

DISTRICT: Shasta County Air Quality Management District	< DISTRICT USE ONLY = DISTRICT ID:
COMPANY NAME: Lehigh Southwest Cement Company	FACILITY NAME:

I. TOTAL STATIONARY SOURCE EMISSIONS

Provide a brief description of operating scenario : Title V Permit Renewal Application

POLLUTANT* (name)	EMISSIONS (tons per year)	PRE-MODIFICATION EMISSIONS (tons per year)	EMISSIONS CHANGE (tons per year)
NOx	**1,042**	NA	NA
CO	**5,086**	NA	NA
SO2	**107**	NA	NA
PM10	**1,025**	NA	NA
VOC	**25**	NA	NA
HCl	**16**	NA	NA
CO2e	**747,143**	NA	NA

* Emissions for all pollutants that the source is major for and all regulated air pollutants must be reported. See Attachment A.

Form 5-C1 & Form 5-C2

Form 5-F1 & Form 5-F2

Form 5-G1 & Form 5-G2

Quarries and Crushing Department

GENERAL EMISSION UNIT
(FORM 5-F1)

DISTRICT:	< DISTRICT USE ONLY =
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME: Lehigh Southwest Cement Company	FACILITY NAME: Redding Plant

I. PERMIT NUMBER: 85-PO-13g

II. EQUIPMENT DESCRIPTION

1. General process description: Quarries and crushing
2. Equipment type: Limestone crusher
3. Equipment description: Limestone crusher
4. Equipment make, model & serial number: Allis Chalmers
5. Maximum design process rate or throughput:
6. Control device(s) type and description (if any): Dust Collectors; negative pressure baghouse type

III. OPERATIONAL INFORMATION

1. Operating schedule: 10 (hours/day) 2,680 (hours/year)
2. Exhaust gas flow rate: varies SCFM @ varies $\%H_2O$
3. Raw products used and finished products produced:

RAW PRODUCT USED (name)	CONSUMPTION (lbs/hr, gal/hr, etc.)	PRODUCTS PRODUCED (name)	PRODUCTION (lbs/hr, gal/hr, etc.)
Limestone			1,012,187 tons/year

GENERAL EMISSION UNIT
(FORM 5-F2)

DISTRICT:	< DISTRICT USE ONLY =
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME: Lehigh Southwest Cement Company	FACILITY NAME: Redding Plant

4. Unit emissions: 85-PO-13g (Limestone Crusher)

CRITERIA POLLUTANT EMISSIONS (tons per year)					
POLLUTANTS	PM10				
A. Emissions	0.273				
B. Pre-modification Emissions[1]					
C. Emission Change[2]					
D. Emission Limit[3]					
OTHER REGULATED AIR POLLUTANT EMISSIONS (tons per year)					
POLLUTANTS					
A. Emissions					
B. Pre-modification Emissions[1]					
C. Emission Change[2]					
D. Emission Limit[3]					

[1] *For permit modifications only; emissions prior to project modification.*
[2] *Difference between Pre-Modification Emissions (Section B.) and Emissions (Section A.).*
[3] *For voluntary emissions cap and emission limits [i.e. expressed as parts per million (ppm) corrected for dilution air, pounds per hour (lbs/hr), pounds per million BTU (lb/MMBTU, etc.] required by any applicable federal requirement.*

GENERAL EMISSION UNIT
(FORM 5-F1)

DISTRICT:	< DISTRICT USE ONLY =
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME: Lehigh Southwest Cement Company	FACILITY NAME: Redding Plant

I. PERMIT NUMBER: 85-PO-13g

II. EQUIPMENT DESCRIPTION

1. General process description: Quarries and crushing
2. Equipment type: Stationary Shale crusher
3. Equipment description: Stationary Shale crusher
4. Equipment make, model & serial number:
5. Maximum design process rate or throughput:
6. Control device(s) type and description (if any): Dust Collectors; negative pressure baghouse type

III. OPERATIONAL INFORMATION

1. Operating schedule: 10 (hours/day) 2,600 (hours/year)
2. Exhaust gas flow rate: ___ SCFM @ ___ $\%H_2O$
3. Raw products used and finished products produced:

RAW PRODUCT USED (name)	CONSUMPTION (lbs/hr, gal/hr, etc.)	PRODUCTS PRODUCED (name)	PRODUCTION (lbs/hr, gal/hr, etc.)
Shale			27,000 tons/year

GENERAL EMISSION UNIT
(FORM 5-F2)

DISTRICT:	< DISTRICT USE ONLY =
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME: Lehigh Southwest Cement Company	FACILITY NAME: Redding Plant

4. Unit emissions: 85-PO-13g (Shale Crusher)

CRITERIA POLLUTANT EMISSIONS (tons per year)					
POLLUTANTS	PM10				
A. Emissions	0.007				
B. Pre-modification Emissions[1]					
C. Emission Change[2]					
D. Emission Limit[3]					
OTHER REGULATED AIR POLLUTANT EMISSIONS (tons per year)					
POLLUTANTS					
A. Emissions					
B. Pre-modification Emissions[1]					
C. Emission Change[2]					
D. Emission Limit[3]					

[1] *For permit modifications only; emissions prior to project modification.*
[2] *Difference between Pre-Modification Emissions (Section B.) and Emissions (Section A.).*
[3] *For voluntary emissions cap and emission limits [i.e. expressed as parts per million (ppm) corrected for dilution air, pounds per hour (lbs/hr), pounds per million BTU (lb/MMBTU, etc.] required by any applicable federal requirement.*

GENERAL EMISSION UNIT
(FORM 5-F1)

DISTRICT:	< DISTRICT USE ONLY =
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME: Lehigh Southwest Cement Company	FACILITY NAME: Redding Plant

I. PERMIT NUMBER: 85-PO-13g

II. EQUIPMENT DESCRIPTION

1. General process description: Quarries and crushing
2. Equipment type: Pre-blending dome building
3. Equipment description: : Pre-blending dome building
4. Equipment make, model & serial number:
5. Maximum design process rate or throughput:
6. Control device(s) type and description (if any): Dust Collectors; negative pressure baghouse type

III. OPERATIONAL INFORMATION

1. Operating schedule: 24 (hours/day) 8,760 (hours/year)
2. Exhaust gas flow rate: ____ SCFM @ ___ $\%H_2O$
3. Raw products used and finished products produced:

RAW PRODUCT USED (name)	CONSUMPTION (lbs/hr, gal/hr, etc.)	PRODUCTS PRODUCED (name)	PRODUCTION (lbs/hr, gal/hr, etc.)
Limestone			1,012,187 tons/year
Shale			37,000 tons/year

GENERAL EMISSION UNIT
(FORM 5-F2)

DISTRICT:	< DISTRICT USE ONLY =
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME: Lehigh Southwest Cement Company	FACILITY NAME: Redding Plant

4. Unit emissions: 85-PO-13g (Pre-Blending Dome Building)

CRITERIA POLLUTANT EMISSIONS (tons per year)					
POLLUTANTS	PM10				
A. Emissions	0.44				
B. Pre-modification Emissions[1]					
C. Emission Change[2]					
D. Emission Limit[3]					
OTHER REGULATED AIR POLLUTANT EMISSIONS (tons per year)					
POLLUTANTS					
A. Emissions					
B. Pre-modification Emissions[1]					
C. Emission Change[2]					
D. Emission Limit[3]					

[1] *For permit modifications only; emissions prior to project modification.*
[2] *Difference between Pre-Modification Emissions (Section B.) and Emissions (Section A.).*
[3] *For voluntary emissions cap and emission limits [i.e. expressed as parts per million (ppm) corrected for dilution air, pounds per hour (lbs/hr), pounds per million BTU (lb/MMBTU, etc.] required by any applicable federal requirement.*

GENERAL EMISSION UNIT
(FORM 5-F1)

DISTRICT:	< DISTRICT USE ONLY =
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME: Lehigh Southwest Cement Company	FACILITY NAME: Redding Plant

I. PERMIT NUMBER: 85-PO-13g

II. EQUIPMENT DESCRIPTION

1. General process description: Quarries and crushing
2. Equipment type: Shale 30" x 42" Jaw Crusher C168
3. Equipment description: Jaw Crusher (C168)
4. Equipment make, model & serial number:
5. Maximum design process rate or throughput:
6. Control device(s) type and description (if any): Dust Collectors; negative pressure baghouse type

III. OPERATIONAL INFORMATION

1. Operating schedule: 10 (hours/day) 2,600 (hours/year)
2. Exhaust gas flow rate: ____ SCFM @ ___ %H_2O
3. Raw products used and finished products produced:

RAW PRODUCT USED (name)	**CONSUMPTION** (lbs/hr, gal/hr, etc.)	**PRODUCTS PRODUCED** (name)	**PRODUCTION** (lbs/hr, gal/hr, etc.)
Shale			10,000 tons/year

GENERAL EMISSION UNIT
(FORM 5-F2)

DISTRICT:	< DISTRICT USE ONLY =
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME: Lehigh Southwest Cement Company	FACILITY NAME: Redding Plant

4. Unit emissions: 85-PO-13g (Shale 30" x 42" Jaw Crusher C168)

CRITERIA POLLUTANT EMISSIONS (tons per year)					
POLLUTANTS	PM10				
A. Emissions	0.003				
B. Pre-modification Emissions[1]					
C. Emission Change[2]					
D. Emission Limit[3]					
OTHER REGULATED AIR POLLUTANT EMISSIONS (tons per year)					
POLLUTANTS					
A. Emissions					
B. Pre-modification Emissions[1]					
C. Emission Change[2]					
D. Emission Limit[3]					

[1] *For permit modifications only; emissions prior to project modification.*
[2] *Difference between Pre-Modification Emissions (Section B.) and Emissions (Section A.).*
[3] *For voluntary emissions cap and emission limits [i.e. expressed as parts per million (ppm) corrected for dilution air, pounds per hour (lbs/hr), pounds per million BTU (lb/MMBTU, etc.] required by any applicable federal requirement.*

GENERAL EMISSION UNIT
(FORM 5-F1)

DISTRICT:	< DISTRICT USE ONLY =
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME: Lehigh Southwest Cement Company	FACILITY NAME: Redding Plant

I. PERMIT NUMBER: 85-PO-13g

II. EQUIPMENT DESCRIPTION

1. General process description: Quarries and crushing
2. Equipment type: Quarry Drill
3. Equipment description: Quarry Drill R116 with Dust Collectors
4. Equipment make, model & serial number:
5. Maximum design process rate or throughput:
6. Control device(s) type and description (if any): Dust Collectors; negative pressure baghouse type

III. OPERATIONAL INFORMATION

1. Operating schedule: ___ (hours/day) 900 (hours/year)
2. Exhaust gas flow rate: ___ SCFM @ ___ $\%H_2O$
3. Raw products used and finished products produced:

RAW PRODUCT USED (name)	CONSUMPTION (lbs/hr, gal/hr, etc.)	PRODUCTS PRODUCED (name)	PRODUCTION (lbs/hr, gal/hr, etc.)

GENERAL EMISSION UNIT
(FORM 5-F2)

DISTRICT:	< DISTRICT USE ONLY =
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME: Lehigh Southwest Cement Company	FACILITY NAME: Redding Plant

4. Unit emissions: 85-PO-13g (Quarry Drill R116 with Dust Collectors)

CRITERIA POLLUTANT EMISSIONS (tons per year)					
POLLUTANTS	PM10				
A. Emissions	0.174				
B. Pre-modification Emissions[1]					
C. Emission Change[2]					
D. Emission Limit[3]					
OTHER REGULATED AIR POLLUTANT EMISSIONS (tons per year)					
POLLUTANTS					
A. Emissions					
B. Pre-modification Emissions[1]					
C. Emission Change[2]					
D. Emission Limit[3]					

[1] *For permit modifications only; emissions prior to project modification.*
[2] *Difference between Pre-Modification Emissions (Section B.) and Emissions (Section A.).*
[3] *For voluntary emissions cap and emission limits [i.e. expressed as parts per million (ppm) corrected for dilution air, pounds per hour (lbs/hr), pounds per million BTU (lb/MMBTU, etc.] required by any applicable federal requirement.*

EMISSION CONTROL UNIT
(FORM 5-G1)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

I. PERMIT NUMBER: 85-PO-13g

II. EQUIPMENT DESCRIPTION

1. General process description: Raise shaft sly dust collector
2. Equipment type: Dust Collector (negative pressure baghouse type)
3. Equipment description: B13
4. Equipment make, model & serial number: Sly, #6 Type B Roll Clean
5. Emission unit(s) served by this equipment: Quarries and Crushing
6. Maximum design or rated capacity: 4,000 SCFM

III. EQUIPMENT DESIGN INFORMATION

1. Exhaust gas: Temperature: Ambient (F) Flow Rate: 4,000 (SCFM)
   Moisture: n/a (%) Oxygen: n/a (%)
   CO_2: n/a (%)
2. General: Manufacturer: Sly Pressure Drop: _____ (in-Hg)
   Inlet Temp.: Ambient (F) Outlet Temp.: Ambient (F)
3. Catalyst data: Catalyst Type/Material: n/a
   Catalyst Life: _____ (years) Volume: _____ (ft^3)
   Space Velocity: _____ (ft^3/Ft) NH_3 Inj. Rate: _____ (gal/hr)
   NH_3 Inj. Temp.: _____ (F)
4. Baghouse data: Design: [ ] Positive Pressure [X] Negative Pressure
   Cleaning Method: Pulse Jet
   Fabric Material: ABC 99 Cotton
   Flow Rate: 4,000 (SCFM) Air/Cloth Ratio: 3
5. ESP data: Number of fields: _____ Cleaning Method: _____
   Power Input: _____
6. Scrubber data: Type/design: _____ Sorbent Type: _____
7. Other Control Devices (include appropriate design information):

EMISSION CONTROL UNIT
(FORM 5-G2)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

IV. OPERATIONAL INFORMATION

1. Operational schedule: 24 (hours/day) 8760 (hours/year)
2. Raw products used by control device: Limestone, shale, and Raw Materials *
3. Operating information:

POLLUTANTS AND EMISSION CONTROL INFORMATION

POLLUTANT (name)	INLET CONCENTRATION (ppm or gr/DSCF[1])	OUTLET CONCENTRATION (ppm or gr/DSCF[1])	CONTROL EFFICIENCY (% weight)
PM10	Varies	0.1 gr/DSCF	Varies

[1] Specify percent O_2 or percent CO_2.

* This information is for descriptive purposes only and is not a limit on the type of material captured or processed by the equipment

EMISSION CONTROL UNIT
(FORM 5-G1)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

I. PERMIT NUMBER: 85-PO-13g

II. EQUIPMENT DESCRIPTION

1. General process description: Limestone belt transfer sly dust collector
2. Equipment type: Dust Collector (negative pressure baghouse type)
3. Equipment description: B25
4. Equipment make, model & serial number: Sly, Dynaclone 6B Roll Clean
5. Emission unit(s) served by this equipment: Quarries and Crushing
6. Maximum design or rated capacity: 3,620 SCFM

III. EQUIPMENT DESIGN INFORMATION

1. Exhaust gas: Temperature: Ambient (F) Flow Rate: 3,620 (SCFM)
   Moisture: n/a (%) Oxygen: n/a (%)
   CO_2: n/a (%)
2. General: Manufacturer: Sly Pressure Drop: _____ (in-Hg)
   Inlet Temp.: Ambient (F) Outlet Temp.: Ambient (F)
3. Catalyst data: Catalyst Type/Material: n/a
   Catalyst Life: _____ (years) Volume: _____ (ft^3)
   Space Velocity: _____ (ft^3/Ft) NH_3 Inj. Rate: _____ (gal/hr)
   NH_3 Inj. Temp.: _____ (F)
4. Baghouse data: Design: [ ] Positive Pressure [X] Negative Pressure
   Cleaning Method: Pulse Jet
   Fabric Material 9-10 oz Cotton Sateen
   Flow Rate: 3,620 (SCFM) Air/Cloth Ratio: 3
5. ESP data: Number of fields: _____ Cleaning Method: _____
   Power Input: _____
6. Scrubber data: Type/design: _____ Sorbent Type: _____
7. Other Control Devices (include appropriate design information):

EMISSION CONTROL UNIT
(FORM 5-G2)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

IV. OPERATIONAL INFORMATION

1. Operational schedule: 24 (hours/day) 8760 (hours/year)
2. Raw products used by control device: Limestone, shale, and Raw Materials *
3. Operating information:

POLLUTANTS AND EMISSION CONTROL INFORMATION

POLLUTANT (name)	INLET CONCENTRATION (ppm or gr/DSCF[1])	OUTLET CONCENTRATION (ppm or gr/DSCF[1])	CONTROL EFFICIENCY (% weight)
PM10	Varies	0.1 gr/DSCF	Varies

[1] Specify percent O_2 or percent CO_2.

* This information is for descriptive purposes only and is not a limit on the type of material captured or processed by the equipment

EMISSION CONTROL UNIT
(FORM 5-G1)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

I. PERMIT NUMBER: 85-PO-13g

II. EQUIPMENT DESCRIPTION

1. General process description: Shale crusher sly dust collector
2. Equipment type: Dust Collector (negative pressure baghouse type)
3. Equipment description: C36
4. Equipment make, model & serial number: Sly
5. Emission unit(s) served by this equipment: Quarries and Crushing
6. Maximum design or rated capacity: 5,010 SCFM

III. EQUIPMENT DESIGN INFORMATION

1. Exhaust gas: Temperature: Ambient (F) Flow Rate: 5,010 (SCFM)
   Moisture: n/a (%) Oxygen: n/a (%)
   CO_2: n/a (%)
2. General: Manufacturer: Sly Pressure Drop: _____ (in-Hg)
   Inlet Temp.: Ambient (F) Outlet Temp.: Ambient (F)
3. Catalyst data: Catalyst Type/Material: n/a
   Catalyst Life: _____ (years) Volume: _____ (ft^3)
   Space Velocity: _____ (ft^3/Ft) NH_3 Inj. Rate: _____ (gal/hr)
   NH_3 Inj. Temp.: _____ (F)
4. Baghouse data: Design: [ ] Positive Pressure [X] Negative Pressure
   Cleaning Method: Pulse Jet
   Fabric Material: Polyester Calendered
   Flow Rate: 5,010 (SCFM) Air/Cloth Ratio: _____
5. ESP data: Number of fields: _____ Cleaning Method: _____
   Power Input: _____
6. Scrubber data: Type/design: _____ Sorbent Type: _____
7. Other Control Devices (include appropriate design information):

EMISSION CONTROL UNIT
(FORM 5-G2)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

IV. OPERATIONAL INFORMATION

1. Operational schedule: 24 (hours/day) 8760 (hours/year)
2. Raw products used by control device: Limestone, shale, and Raw Materials *
3. Operating information:

POLLUTANTS AND EMISSION CONTROL INFORMATION

POLLUTANT (name)	INLET CONCENTRATION (ppm or gr/DSCF[1])	OUTLET CONCENTRATION (ppm or gr/DSCF[1])	CONTROL EFFICIENCY (% weight)
PM10	Varies	0.1 gr/DSCF	Varies

[1] Specify percent O_2 or percent CO_2.

* This information is for descriptive purposes only and is not a limit on the type of material captured or processed by the equipment

EMISSION CONTROL UNIT
(FORM 5-G1)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

I. PERMIT NUMBER: 85-PO-13g

II. EQUIPMENT DESCRIPTION

1. General process description: Secondary crusher dust collector
2. Equipment type: Dust Collector (negative pressure baghouse type)
3. Equipment description: C34
4. Equipment make, model & serial number: Sly
5. Emission unit(s) served by this equipment: Quarries and Crushing
6. Maximum design or rated capacity: 21,695 SCFM

III. EQUIPMENT DESIGN INFORMATION

1. Exhaust gas: Temperature: Ambient (F) Flow Rate: 21,695 (SCFM)
   Moisture: n/a (%) Oxygen: n/a (%)
   CO_2: n/a (%)
2. General: Manufacturer: _____ Pressure Drop: _____ (in-Hg)
   Inlet Temp.: Ambient (F) Outlet Temp.: Ambient (F)
3. Catalyst data: Catalyst Type/Material: n/a
   Catalyst Life: _____ (years) Volume: _____ (ft^3)
   Space Velocity: _____ (ft^3/Ft) NH_3 Inj. Rate: _____ (gal/hr)
   NH_3 Inj. Temp.: _____ (F)
4. Baghouse data: Design: [ ] Positive Pressure [X] Negative Pressure
   Cleaning Method: Pulse Jet
   Fabric Material: Polyester Calendered
   Flow Rate: 21,695 (SCFM) Air/Cloth Ratio: _____
5. ESP data: Number of fields: _____ Cleaning Method: _____
   Power Input: _____
6. Scrubber data: Type/design: _____ Sorbent Type: _____
7. Other Control Devices (include appropriate design information):

EMISSION CONTROL UNIT
(FORM 5-G2)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

IV. OPERATIONAL INFORMATION

1. Operational schedule: 24 (hours/day) 8760 (hours/year)
2. Raw products used by control device: Limestone, shale, and Raw Materials *
3. Operating information:

POLLUTANTS AND EMISSION CONTROL INFORMATION

POLLUTANT (name)	INLET CONCENTRATION (ppm or gr/DSCF[1])	OUTLET CONCENTRATION (ppm or gr/DSCF[1])	CONTROL EFFICIENCY (% weight)
PM10	Varies	0.1 gr/DSCF	Varies

[1] Specify percent O_2 or percent CO_2.

* This information is for descriptive purposes only and is not a limit on the type of material captured or processed by the equipment

EMISSION CONTROL UNIT
(FORM 5-G1)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

I. PERMIT NUMBER: 85-PO-13g

II. EQUIPMENT DESCRIPTION

1. General process description: Transfer building sly dust collector
2. Equipment type: Dust Collector (negative pressure baghouse type)
3. Equipment description: C38
4. Equipment make, model & serial number: Sly, Dynaclone, H6795A
5. Emission unit(s) served by this equipment: Quarries and Crushing
6. Maximum design or rated capacity: 3,640 SCFM

III. EQUIPMENT DESIGN INFORMATION

1. Exhaust gas: Temperature: Ambient (F) Flow Rate: 3,640 (SCFM)
   Moisture: n/a (%) Oxygen: n/a (%)
   CO_2: n/a (%)
2. General: Manufacturer: Sly Pressure Drop: _____ (in-Hg)
   Inlet Temp.: Ambient (F) Outlet Temp.: Ambient (F)
3. Catalyst data: Catalyst Type/Material: n/a
   Catalyst Life: _____ (years) Volume: _____ (ft^3)
   Space Velocity: _____ (ft^3/Ft) NH_3 Inj. Rate: _____ (gal/hr)
   NH_3 Inj. Temp.: _____ (F)
4. Baghouse data: Design: [ ] Positive Pressure [X] Negative Pressure
   Cleaning Method: Pulse Jet
   Fabric Material: Polyester Calendered
   Flow Rate: 3,640 (SCFM) Air/Cloth Ratio: _____
5. ESP data: Number of fields: _____ Cleaning Method: _____
   Power Input: _____
6. Scrubber data: Type/design: _____ Sorbent Type: _____
7. Other Control Devices (include appropriate design information):

EMISSION CONTROL UNIT
(FORM 5-G2)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

IV. OPERATIONAL INFORMATION

1. Operational schedule: 24 (hours/day) 8760 (hours/year)
2. Raw products used by control device: Limestone, shale, and Raw Materials *
3. Operating information:

POLLUTANTS AND EMISSION CONTROL INFORMATION

POLLUTANT (name)	INLET CONCENTRATION (ppm or gr/DSCF[1])	OUTLET CONCENTRATION (ppm or gr/DSCF[1])	CONTROL EFFICIENCY (% weight)
PM10	Varies	0. 1 gr/DSCF	Varies

[1] Specify percent O_2 or percent CO_2.

* This information is for descriptive purposes only and is not a limit on the type of material captured or processed by the equipment

EMISSION CONTROL UNIT
(FORM 5-G1)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

I. PERMIT NUMBER: 85-PO-13g

II. EQUIPMENT DESCRIPTION

1. General process description: Particle Capture
2. Equipment type: Dust Collector (negative pressure baghouse type)
3. Equipment description: Quarry Drill R116 with Dust Collectors
4. Equipment make, model & serial number:
5. Emission unit(s) served by this equipment: Quarries and Crushing
6. Maximum design or rated capacity: 3,000 SCFM

III. EQUIPMENT DESIGN INFORMATION

1. Exhaust gas: Temperature: Ambient (F) Flow Rate: 11,280 (SCFM)
   Moisture: n/a (%) Oxygen: n/a (%)
   CO_2: n/a (%)
2. General: Manufacturer: Pressure Drop: (in-Hg)
   Inlet Temp.: Ambient (F) Outlet Temp.: Ambient (F)
3. Catalyst data: Catalyst Type/Material: n/a
   Catalyst Life: (years) Volume: (ft^3)
   Space Velocity: (ft^3/Ft) NH_3 Inj. Rate: (gal/hr)
   NH_3 Inj. Temp.: (F)
4. Baghouse data: Design: [ ] Positive Pressure [X] Negative Pressure
   Cleaning Method: Pulse Jet
   Fabric Material: Polyester Calendered
   Flow Rate: 11,280 (SCFM) Air/Cloth Ratio:
5. ESP data: Number of fields: Cleaning Method:
   Power Input:
6. Scrubber data: Type/design: Sorbent Type:
7. Other Control Devices (include appropriate design information):

EMISSION CONTROL UNIT
(FORM 5-G2)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

IV. OPERATIONAL INFORMATION

1. Operational schedule: 24 (hours/day) 8760 (hours/year)
2. Raw products used by control device: Limestone, shale, and Raw Materials *
3. Operating information:

POLLUTANTS AND EMISSION CONTROL INFORMATION

POLLUTANT (name)	INLET CONCENTRATION (ppm or gr/DSCF[1])	OUTLET CONCENTRATION (ppm or gr/DSCF[1])	CONTROL EFFICIENCY (% weight)
PM10	Varies	0.10 gr/DSCF	Varies

[1] Specify percent O_2 or percent CO_2.

* This information is for descriptive purposes only and is not a limit on the type of material captured or processed by the equipment

Raw Milling and Kiln Department

COMBUSTION EMISSION UNIT
(FORM 5-C1)

DISTRICT: **Shasta County Air Quality Management District**	**➢ DISTRICT USE ONLY ➣** **DISTRICT ID:**
COMPANY NAME: **Lehigh Southwest Cement Company**	**FACILITY NAME:** **Redding Plant**

I. PERMIT NUMBER: 85-PO-14

II. EMISSION UNIT DESCRIPTION*

1. Equipment type: Rotary Kiln
2. Equipment description: Portland Cement Rotary Kiln
3. Equipment make, model & serial number: FL Schmidt and Company Preheater/Precalciner Kiln
4. Maximum design process rate or maximum power input/output: 100 tons/hr of clinker produced
5. Primary use: Manufacture of clinker
6. Burner(s) design, operating temperature and capacity: FL Schmidt and Company, typical operating temperature: 3,000°F, typical operating level: 330 MMBtu/hr
7. Control device(s) type and description (if any): Dust Collector S-260 (also controls Raw Mill exhaust)

III. OPERATIONAL INFORMATION*

1. Operating schedule: 24 (hours/day) 8,760 (hours/year)
2. Exhaust gas properties (temperature, SCFM, %H2O, %O2 or %CO2): Exhaust temperature = 180 - 350 °F, DSCFM = 95,000 - 116,000, % H2O = 19.5 %, %O2 = 9.9 %, %CO2 = 18.3 %
3. Fuel specifications:

FUEL TYPE (name)	ANNUAL USAGE (c.f./yr, lb/yr, gal/yr)	HEATING VALUE (BTU/lb or BTU/gal)	SULFUR (%)	NITROGEN (%)
Solid Organic Fuels** (eg., coal, coke)	15 tons/hr*	12,000 - 16,000 Btu/lb* (LHV)	0.40 - 3.0% (% Wt)*	1.20 - 1.25% (%Wt)*
Natural Gas**	200 Mscf/hr*	932 Btu/scf* (LHV)	0.003-0.005% (%Wt)*	0.92 - 0.96% (%Wt)*
Secondary Fuel-Sawdust**	7.0tons/hr	13,000 Btu/lb* (LHV)	0.05 - 0.10% (%Wt)*	Unknown (%Wt)*
Scrap Tires**	4 tons/hr*	14,500 Btu/lb* (LHV)	1.45 - 1.50% (%Wt)*	7.65 - 7.70% (%Wt)*

* This information is for descriptive purposes only and is not a limit on the type of equipment used and/or operating rate of the equipment.
** The fuel types are for descriptive purposes only and do not preclude the addition and/or omission of a fuel type.

COMBUSTION EMISSION UNIT
(FORM 5-C2)

DISTRICT:	➢ DISTRICT USE ONLY ➣
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME: Lehigh Southwest Cement Company	FACILITY NAME: Redding Plant

4. Unit emissions:**

CRITERIA POLLUTANT EMISSIONS (tons per year)					
POLLUTANTS	NOx	CO	THC/VOC	SOx	PM10
A. Emissions	954	5,067	18*	101	Included in dust collector forms
B. Pre-modification Emissions[1]	N/A	N/A	N/A	N/A	N/A
C. Emission Change[2]	N/A	N/A	N/A	N/A	N/A
D. Emission Limit[3]	N/A	N/A	N/A	N/A	N/A

OTHER REGULATED AIR POLLUTANT EMISSIONS (tons per year)					
POLLUTANTS	HAPS				
A. Emissions	N/A				
B. Pre-Modification Emissions[1]	N/A				
C. Emission Change[2]	N/A				
D. Emission Limit[3]	N/A				

[1] *For permit modifications only; emissions prior to project modification.*
[2] *Difference between Pre-Modification Emissions (Section B.) and Emissions (Section A.).*
[3] *For voluntary emissions cap and emission limits [i.e. expressed as parts per million (ppm) corrected for dilution air, pounds per hour (lbs/hr), pounds per million BTU (lb/MMBTU, etc.] required by any applicable federal requirement.*

* This information is for descriptive purposes only and is not a limit on the operating rate of the equipment.
** Based on potential emissions. Detailed emission calculations included in Section VI.

GENERAL EMISSION UNIT
(FORM 5-F1)

DISTRICT:	< DISTRICT USE ONLY =
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME: Lehigh Southwest Cement Company	FACILITY NAME: Redding Plant

I. PERMIT NUMBER: 85-PO-14o

II. EQUIPMENT DESCRIPTION

1. General process description: Raw milling and in-line kiln
2. Equipment type: Shredded Tire and Automated Whole Tire Fuel Feed Systems
3. Equipment description: Shredded Tire and Automated Whole Tire Fuel Feed Systems
4. Equipment make, model & serial number:
5. Maximum design process rate or throughput:
6. Control device(s) type and description (if any): Dust Collectors; negative pressure baghouse type

III. OPERATIONAL INFORMATION

1. Operating schedule: __ (hours/day) ___ (hours/year)
2. Exhaust gas flow rate: ___ SCFM @ ___ $\%H_2O$
3. Raw products used and finished products produced:

RAW PRODUCT USED (name)	CONSUMPTION (lbs/hr, gal/hr, etc.)	PRODUCTS PRODUCED (name)	PRODUCTION (lbs/hr, gal/hr, etc.)
Tires			

GENERAL EMISSION UNIT
(FORM 5-F2)

DISTRICT:	< DISTRICT USE ONLY =
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME: Lehigh Southwest Cement Company	FACILITY NAME: Redding Plant

4. Unit emissions: 85-PO-14o (Shredded Tire and Automated Whole Tire Fuel Feed System) Emissions are negligible from tire conveying.

CRITERIA POLLUTANT EMISSIONS (tons per year)					
POLLUTANTS					
A. Emissions					
B. Pre-modification Emissions[1]					
C. Emission Change[2]					
D. Emission Limit[3]					
OTHER REGULATED AIR POLLUTANT EMISSIONS (tons per year)					
POLLUTANTS					
A. Emissions					
B. Pre-modification Emissions[1]					
C. Emission Change[2]					
D. Emission Limit[3]					

[1] *For permit modifications only; emissions prior to project modification.*
[2] *Difference between Pre-Modification Emissions (Section B.) and Emissions (Section A.).*
[3] *For voluntary emissions cap and emission limits [i.e. expressed as parts per million (ppm) corrected for dilution air, pounds per hour (lbs/hr), pounds per million BTU (lb/MMBTU, etc.] required by any applicable federal requirement.*

GENERAL EMISSION UNIT
(FORM 5-F1)

DISTRICT: Shasta County Air Quality Management District	< DISTRICT USE ONLY = DISTRICT ID:
COMPANY NAME: Lehigh Southwest Cement Company	FACILITY NAME: Redding Plant

I. PERMIT NUMBER: 85-PO-14o

II. EQUIPMENT DESCRIPTION

1. General process description: Raw milling and in-line kiln
2. Equipment type: Coal Unloading Facility
3. Equipment description: Coal Unloading Facility
4. Equipment make, model & serial number:
5. Maximum design process rate or throughput:
6. Control device(s) type and description (if any): Dust Collectors; negative pressure baghouse type

III. OPERATIONAL INFORMATION

1. Operating schedule: __ (hours/day) __ (hours/year)
2. Exhaust gas flow rate: __ SCFM @ __ $\%H_2O$
3. Raw products used and finished products produced:

RAW PRODUCT USED (name)	CONSUMPTION (lbs/hr, gal/hr, etc.)	PRODUCTS PRODUCED (name)	PRODUCTION (lbs/hr, gal/hr, etc.)
Coal	85,250 tons/year		

GENERAL EMISSION UNIT
(FORM 5-F2)

DISTRICT:	< DISTRICT USE ONLY =
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME: Lehigh Southwest Cement Company	FACILITY NAME: Redding Plant

4. Unit emissions: 85-PO-14o (Coal Unloading Facility)

CRITERIA POLLUTANT EMISSIONS (tons per year)					
POLLUTANTS	PM10				
A. Emissions	0.02				
B. Pre-modification Emissions[1]					
C. Emission Change[2]					
D. Emission Limit[3]					

OTHER REGULATED AIR POLLUTANT EMISSIONS (tons per year)					
POLLUTANTS					
A. Emissions					
B. Pre-modification Emissions[1]					
C. Emission Change[2]					
D. Emission Limit[3]					

1 *For permit modifications only; emissions prior to project modification.*
2 *Difference between Pre-Modification Emissions (Section B.) and Emissions (Section A.).*
3 *For voluntary emissions cap and emission limits [i.e. expressed as parts per million (ppm) corrected for dilution air, pounds per hour (lbs/hr), pounds per million BTU (lb/MMBTU, etc.] required by any applicable federal requirement.*

GENERAL EMISSION UNIT
(FORM 5-F1)

DISTRICT:	< DISTRICT USE ONLY =
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME: Lehigh Southwest Cement Company	FACILITY NAME: Redding Plant

I. PERMIT NUMBER: 85-PO-14o

II. EQUIPMENT DESCRIPTION

1. General process description: Raw milling and in-line kiln
2. Equipment type: Clinker Cooler (Closed System)
3. Equipment description: Clinker Cooler (Closed System)
4. Equipment make, model & serial number: _____
5. Maximum design process rate or throughput: _____
6. Control device(s) type and description (if any): Dust Collectors; negative pressure baghouse type

III. OPERATIONAL INFORMATION

1. Operating schedule: __ (hours/day) __ (hours/year)
2. Exhaust gas flow rate: ____ SCFM @ ___ $\%H_2O$
3. Raw products used and finished products produced:

RAW PRODUCT USED (name)	**CONSUMPTION** (lbs/hr, gal/hr, etc.)	**PRODUCTS PRODUCED** (name)	**PRODUCTION** (lbs/hr, gal/hr, etc.)
Raw Feed Mix			

GENERAL EMISSION UNIT
(FORM 5-F2)

DISTRICT:	< DISTRICT USE ONLY =
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME: Lehigh Southwest Cement Company	FACILITY NAME: Redding Plant

4. Unit emissions: 85-PO-14o (Clinker Cooler)
No emissions; air from cooler is used as combustion air in the kiln.

CRITERIA POLLUTANT EMISSIONS (tons per year)					
POLLUTANTS					
A. Emissions					
B. Pre-modification Emissions[1]					
C. Emission Change[2]					
D. Emission Limit[3]					
OTHER REGULATED AIR POLLUTANT EMISSIONS (tons per year)					
POLLUTANTS					
A. Emissions					
B. Pre-modification Emissions[1]					
C. Emission Change[2]					
D. Emission Limit[3]					

[1] *For permit modifications only; emissions prior to project modification.*
[2] *Difference between Pre-Modification Emissions (Section B.) and Emissions (Section A.).*
[3] *For voluntary emissions cap and emission limits [i.e. expressed as parts per million (ppm) corrected for dilution air, pounds per hour (lbs/hr), pounds per million BTU (lb/MMBTU, etc.] required by any applicable federal requirement.*

GENERAL EMISSION UNIT
(FORM 5-F1)

DISTRICT: **Shasta County Air Quality Management District**	**< DISTRICT USE ONLY =** **DISTRICT ID:**
COMPANY NAME: **Lehigh Southwest Cement Company**	**FACILITY NAME:** **Redding Plant**

I. PERMIT NUMBER: 85-PO-14o

II. EQUIPMENT DESCRIPTION

1. General process description Raw milling and in-line kiln
2. Equipment type: Secondary Fuel System
3. Equipment description: Secondary Fuel System
4. Equipment make, model & serial number:
5. Maximum design process rate or throughput:
6. Control device(s) type and description (if any): Dust Collectors; negative pressure baghouse type

III. OPERATIONAL INFORMATION

1. Operating schedule: __ (hours/day) ___(hours/year)
2. Exhaust gas flow rate: ___ SCFM @ ___ $\%H_2O$
3. Raw products used and finished products produced:

RAW PRODUCT USED (name)	**CONSUMPTION** (lbs/hr, gal/hr, etc.)	**PRODUCTS PRODUCED** (name)	**PRODUCTION** (lbs/hr, gal/hr, etc.)
Raw Feed Mix			

GENERAL EMISSION UNIT
(FORM 5-F2)

DISTRICT:	< DISTRICT USE ONLY =
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME: Lehigh Southwest Cement Company	FACILITY NAME: Redding Plant

4. Unit emissions: 85-PO-14o (Secondary Fuel System)
No emissions; fully enclosed downstream of coal mill.

CRITERIA POLLUTANT EMISSIONS (tons per year)					
POLLUTANTS					
A. Emissions					
B. Pre-modification Emissions[1]					
C. Emission Change[2]					
D. Emission Limit[3]					
OTHER REGULATED AIR POLLUTANT EMISSIONS (tons per year)					
POLLUTANTS					
A. Emissions					
B. Pre-modification Emissions[1]					
C. Emission Change[2]					
D. Emission Limit[3]					

[1] *For permit modifications only; emissions prior to project modification.*
[2] *Difference between Pre-Modification Emissions (Section B.) and Emissions (Section A.).*
[3] *For voluntary emissions cap and emission limits [i.e. expressed as parts per million (ppm) corrected for dilution air, pounds per hour (lbs/hr), pounds per million BTU (lb/MMBTU, etc.] required by any applicable federal requirement.*

GENERAL EMISSION UNIT
(FORM 5-F1)

DISTRICT:	< DISTRICT USE ONLY =
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME: Lehigh Southwest Cement Company	FACILITY NAME: Redding Plant

I. PERMIT NUMBER: 85-PO-14o

II. EQUIPMENT DESCRIPTION

1. General process description Fluid coke silo
2. Equipment type: _____
3. Equipment description: 270 barrel portable silo
4. Equipment make, model & serial number: Belgrade Steel Tank Co., Inc.
5. Maximum design process rate or throughput: _____
6. Control device(s) type and description (if any): Dust Collector; negative pressure baghouse type

III. OPERATIONAL INFORMATION

1. Operating schedule: _ (hours/day) ___(hours/year)
2. Exhaust gas flow rate: ___ SCFM @ ___ $\%H_2O$
3. Raw products used and finished products produced:

RAW PRODUCT USED (name)	CONSUMPTION (lbs/hr, gal/hr, etc.)	PRODUCTS PRODUCED (name)	PRODUCTION (lbs/hr, gal/hr, etc.)
Fluid Coke			

GENERAL EMISSION UNIT
(FORM 5-F2)

DISTRICT:	< DISTRICT USE ONLY =
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME: Lehigh Southwest Cement Company	FACILITY NAME: Redding Plant

4. Unit emissions: 85-PO-14o
No emissions; vented to dust collector.

CRITERIA POLLUTANT EMISSIONS (tons per year)					
POLLUTANTS					
A. Emissions					
B. Pre-modification Emissions[1]					
C. Emission Change[2]					
D. Emission Limit[3]					
OTHER REGULATED AIR POLLUTANT EMISSIONS (tons per year)					
POLLUTANTS					
A. Emissions					
B. Pre-modification Emissions[1]					
C. Emission Change[2]					
D. Emission Limit[3]					

[1] *For permit modifications only; emissions prior to project modification.*
[2] *Difference between Pre-Modification Emissions (Section B.) and Emissions (Section A.).*
[3] *For voluntary emissions cap and emission limits [i.e. expressed as parts per million (ppm) corrected for dilution air, pounds per hour (lbs/hr), pounds per million BTU (lb/MMBTU, etc.] required by any applicable federal requirement.*

EMISSION CONTROL UNIT
(FORM 5-G1)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

I. PERMIT NUMBER: 85-PO-14o

II. EQUIPMENT DESCRIPTION

1. General process description: Kiln baghouse dust collector
2. Equipment type: Dust Collector (negative pressure baghouse type)
3. Equipment description: S260
4. Equipment make, model & serial number: Ind. Clean Air, BHA, TEX
5. Emission unit(s) served by this equipment: Raw milling and in-line kiln
6. Maximum design or rated capacity: 116,000 SCFM

III. EQUIPMENT DESIGN INFORMATION

1. Exhaust gas: Temperature: Ambient (F) Flow Rate: 116,000 (SCFM)
   Moisture: n/a (%) Oxygen: n/a (%)
   CO_2: n/a (%)
2. General: Manufacturer: Ind. Clean Air Pressure Drop: 5 (in-Hg)
   Inlet Temp.: Ambient (F) Outlet Temp.: 260-350 (F)
3. Catalyst data: Catalyst Type/Material: n/a
   Catalyst Life: _____ (years) Volume: _____ (ft^3)
   Space Velocity: _____ (ft^3/Ft) NH_3 Inj. Rate: _____ (gal/hr)
   NH_3 Inj. Temp.: _____ (F)
4. Baghouse data: Design: [ ] Positive Pressure [X] Negative Pressure
   Cleaning Method: Pulse Jet
   Fabric Material: Polyester Calendered
   Flow Rate: 116,000 (SCFM) Air/Cloth Ratio: 2
5. ESP data: Number of fields: _____ Cleaning Method: _____
   Power Input: _____
6. Scrubber data: Type/design: _____ Sorbent Type: _____
7. Other Control Devices (include appropriate design information):

EMISSION CONTROL UNIT
(FORM 5-G2)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

IV. OPERATIONAL INFORMATION

1. Operational schedule: 24 (hours/day) 8760 (hours/year)
2. Raw products used by control device: Coal, clinker, and Raw Materials *
3. Operating information:

POLLUTANTS AND EMISSION CONTROL INFORMATION

POLLUTANT (name)	INLET CONCENTRATION (ppm or gr/DSCF[1])	OUTLET CONCENTRATION (ppm or gr/DSCF[1])	CONTROL EFFICIENCY (% weight)
PM10	Varies	17.2 lb/hr (roller mill on)	Varies
PM10	Varies	17.9 lb/hr (roller mill bypass)	Varies

[1] Specify percent O_2 or percent CO_2.

* This information is for descriptive purposes only and is not a limit on the type of material captured or processed by the equipment

EMISSION CONTROL UNIT
(FORM 5-G1)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

I. PERMIT NUMBER: 85-PO-14o

II. EQUIPMENT DESCRIPTION

1. General process description: Raw mix tanks dust collector
2. Equipment type: Dust Collector (negative pressure baghouse type)
3. Equipment description: C172
4. Equipment make, model & serial number: Ray Jet, 9MWBV-10
5. Emission unit(s) served by this equipment: Raw milling and in-line kiln
6. Maximum design or rated capacity: 3,500 SCFM

III. EQUIPMENT DESIGN INFORMATION

1. Exhaust gas: Temperature: Ambient (F) Flow Rate: 3,500 (SCFM)
   Moisture: n/a (%) Oxygen: n/a (%)
   CO_2: n/a (%)
2. General: Manufacturer: Ray Jet Pressure Drop: _____ (in-Hg)
   Inlet Temp.: Ambient (F) Outlet Temp.: Ambient (F)
3. Catalyst data: Catalyst Type/Material: n/a
   Catalyst Life: _____ (years) Volume: _____ (ft^3)
   Space Velocity: _____ (ft^3/Ft) NH_3 Inj. Rate: _____ (gal/hr)
   NH_3 Inj. Temp.: _____ (F)
4. Baghouse data: Design: [ ] Positive Pressure [X] Negative Pressure
   Cleaning Method: Pulse Jet
   Fabric Material: 16 OZ Polyester Calendered
   Flow Rate: 3,500 (SCFM) Air/Cloth Ratio: 4.90
5. ESP data: Number of fields: _____ Cleaning Method: _____
   Power Input: _____
6. Scrubber data: Type/design: _____ Sorbent Type: _____
7. Other Control Devices (include appropriate design information):

EMISSION CONTROL UNIT
(FORM 5-G2)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

IV. OPERATIONAL INFORMATION

1. Operational schedule: 24 (hours/day) 8760 (hours/year)
2. Raw products used by control device: Coal, clinker, and Raw Materials *
3. Operating information:

POLLUTANTS AND EMISSION CONTROL INFORMATION

POLLUTANT (name)	INLET CONCENTRATION (ppm or gr/DSCF[1])	OUTLET CONCENTRATION (ppm or gr/DSCF[1])	CONTROL EFFICIENCY (% weight)
PM10	Varies	0.1 gr/DSCF	Varies

[1] Specify percent O_2 or percent CO_2.

* This information is for descriptive purposes only and is not a limit on the type of material captured or processed by the equipment

EMISSION CONTROL UNIT
(FORM 5-G1)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

I. PERMIT NUMBER: 85-PO-14o

II. EQUIPMENT DESCRIPTION

1. General process description: Clinker handling dust collector
2. Equipment type: Dust Collector (negative pressure baghouse type)
3. Equipment description: G418-1
4. Equipment make, model & serial number: Ray Jet
5. Emission unit(s) served by this equipment: Raw milling and in-line kiln
6. Maximum design or rated capacity: 9,000 SCFM

III. EQUIPMENT DESIGN INFORMATION

1. Exhaust gas: Temperature: Ambient (F) Flow Rate: 9,000 (SCFM)
   Moisture: n/a (%) Oxygen: n/a (%)
   CO_2: n/a (%)
2. General: Manufacturer: Ray Jet Pressure Drop: _____ (in-Hg)
   Inlet Temp.: Ambient (F) Outlet Temp.: Ambient (F)
3. Catalyst data: Catalyst Type/Material: n/a
   Catalyst Life: _____ (years) Volume: _____ (ft^3)
   Space Velocity: _____ (ft^3/Ft) NH_3 Inj. Rate: _____ (gal/hr)
   NH_3 Inj. Temp.: _____ (F)
4. Baghouse data: Design: [ ] Positive Pressure [X] Negative Pressure
   Cleaning Method: Pulse Jet
   Fabric Material: Polyester Calendered
   Flow Rate: 9,000 (SCFM) Air/Cloth Ratio: _____
5. ESP data: Number of fields: _____ Cleaning Method: _____
   Power Input: _____
6. Scrubber data: Type/design: _____ Sorbent Type: _____
7. Other Control Devices (include appropriate design information):

EMISSION CONTROL UNIT
(FORM 5-G2)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

IV. OPERATIONAL INFORMATION

1. Operational schedule: 24 (hours/day) 8760 (hours/year)
2. Raw products used by control device: Coal, clinker, and Raw Materials *
3. Operating information:

POLLUTANTS AND EMISSION CONTROL INFORMATION

POLLUTANT (name)	INLET CONCENTRATION (ppm or gr/DSCF[1])	OUTLET CONCENTRATION (ppm or gr/DSCF[1])	CONTROL EFFICIENCY (% weight)
PM10	Varies	0.04 gr/DSCF	Varies

[1] Specify percent O_2 or percent CO_2.

* This information is for descriptive purposes only and is not a limit on the type of material captured or processed by the equipment

EMISSION CONTROL UNIT
(FORM 5-G1)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

I. PERMIT NUMBER: 85-PO-14o

II. EQUIPMENT DESCRIPTION

1. General process description: Blending silo dust collector
2. Equipment type: Dust Collector (negative pressure baghouse type)
3. Equipment description: F173
4. Equipment make, model & serial number: SLY, 216-10
5. Emission unit(s) served by this equipment: Raw milling and in-line kiln
6. Maximum design or rated capacity: 9,850 SCFM

III. EQUIPMENT DESIGN INFORMATION

1. Exhaust gas: Temperature: Ambient (F) Flow Rate: 9,850 (SCFM)
   Moisture: n/a (%) Oxygen: n/a (%)
   CO_2: n/a (%)
2. General: Manufacturer: SLY Pressure Drop: _____ (in-Hg)
   Inlet Temp.: Ambient (F) Outlet Temp.: 120 (F)
3. Catalyst data: Catalyst Type/Material: n/a
   Catalyst Life: _____ (years) Volume: _____ (ft^3)
   Space Velocity: _____ (ft^3/Ft) NH_3 Inj. Rate: _____ (gal/hr)
   NH_3 Inj. Temp.: _____ (F)
4. Baghouse data: Design: [ ] Positive Pressure [X] Negative Pressure
   Cleaning Method: Pulse Jet
   Fabric Material 16 Oz Polyester Calendered
   Flow Rate: 9,850 (SCFM) Air/Cloth Ratio: 7
5. ESP data: Number of fields: _____ Cleaning Method: _____
   Power Input: _____
6. Scrubber data: Type/design: _____ Sorbent Type: _____
7. Other Control Devices (include appropriate design information):

EMISSION CONTROL UNIT
(FORM 5-G2)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

IV. OPERATIONAL INFORMATION

1. Operational schedule: 24 (hours/day) 8760 (hours/year)
2. Raw products used by control device: Coal, clinker, and Raw Materials *
3. Operating information:

POLLUTANTS AND EMISSION CONTROL INFORMATION

POLLUTANT (name)	INLET CONCENTRATION (ppm or gr/DSCF[1])	OUTLET CONCENTRATION (ppm or gr/DSCF[1])	CONTROL EFFICIENCY (% weight)
PM10	Varies	0.1 gr/DSCF	Varies

[1] Specify percent O_2 or percent CO_2.

* This information is for descriptive purposes only and is not a limit on the type of material captured or processed by the equipment

EMISSION CONTROL UNIT
(FORM 5-G1)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

I. PERMIT NUMBER: 85-PO-14o

II. EQUIPMENT DESCRIPTION

1. General process description: Raw storage silo dust collector
2. Equipment type: Dust Collector (negative pressure baghouse type)
3. Equipment description: F184
4. Equipment make, model & serial number: SLY, 169-10B
5. Emission unit(s) served by this equipment: Raw milling and in-line kiln
6. Maximum design or rated capacity: 6,700 SCFM

III. EQUIPMENT DESIGN INFORMATION

1. Exhaust gas: Temperature: Ambient (F) Flow Rate: 6,700 (SCFM)
   Moisture: n/a (%) Oxygen: n/a (%)
   CO_2: n/a (%)
2. General: Manufacturer: _____ Pressure Drop: _____ (in-Hg)
   Inlet Temp.: Ambient (F) Outlet Temp.: 100 (F)
3. Catalyst data: Catalyst Type/Material: n/a
   Catalyst Life: _____ (years) Volume: _____ (ft^3)
   Space Velocity: _____ (ft^3/Ft) NH_3 Inj. Rate: _____ (gal/hr)
   NH_3 Inj. Temp.: _____ (F)
4. Baghouse data: Design: [ ] Positive Pressure [X] Negative Pressure
   Cleaning Method: Pulse Jet
   Fabric Material: 16 Oz. Polypropylene Felt
   Flow Rate: 6,700 (SCFM) Air/Cloth Ratio: 7
5. ESP data: Number of fields: _____ Cleaning Method: _____
   Power Input: _____
6. Scrubber data: Type/design: _____ Sorbent Type: _____
7. Other Control Devices (include appropriate design information):

EMISSION CONTROL UNIT
(FORM 5-G2)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

IV. OPERATIONAL INFORMATION

1. Operational schedule: 24 (hours/day) 8760 (hours/year)
2. Raw products used by control device: Coal, clinker, and Raw Materials *
3. Operating information:

POLLUTANTS AND EMISSION CONTROL INFORMATION

POLLUTANT (name)	INLET CONCENTRATION (ppm or gr/DSCF[1])	OUTLET CONCENTRATION (ppm or gr/DSCF[1])	CONTROL EFFICIENCY (% weight)
PM10	Varies	0.1 gr/DSCF	Varies

[1] Specify percent O_2 or percent CO_2.

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EMISSION CONTROL UNIT
(FORM 5-G1)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

I. PERMIT NUMBER: 85-PO-14o

II. EQUIPMENT DESCRIPTION

1. General process description: Pre-heater kiln feed bin dust collector
2. Equipment type: Dust Collector (negative pressure baghouse type)
3. Equipment description: F350
4. Equipment make, model & serial number: Ray Jet
5. Emission unit(s) served by this equipment: Raw milling and in-line kiln
6. Maximum design or rated capacity: 13,000 SCFM

III. EQUIPMENT DESIGN INFORMATION

1. Exhaust gas: Temperature: Ambient (F) Flow Rate: 13,000 (SCFM)
   Moisture: n/a (%) Oxygen: n/a (%)
   CO_2: n/a (%)
2. General: Manufacturer: Ray Jet Pressure Drop: _____ (in-Hg)
   Inlet Temp.: Ambient (F) Outlet Temp.: 120 (F)
3. Catalyst data: Catalyst Type/Material: n/a
   Catalyst Life: _____ (years) Volume: _____ (ft^3)
   Space Velocity: _____ (ft^3/Ft) NH_3 Inj. Rate: _____ (gal/hr)
   NH_3 Inj. Temp.: _____ (F)
4. Baghouse data: Design: [ ] Positive Pressure [X] Negative Pressure
   Cleaning Method: Pulse Jet
   Fabric Material: Polyester Calendered
   Flow Rate: 13,000 (SCFM) Air/Cloth Ratio: _____
5. ESP data: Number of fields: _____ Cleaning Method: _____
   Power Input: _____
6. Scrubber data: Type/design: _____ Sorbent Type: _____
7. Other Control Devices (include appropriate design information):

EMISSION CONTROL UNIT
(FORM 5-G2)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

IV. OPERATIONAL INFORMATION

1. Operational schedule: 24 (hours/day) 8760 (hours/year)
2. Raw products used by control device: Coal, clinker, and Raw Materials *
3. Operating information:

POLLUTANTS AND EMISSION CONTROL INFORMATION

POLLUTANT (name)	INLET CONCENTRATION (ppm or gr/DSCF[1])	OUTLET CONCENTRATION (ppm or gr/DSCF[1])	CONTROL EFFICIENCY (% weight)
PM10	Varies	0.1 gr/DSCF	Varies

[1] Specify percent O_2 or percent CO_2.

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EMISSION CONTROL UNIT
(FORM 5-G1)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

I. PERMIT NUMBER: 85-PO-14o

II. EQUIPMENT DESCRIPTION

1. General process description: Deep bucket conveyor dust collector
2. Equipment type: Dust Collector (negative pressure baghouse type)
3. Equipment description: G425
4. Equipment make, model & serial number: Fabric Filters
5. Emission unit(s) served by this equipment: Raw milling and in-line kiln
6. Maximum design or rated capacity: 3,000 SCFM

III. EQUIPMENT DESIGN INFORMATION

1. Exhaust gas: Temperature: Ambient (F) Flow Rate: 3,000 (SCFM)
   Moisture: n/a (%) Oxygen: n/a (%)
   CO_2: n/a (%)
2. General: Manufacturer: Fabric Filters Pressure Drop: _____ (in-Hg)
   Inlet Temp.: Ambient (F) Outlet Temp.: Ambient (F)
3. Catalyst data: Catalyst Type/Material: n/a
   Catalyst Life: _____ (years) Volume: _____ (ft^3)
   Space Velocity: _____ (ft^3/Ft) NH_3 Inj. Rate: _____ (gal/hr)
   NH_3 Inj. Temp.: _____ (F)
4. Baghouse data: Design: [ ] Positive Pressure [X] Negative Pressure
   Cleaning Method: Pulse Jet
   Fabric Material: Polyester Calendered
   Flow Rate: 3,000 (SCFM) Air/Cloth Ratio: _____
5. ESP data: Number of fields: _____ Cleaning Method: _____
   Power Input: _____
6. Scrubber data: Type/design: _____ Sorbent Type: _____
7. Other Control Devices (include appropriate design information):

EMISSION CONTROL UNIT
(FORM 5-G2)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

IV. OPERATIONAL INFORMATION

1. Operational schedule: 24 (hours/day) 8760 (hours/year)
2. Raw products used by control device: Coal, clinker, and Raw Materials *
3. Operating information:

POLLUTANTS AND EMISSION CONTROL INFORMATION

POLLUTANT (name)	INLET CONCENTRATION (ppm or gr/DSCF[1])	OUTLET CONCENTRATION (ppm or gr/DSCF[1])	CONTROL EFFICIENCY (% weight)
PM10	Varies	0.1 gr/DSCF	Varies

[1] Specify percent O_2 or percent CO_2.

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EMISSION CONTROL UNIT
(FORM 5-G1)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

I. PERMIT NUMBER: 85-PO-14o

II. EQUIPMENT DESCRIPTION

1. General process description: Roller mill rock feeder dust collector
2. Equipment type: Dust Collector (negative pressure baghouse type)
3. Equipment description: S210
4. Equipment make, model & serial number: Ray Jet, 9MWC-15
5. Emission unit(s) served by this equipment: Raw milling and in-line kiln
6. Maximum design or rated capacity: 6,000 SCFM

III. EQUIPMENT DESIGN INFORMATION

1. Exhaust gas: Temperature: Ambient (F) Flow Rate: 6,000 (SCFM)
   Moisture: n/a (%) Oxygen: n/a (%)
   CO_2: n/a (%)
2. General: Manufacturer: _____ Pressure Drop: _____ (in-Hg)
   Inlet Temp.: Ambient (F) Outlet Temp.: Ambient (F)
3. Catalyst data: Catalyst Type/Material: n/a
   Catalyst Life: _____ (years) Volume: _____ (ft^3)
   Space Velocity: _____ (ft^3/Ft) NH_3 Inj. Rate: _____ (gal/hr)
   NH_3 Inj. Temp.: _____ (F)
4. Baghouse data: Design: [ ] Positive Pressure [X] Negative Pressure
   Cleaning Method: Pulse Jet
   Fabric Material: 16 oz. Polyester Calendered
   Flow Rate: 6,000 (SCFM) Air/Cloth Ratio: 5.60
5. ESP data: Number of fields: _____ Cleaning Method: _____
   Power Input: _____
6. Scrubber data: Type/design: _____ Sorbent Type: _____
7. Other Control Devices (include appropriate design information):

EMISSION CONTROL UNIT
(FORM 5-G2)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

IV. OPERATIONAL INFORMATION

1. Operational schedule: 24 (hours/day) 8760 (hours/year)
2. Raw products used by control device: Coal, clinker, and Raw Materials *
3. Operating information:

POLLUTANTS AND EMISSION CONTROL INFORMATION

POLLUTANT (name)	INLET CONCENTRATION (ppm or gr/DSCF[1])	OUTLET CONCENTRATION (ppm or gr/DSCF[1])	CONTROL EFFICIENCY (% weight)
PM10	Varies	0.1 gr/DSCF	Varies

[1] Specify percent O_2 or percent CO_2.

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EMISSION CONTROL UNIT
(FORM 5-G1)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

I. PERMIT NUMBER: 85-PO-14o

II. EQUIPMENT DESCRIPTION

1. General process description: Bucket (meal) elevators dust collector
2. Equipment type: Dust Collector (negative pressure baghouse type)
3. Equipment description: S253
4. Equipment make, model & serial number: Ray Jet, 9MW-30
5. Emission unit(s) served by this equipment: Raw milling and in-line kiln
6. Maximum design or rated capacity: 12,000 SCFM

III. EQUIPMENT DESIGN INFORMATION

1. Exhaust gas: Temperature: Ambient (F) Flow Rate: 12,000 (SCFM)
   Moisture: n/a (%) Oxygen: n/a (%)
   CO_2: n/a (%)
2. General: Manufacturer: _____ Pressure Drop: _____ (in-Hg)
   Inlet Temp.: Ambient (F) Outlet Temp.: 150 (F)
3. Catalyst data: Catalyst Type/Material: n/a
   Catalyst Life: _____ (years) Volume: _____ (ft^3)
   Space Velocity: _____ (ft^3/Ft) NH_3 Inj. Rate: _____ (gal/hr)
   NH_3 Inj. Temp.: _____ (F)
4. Baghouse data: Design: [ ] Positive Pressure [X] Negative Pressure
   Cleaning Method: Pulse Jet
   Fabric Material: 16 oz. Polyester Calendered
   Flow Rate: 12,000 (SCFM) Air/Cloth Ratio: 5.60
5. ESP data: Number of fields: _____ Cleaning Method: _____
   Power Input: _____
6. Scrubber data: Type/design: _____ Sorbent Type: _____
7. Other Control Devices (include appropriate design information):

EMISSION CONTROL UNIT
(FORM 5-G2)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

IV. OPERATIONAL INFORMATION

1. Operational schedule: 24 (hours/day) 8760 (hours/year)
2. Raw products used by control device: Coal, clinker, and Raw Materials *
3. Operating information:

POLLUTANTS AND EMISSION CONTROL INFORMATION

POLLUTANT (name)	INLET CONCENTRATION (ppm or gr/DSCF[1])	OUTLET CONCENTRATION (ppm or gr/DSCF[1])	CONTROL EFFICIENCY (% weight)
PM10	Varies	0.1 gr/DSCF	Varies

[1] Specify percent O_2 or percent CO_2.

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EMISSION CONTROL UNIT
(FORM 5-G1)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

I. PERMIT NUMBER: 85-PO-14o

II. EQUIPMENT DESCRIPTION

1. General process description: Coal silo dust collector
2. Equipment type: Dust Collector (negative pressure baghouse type)
3. Equipment description: G206
4. Equipment make, model & serial number: Micro-Pulsaire, 495-10-200
5. Emission unit(s) served by this equipment: Raw milling and in-line kiln
6. Maximum design or rated capacity: 6,000 SCFM

III. EQUIPMENT DESIGN INFORMATION

1. Exhaust gas: Temperature: Ambient (F) Flow Rate: 6,000 (SCFM)
   Moisture: n/a (%) Oxygen: n/a (%)
   CO_2: n/a (%)
2. General: Manufacturer: Micro-Pulsaire Pressure Drop: _____ (in-Hg)
   Inlet Temp.: Ambient (F) Outlet Temp.: Ambient (F)
3. Catalyst data: Catalyst Type/Material: n/a
   Catalyst Life: _____ (years) Volume: _____ (ft^3)
   Space Velocity: _____ (ft^3/Ft) NH_3 Inj. Rate: _____ (gal/hr)
   NH_3 Inj. Temp.: _____ (F)
4. Baghouse data: Design: [ ] Positive Pressure [X] Negative Pressure
   Cleaning Method: Pulse Jet
   Fabric Material: NOMEX UNTR
   Flow Rate: 6,000 (SCFM) Air/Cloth Ratio: 7
5. ESP data: Number of fields: _____ Cleaning Method: _____
   Power Input: _____
6. Scrubber data: Type/design: _____ Sorbent Type: _____
7. Other Control Devices (include appropriate design information):

EMISSION CONTROL UNIT
(FORM 5-G2)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

IV. OPERATIONAL INFORMATION

1. Operational schedule: 24 (hours/day) 8760 (hours/year)
2. Raw products used by control device: Coal, clinker, and Raw Materials *
3. Operating information:

POLLUTANTS AND EMISSION CONTROL INFORMATION

POLLUTANT (name)	INLET CONCENTRATION (ppm or gr/DSCF[1])	OUTLET CONCENTRATION (ppm or gr/DSCF[1])	CONTROL EFFICIENCY (% weight)
PM10	Varies	0.1 gr/DSCF	Varies

[1] Specify percent O_2 or percent CO_2.

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EMISSION CONTROL UNIT
(FORM 5-G1)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

I. PERMIT NUMBER: 85-PO-14o

II. EQUIPMENT DESCRIPTION

1. General process description: Indirect coal firing system dust collector
2. Equipment type: Dust Collector (negative pressure baghouse type)
3. Equipment description: G465
4. Equipment make, model & serial number: Micro-Pulsaire, 133-10-100 TR C
5. Emission unit(s) served by this equipment: Raw milling and in-line kiln
6. Maximum design or rated capacity: 23,500 SCFM

III. EQUIPMENT DESIGN INFORMATION

1. Exhaust gas: Temperature: Ambient (F) Flow Rate: 23,500 (SCFM)
   Moisture: n/a (%) Oxygen: n/a (%)
   CO_2: n/a (%)
2. General: Manufacturer: _____ Pressure Drop: _____ (in-Hg)
   Inlet Temp.: Ambient (F) Outlet Temp.: 120 (F)
3. Catalyst data: Catalyst Type/Material: n/a
   Catalyst Life: _____ (years) Volume: _____ (ft^3)
   Space Velocity: _____ (ft^3/Ft) NH_3 Inj. Rate: _____ (gal/hr)
   NH_3 Inj. Temp.: _____ (F)
4. Baghouse data: Design: [ ] Positive Pressure [X] Negative Pressure
   Cleaning Method: Pulse Jet
   Fabric Material: 16 oz. Polyester Felt
   Flow Rate: 23,500 (SCFM) Air/Cloth Ratio: 7
5. ESP data: Number of fields: _____ Cleaning Method: _____
   Power Input: _____
6. Scrubber data: Type/design: _____ Sorbent Type: _____
7. Other Control Devices (include appropriate design information):

EMISSION CONTROL UNIT
(FORM 5-G2)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

IV. OPERATIONAL INFORMATION

1. Operational schedule: 24 (hours/day) 8760 (hours/year)
2. Raw products used by control device: Coal, clinker, and Raw Materials *
3. Operating information:

POLLUTANTS AND EMISSION CONTROL INFORMATION

POLLUTANT (name)	INLET CONCENTRATION (ppm or gr/DSCF[1])	OUTLET CONCENTRATION (ppm or gr/DSCF[1])	CONTROL EFFICIENCY (% weight)
PM10	Varies	0.1 gr/DSCF	Varies

[1] Specify percent O_2 or percent CO_2.

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EMISSION CONTROL UNIT
(FORM 5-G1)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

I. PERMIT NUMBER: 85-PO-14o

II. EQUIPMENT DESCRIPTION

1. General process description: MDF receiving hopper dust collector; MDF storage silo dust collector; MDF pre-hopper dust collector
2. Equipment type: Dust Collector (negative pressure baghouse type)
3. Equipment description: G-228F, G228G, G-228NA
4. Equipment make, model & serial number: LMC West Donaldson Torit, 49-FSD-6, 5133; Sly, CTR-60-59-10 Tube Jet, RP8-1603; Infaststaub, INFA-JET AJN-044, 3688
5. Emission unit(s) served by this equipment: Raw milling and in-line kiln
6. Maximum design or rated capacity: 2,680/2,530/156 SCFM

III. EQUIPMENT DESIGN INFORMATION

1. Exhaust gas: Temperature: Ambient (F) Flow Rate: 2,680/2,530/156 (SCFM)
   Moisture: n/a (%) Oxygen: n/a (%)
   CO_2: n/a (%)
2. General: Manufacturer: _____ Pressure Drop: 4 (in-Hg)
   Inlet Temp.: Ambient (F) Outlet Temp.: Ambient (F)
3. Catalyst data: Catalyst Type/Material: n/a
   Catalyst Life: _____ (years) Volume: _____ (ft^3)
   Space Velocity: _____ (ft^3/Ft) NH_3 Inj. Rate: _____ (gal/hr)
   NH_3 Inj. Temp.: _____ (F)
4. Baghouse data: Design: [ ] Positive Pressure [X] Negative Pressure
   Cleaning Method: Pulse Jet
   Fabric Material: 16 oz, Polyester Felt; 18 oz fine fiber blend Polyester Felt; Polyester Needle Felt
   Flow Rate: 2,680/2,530/156 (SCFM) Air/Cloth Ratio: 7.75; 4.1
5. ESP data: Number of fields: _____ Cleaning Method: _____
   Power Input: _____
6. Scrubber data: Type/design: _____ Sorbent Type: _____
7. Other Control Devices (include appropriate design information):

EMISSION CONTROL UNIT
(FORM 5-G2)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

IV. OPERATIONAL INFORMATION

1. Operational schedule: 24 (hours/day) 8760 (hours/year)
2. Raw products used by control device: Coal, clinker, and Raw Materials *
3. Operating information:

POLLUTANTS AND EMISSION CONTROL INFORMATION

POLLUTANT (name)	INLET CONCENTRATION (ppm or gr/DSCF[1])	OUTLET CONCENTRATION (ppm or gr/DSCF[1])	CONTROL EFFICIENCY (% weight)
PM10	Varies	0.1 gr/DSCF	Varies

[1] Specify percent O_2 or percent CO_2.

* This information is for descriptive purposes only and is not a limit on the type of material captured or processed by the equipment

EMISSION CONTROL UNIT
(FORM 5-G1)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

I. PERMIT NUMBER: 85-PO-14o

II. EQUIPMENT DESCRIPTION

1. General process description: Fluid coke silo dust collector
2. Equipment type: Dust Collector (negative pressure baghouse type)
3. Equipment description: G-270
4. Equipment make, model & serial number:
5. Emission unit(s) served by this equipment: Fluid coke silo
6. Maximum design or rated capacity: 1,800 CFM

III. EQUIPMENT DESIGN INFORMATION

1. Exhaust gas: Temperature: Ambient (F) Flow Rate: 1,800 (SCFM)
   Moisture: n/a (%) Oxygen: n/a (%)
   CO_2: n/a (%)
2. General: Manufacturer: Pressure Drop: (in-Hg)
   Inlet Temp.: Ambient (F) Outlet Temp.: Ambient (F)
3. Catalyst data: Catalyst Type/Material: n/a
   Catalyst Life: (years) Volume: (ft^3)
   Space Velocity: (ft^3/Ft) NH_3 Inj. Rate: (gal/hr)
   NH_3 Inj. Temp.: (F)
4. Baghouse data: Design: [ ] Positive Pressure [X] Negative Pressure
   Cleaning Method:
   Fabric Material
   Flow Rate: 1,800 (SCFM) Air/Cloth Ratio:
5. ESP data: Number of fields: Cleaning Method:
   Power Input:
6. Scrubber data: Type/design: Sorbent Type:
7. Other Control Devices (include appropriate design information):

EMISSION CONTROL UNIT
(FORM 5-G2)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

IV. OPERATIONAL INFORMATION

1. Operational schedule: 24 (hours/day) 8760 (hours/year)
2. Raw products used by control device: Fluid Coke
3. Operating information:

POLLUTANTS AND EMISSION CONTROL INFORMATION

POLLUTANT (name)	INLET CONCENTRATION (ppm or gr/DSCF[1])	OUTLET CONCENTRATION (ppm or gr/DSCF[1])	CONTROL EFFICIENCY (% weight)
PM10	Varies	0.1 gr/DSCF	Varies

[1] Specify percent O_2 or percent CO_2.

* This information is for descriptive purposes only and is not a limit on the type of material captured or processed by the equipment

Finish Grinding Department

EMISSION CONTROL UNIT
(FORM 5-G1)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

I. PERMIT NUMBER: 85-PO-12f

II. EQUIPMENT DESCRIPTION

1. General process description: Particle Capture
2. Equipment type: Dust Collector (negative pressure baghouse type)
3. Equipment description: EA87
4. Equipment make, model & serial number: Norblo, BHA Tensionor System
5. Emission unit(s) served by this equipment: Finish Mills
6. Maximum design or rated capacity: 13,500 SCFM

III. EQUIPMENT DESIGN INFORMATION

1. Exhaust gas: Temperature: 150 (F) Flow Rate: 13,500 (SCFM)
   Moisture: n/a (%) Oxygen: n/a (%)
   CO_2: n/a (%)
2. General: Manufacturer: Norblo Pressure Drop: Unknown (in-Hg)
   Inlet Temp.: Ambient (F) Outlet Temp.: 150 (F)
3. Catalyst data: Catalyst Type/Material: n/a
   Catalyst Life: _____ (years) Volume: _____ (ft^3)
   Space Velocity: _____ (ft^3/Ft) NH_3 Inj. Rate: _____ (gal/hr)
   NH_3 Inj. Temp.: _____ (F)
4. Baghouse data: Design: [ ] Positive Pressure [X] Negative Pressure
   Cleaning Method: Pulse Jet
   Fabric Material: Polyester Felt
   Flow Rate: 13,500 (SCFM) Air/Cloth Ratio: 7
5. ESP data: Number of fields: _____ Cleaning Method: _____
   Power Input: _____
6. Scrubber data: Type/design: _____ Sorbent Type: _____
7. Other Control Devices (include appropriate design information):

EMISSION CONTROL UNIT
(FORM 5-G2)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

IV. OPERATIONAL INFORMATION

1. Operational schedule: 24 (hours/day) 8760 (hours/year)
2. Raw products used by control device: Clinker and Additives*
3. Operating information:

POLLUTANTS AND EMISSION CONTROL INFORMATION

POLLUTANT (name)	INLET CONCENTRATION (ppm or gr/DSCF[1])	OUTLET CONCENTRATION (ppm or gr/DSCF[1])	CONTROL EFFICIENCY (% weight)
PM10	Varies	0.05 gr/DSCF	Varies

[1] Specify percent O_2 or percent CO_2.

*This information is for descriptive purposes only and is not a limit on the type of material captured or processed by the equipment

EMISSION CONTROL UNIT
(FORM 5-G1)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

I. PERMIT NUMBER: 85-PO-12f

II. EQUIPMENT DESCRIPTION

1. General process description: Particle Capture
2. Equipment type: Dust Collector (negative pressure baghouse type)
3. Equipment description: EA92/93
4. Equipment make, model & serial number: Norblo, BHA Tensionor System
5. Emission unit(s) served by this equipment: Finish Mill
6. Maximum design or rated capacity: 27,000 SCFM

III. EQUIPMENT DESIGN INFORMATION

1. Exhaust gas: Temperature: 150 (F) Flow Rate: 27,000 (SCFM)
   Moisture: n/a (%) Oxygen: n/a (%)
   CO_2: n/a (%)
2. General: Manufacturer: Norblo Pressure Drop: Unknown (in-Hg)
   Inlet Temp.: Ambient (F) Outlet Temp.: 150 (F)
3. Catalyst data: Catalyst Type/Material: n/a
   Catalyst Life: _____ (years) Volume: _____ (ft^3)
   Space Velocity: _____ (ft^3/Ft) NH_3 Inj. Rate: _____ (gal/hr)
   NH_3 Inj. Temp.: _____ (F)
4. Baghouse data: Design: [ ] Positive Pressure [X] Negative Pressure
   Cleaning Method: Pulse Jet
   Fabric Material: Polyester Felt
   Flow Rate: 27,000 (SCFM) Air/Cloth Ratio: 7
5. ESP data: Number of fields: _____ Cleaning Method: _____
   Power Input: _____
6. Scrubber data: Type/design: _____ Sorbent Type: _____
7. Other Control Devices (include appropriate design information):

EMISSION CONTROL UNIT
(FORM 5-G2)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

IV. OPERATIONAL INFORMATION

1. Operational schedule: 24 (hours/day) 8760 (hours/year)
2. Raw products used by control device: Clinker and additives*
3. Operating information:

POLLUTANTS AND EMISSION CONTROL INFORMATION

POLLUTANT (name)	INLET CONCENTRATION (ppm or gr/DSCF[1])	OUTLET CONCENTRATION (ppm or gr/DSCF[1])	CONTROL EFFICIENCY (% weight)
PM10	Varies	0.05 gr/DSCF	Varies

[1] Specify percent O_2 or percent CO_2.

*This information is for descriptive purposes only and is not a limit on the type of material captured or processed by the equipment

EMISSION CONTROL UNIT
(FORM 5-G1)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

I. PERMIT NUMBER: 85-PO-12f

II. EQUIPMENT DESCRIPTION

1. General process description: Particle Capture
2. Equipment type: Dust Collector (negative pressure baghouse type)
3. Equipment description: EB147/148
4. Equipment make, model & serial number: Norblo, BHA Tensionor System
5. Emission unit(s) served by this equipment: Finish Mill
6. Maximum design or rated capacity: 27,000 SCFM

III. EQUIPMENT DESIGN INFORMATION

1. Exhaust gas: Temperature: 150 (F) Flow Rate: 27,000 (SCFM)
   Moisture: n/a (%) Oxygen: n/a (%)
   CO_2: n/a (%)
2. General: Manufacturer: Norblo Pressure Drop: Unknown (in-Hg)
   Inlet Temp.: Ambient (F) Outlet Temp.: 150 (F)
3. Catalyst data: Catalyst Type/Material: n/a
   Catalyst Life: _____ (years) Volume: _____ (ft^3)
   Space Velocity: _____ (ft^3/Ft) NH_3 Inj. Rate: _____ (gal/hr)
   NH_3 Inj. Temp.: _____ (F)
4. Baghouse data: Design: [ ] Positive Pressure [X] Negative Pressure
   Cleaning Method: Pulse Jet
   Fabric Material: Polyester Felt
   Flow Rate: 27,000 (SCFM) Air/Cloth Ratio: 7
5. ESP data: Number of fields: _____ Cleaning Method: _____
   Power Input: _____
6. Scrubber data: Type/design: _____ Sorbent Type: _____
7. Other Control Devices (include appropriate design information):

EMISSION CONTROL UNIT
(FORM 5-G2)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

IV. OPERATIONAL INFORMATION

1. Operational schedule: 24 (hours/day) 8760 (hours/year)
2. Raw products used by control device: Clinker and additives*
3. Operating information:

POLLUTANTS AND EMISSION CONTROL INFORMATION

POLLUTANT (name)	INLET CONCENTRATION (ppm or gr/DSCF[1])	OUTLET CONCENTRATION (ppm or gr/DSCF[1])	CONTROL EFFICIENCY (% weight)
PM10	Varies	0.05 gr/DSCF	Varies

[1] Specify percent O_2 or percent CO_2.

*This information is for descriptive purposes only and is not a limit on the type of material captured or processed by the equipment

EMISSION CONTROL UNIT
(FORM 5-G1)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

I. PERMIT NUMBER: 85-PO-12f

II. EQUIPMENT DESCRIPTION

1. General process description: Particle Capture
2. Equipment type: Dust Collector (negative pressure baghouse type)
3. Equipment description: EB142
4. Equipment make, model & serial number: Norblo, BHA Tensionor System
5. Emission unit(s) served by this equipment: Finish Mill
6. Maximum design or rated capacity: 13,500 SCFM

III. EQUIPMENT DESIGN INFORMATION

1. Exhaust gas: Temperature: 150 (F) Flow Rate: 13,500 (SCFM)
   Moisture: n/a (%) Oxygen: n/a (%)
   CO_2: n/a (%)
2. General: Manufacturer: Norblo Pressure Drop: Unknown (in-Hg)
   Inlet Temp.: Ambient (F) Outlet Temp.: 150 (F)
3. Catalyst data: Catalyst Type/Material: _____
   Catalyst Life: _____ (years) Volume: _____ (ft^3)
   Space Velocity: _____ (ft^3/Ft) NH_3 Inj. Rate: _____ (gal/hr)
   NH_3 Inj. Temp.: _____ (F)
4. Baghouse data: Design: [ ] Positive Pressure [X] Negative Pressure
   Cleaning Method: Pulse Jet
   Fabric Material: Polyester Felt
   Flow Rate: 13,500 (SCFM) Air/Cloth Ratio: 7
5. ESP data: Number of fields: _____ Cleaning Method: _____
   Power Input: _____
6. Scrubber data: Type/design: _____ Sorbent Type: _____
7. Other Control Devices (include appropriate design information):

EMISSION CONTROL UNIT
(FORM 5-G2)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

IV. OPERATIONAL INFORMATION

1. Operational schedule: 24 (hours/day) 8760 (hours/year)
2. Raw products used by control device: Clinker and additives *
3. Operating information:

POLLUTANTS AND EMISSION CONTROL INFORMATION

POLLUTANT (name)	INLET CONCENTRATION (ppm or gr/DSCF[1])	OUTLET CONCENTRATION (ppm or gr/DSCF[1])	CONTROL EFFICIENCY (% weight)
PM10	Varies	0.05 gr/DSCF	Varies

[1] Specify percent O_2 or percent CO_2.

*This information is for descriptive purposes only and is not a limit on the type of material captured or processed by the equipment

EMISSION CONTROL UNIT
(FORM 5-G1)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

I. PERMIT NUMBER: 85-PO-12f

II. EQUIPMENT DESCRIPTION

1. General process description: Particle Capture
2. Equipment type: Dust Collector (negative pressure baghouse type)
3. Equipment description: E35/34
4. Equipment make, model & serial number: Norblo, BHA Tensionor System
5. Emission unit(s) served by this equipment: Finish Mill
6. Maximum design or rated capacity: 27,000

III. EQUIPMENT DESIGN INFORMATION

1. Exhaust gas: Temperature: 150 (F) Flow Rate: 27,000 (SCFM)
   Moisture: n/a (%) Oxygen: n/a (%)
   CO_2: n/a (%)
2. General: Manufacturer: Norblo Pressure Drop: Uknown (in-Hg)
   Inlet Temp.: Ambient (F) Outlet Temp.: 150 (F)
3. Catalyst data: Catalyst Type/Material: _____
   Catalyst Life: _____ (years) Volume: _____ (ft^3)
   Space Velocity: _____ (ft^3/Ft) NH_3 Inj. Rate: _____ (gal/hr)
   NH_3 Inj. Temp.: _____ (F)
4. Baghouse data: Design: [ ] Positive Pressure [X] Negative Pressure
   Cleaning Method: Pulse Jet
   Fabric Material: Polyester Calendered
   Flow Rate: 27,000 (SCFM) Air/Cloth Ratio: 7
5. ESP data: Number of fields: _____ Cleaning Method: _____
   Power Input: _____
6. Scrubber data: Type/design: _____ Sorbent Type: _____
7. Other Control Devices (include appropriate design information):

EMISSION CONTROL UNIT
(FORM 5-G2)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

IV. OPERATIONAL INFORMATION

1. Operational schedule: 24 (hours/day) 8760 (hours/year)
2. Raw products used by control device: Clinker and additives
3. Operating information:

POLLUTANTS AND EMISSION CONTROL INFORMATION

POLLUTANT (name)	INLET CONCENTRATION (ppm or gr/DSCF[1])	OUTLET CONCENTRATION (ppm or gr/DSCF[1])	CONTROL EFFICIENCY (% weight)
PM10	Varies	0.05 gr/DSCF	Varies

[1] Specify percent O_2 or percent CO_2.

*This information is for descriptive purposes only and is not a limit on the type of material captured or processed by the equipment

EMISSION CONTROL UNIT
(FORM 5-G1)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

I. PERMIT NUMBER: 85-PO-12f

II. EQUIPMENT DESCRIPTION

1. General process description: Particle Capture
2. Equipment type: Dust Collector (negative pressure baghouse type)
3. Equipment description: E30
4. Equipment make, model & serial number: Norblo, BHA Tensionor Type
5. Emission unit(s) served by this equipment: Finish Mill
6. Maximum design or rated capacity: 13,500 SCFM

III. EQUIPMENT DESIGN INFORMATION

1. Exhaust gas: Temperature: 150 (F) Flow Rate: 13,500 (SCFM)
   Moisture: n/a (%) Oxygen: n/a (%)
   CO_2: n/a (%)
2. General: Manufacturer: Norblo Pressure Drop: Uknown (in-Hg)
   Inlet Temp.: Ambient (F) Outlet Temp.: 150 (F)
3. Catalyst data: Catalyst Type/Material: n/a
   Catalyst Life: _____ (years) Volume: _____ (ft^3)
   Space Velocity: _____ (ft^3/Ft) NH_3 Inj. Rate: _____ (gal/hr)
   NH_3 Inj. Temp.: _____ (F)
4. Baghouse data: Design: [ ] Positive Pressure [X] Negative Pressure
   Cleaning Method: Pulse Jet
   Fabric Material: Polyester Calendered
   Flow Rate: 13,500 (SCFM) Air/Cloth Ratio: 7
5. ESP data: Number of fields: _____ Cleaning Method: _____
   Power Input: _____
6. Scrubber data: Type/design: _____ Sorbent Type: _____
7. Other Control Devices (include appropriate design information):

EMISSION CONTROL UNIT
(FORM 5-G2)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

IV. OPERATIONAL INFORMATION

1. Operational schedule: 24 (hours/day) 8760 (hours/year)
2. Raw products used by control device: Clinker and Additives *
3. Operating information:

POLLUTANTS AND EMISSION CONTROL INFORMATION

POLLUTANT (name)	INLET CONCENTRATION (ppm or gr/DSCF[1])	OUTLET CONCENTRATION (ppm or gr/DSCF[1])	CONTROL EFFICIENCY (% weight)
PM10	Varies	0.05 gr/DSCF	Varies

[1] Specify percent O_2 or percent CO_2.

*This information is for descriptive purposes only and is not a limit on the type of material captured or processed by the equipment

EMISSION CONTROL UNIT
(FORM 5-G1)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

I. PERMIT NUMBER: 85-PO-12f

II. EQUIPMENT DESCRIPTION

1. General process description: Particle Capture
2. Equipment type: Dust Collector (negative pressure baghouse type)
3. Equipment description: E12
4. Equipment make, model & serial number: DCE Dalamatic
5. Emission unit(s) served by this equipment: Finish Mill – Feed Elevator
6. Maximum design or rated capacity: 900 SCFM

III. EQUIPMENT DESIGN INFORMATION

1. Exhaust gas: Temperature: 150 (F) Flow Rate: 900 (SCFM)
   Moisture: n/a (%) Oxygen: n/a (%)
   CO_2: n/a (%)
2. General: Manufacturer: DCE Pressure Drop: Unknown (in-Hg)
   Inlet Temp.: Ambient (F) Outlet Temp.: 150 (F)
3. Catalyst data: Catalyst Type/Material: n/a
   Catalyst Life: _____ (years) Volume: _____ (ft^3)
   Space Velocity: _____ (ft^3/Ft) NH_3 Inj. Rate: _____ (gal/hr)
   NH_3 Inj. Temp.: _____ (F)
4. Baghouse data: Design: [ ] Positive Pressure [X] Negative Pressure
   Cleaning Method: Pulse Jet
   Fabric Material: Polyester Calendered
   Flow Rate: 900 (SCFM) Air/Cloth Ratio: 7
5. ESP data: Number of fields: _____ Cleaning Method: _____
   Power Input: _____
6. Scrubber data: Type/design: _____ Sorbent Type: _____
7. Other Control Devices (include appropriate design information):

EMISSION CONTROL UNIT
(FORM 5-G2)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

IV. OPERATIONAL INFORMATION

1. Operational schedule: 24 (hours/day) 8760 (hours/year)
2. Raw products used by control device: Clinker and additives*
3. Operating information:

POLLUTANTS AND EMISSION CONTROL INFORMATION

POLLUTANT (name)	INLET CONCENTRATION (ppm or gr/DSCF[1])	OUTLET CONCENTRATION (ppm or gr/DSCF[1])	CONTROL EFFICIENCY (% weight)
PM10	Varies	0.05 gr/DSCF	Varies

[1] Specify percent O_2 or percent CO_2.

*This information is for descriptive purposes only and is not a limit on the type of material captured or processed by the equipment

EMISSION CONTROL UNIT
(FORM 5-G1)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

I. PERMIT NUMBER: 85-PO-12f

II. EQUIPMENT DESCRIPTION

1. General process description: Particle Capture
2. Equipment type: Dust Collector (negative pressure baghouse type)
3. Equipment description: E230
4. Equipment make, model & serial number: DCE Dalamatic
5. Emission unit(s) served by this equipment: Finish Mill – Gypsum Weigh Feeder
6. Maximum design or rated capacity: 1,400

III. EQUIPMENT DESIGN INFORMATION

1. Exhaust gas: Temperature: Ambient (F) Flow Rate: 1,400 (SCFM)
   Moisture: n/a (%) Oxygen: n/a (%)
   CO_2: n/a (%)
2. General: Manufacturer: DCE Pressure Drop: Unknown (in-Hg)
   Inlet Temp.: Ambient (F) Outlet Temp.: Ambient (F)
3. Catalyst data: Catalyst Type/Material: n/a
   Catalyst Life: _____ (years) Volume: _____ (ft^3)
   Space Velocity: _____ (ft^3/Ft) NH_3 Inj. Rate: _____ (gal/hr)
   NH_3 Inj. Temp.: _____ (F)
4. Baghouse data: Design: [ ] Positive Pressure [X] Negative Pressure
   Cleaning Method: Pulse Jet
   Fabric Material: Polyester Calendered
   Flow Rate: 1,400 (SCFM) Air/Cloth Ratio: 7
5. ESP data: Number of fields: _____ Cleaning Method: _____
   Power Input: _____
6. Scrubber data: Type/design: _____ Sorbent Type: _____
7. Other Control Devices (include appropriate design information):

EMISSION CONTROL UNIT
(FORM 5-G2)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

IV. OPERATIONAL INFORMATION

1. Operational schedule: 24 (hours/day) 8760 (hours/year)
2. Raw products used by control device: Clinker and Gypsum*
3. Operating information:

POLLUTANTS AND EMISSION CONTROL INFORMATION

POLLUTANT (name)	INLET CONCENTRATION (ppm or gr/DSCF[1])	OUTLET CONCENTRATION (ppm or gr/DSCF[1])	CONTROL EFFICIENCY (% weight)
PM10	Varies	0.05 gr/DSCF	Varies

[1] Specify percent O_2 or percent CO_2.

*This information is for descriptive purposes only and is not a limit on the type of material captured or processed by the equipment

EMISSION CONTROL UNIT
(FORM 5-G1)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

I. PERMIT NUMBER: 85-PO-12f

II. EQUIPMENT DESCRIPTION

1. General process description: Particle Capture
2. Equipment type: Dust Collector (negative pressure baghouse type)
3. Equipment description: E231
4. Equipment make, model & serial number: DCE Dalamatic
5. Emission unit(s) served by this equipment: Finish Mill – Clinker Weigh Feeder
6. Maximum design or rated capacity: 1,400 SCFM

III. EQUIPMENT DESIGN INFORMATION

1. Exhaust gas: Temperature: 100 (F) Flow Rate: 1,400 (SCFM)
   Moisture: n/a (%) Oxygen: n/a (%)
   CO_2: n/a (%)
2. General: Manufacturer: DCE Pressure Drop: Unknown (in-Hg)
   Inlet Temp.: Ambient (F) Outlet Temp.: 100 (F)
3. Catalyst data: Catalyst Type/Material: n/a
   Catalyst Life: _____ (years) Volume: _____ (ft^3)
   Space Velocity: _____ (ft^3/Ft) NH_3 Inj. Rate: _____ (gal/hr)
   NH_3 Inj. Temp.: _____ (F)
4. Baghouse data: Design: [ ] Positive Pressure [X] Negative Pressure
   Cleaning Method: Pulse Jet
   Fabric Material: Polyester Calendered
   Flow Rate: 1,400 (SCFM) Air/Cloth Ratio: 7
5. ESP data: Number of fields: _____ Cleaning Method: _____
   Power Input: _____
6. Scrubber data: Type/design: _____ Sorbent Type: _____
7. Other Control Devices (include appropriate design information):

EMISSION CONTROL UNIT
(FORM 5-G2)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

IV. OPERATIONAL INFORMATION

1. Operational schedule: 24 (hours/day) 8760 (hours/year)
2. Raw products used by control device: Clinker and Additives *
3. Operating information:

POLLUTANTS AND EMISSION CONTROL INFORMATION

POLLUTANT (name)	INLET CONCENTRATION (ppm or gr/DSCF[1])	OUTLET CONCENTRATION (ppm or gr/DSCF[1])	CONTROL EFFICIENCY (% weight)
PM10	Varies	0.05 gr/DSCF	Varies

[1] Specify percent O_2 or percent CO_2.

*This information is for descriptive purposes only and is not a limit on the type of material captured or processed by the equipment

EMISSION CONTROL UNIT
(FORM 5-G1)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

I. PERMIT NUMBER: 85-PO-12f

II. EQUIPMENT DESCRIPTION

1. General process description: Particle Capture
2. Equipment type: Dust Collector (negative pressure baghouse type)
3. Equipment description: D34
4. Equipment make, model & serial number: DCE Dalamatic
5. Emission unit(s) served by this equipment: Finish Mill – Gypsum Elevator
6. Maximum design or rated capacity: 1,500

III. EQUIPMENT DESIGN INFORMATION

1. Exhaust gas: Temperature: Ambient (F) Flow Rate: 1,500 (SCFM)
   Moisture: n/a (%) Oxygen: n/a (%)
   CO_2: n/a (%)
2. General: Manufacturer: DCE Pressure Drop: Unknown (in-Hg)
   Inlet Temp.: Ambient (F) Outlet Temp.: Ambient (F)
3. Catalyst data: Catalyst Type/Material: n/a
   Catalyst Life: _____ (years) Volume: _____ (ft^3)
   Space Velocity: _____ (ft^3/Ft) NH_3 Inj. Rate: _____ (gal/hr)
   NH_3 Inj. Temp.: _____ (F)
4. Baghouse data: Design: [ ] Positive Pressure [X] Negative Pressure
   Cleaning Method: Pulse Jet
   Fabric Material: Polyester Calendered
   Flow Rate: 1,500 (SCFM) Air/Cloth Ratio: 7
5. ESP data: Number of fields: _____ Cleaning Method: _____
   Power Input: _____
6. Scrubber data: Type/design: _____ Sorbent Type: _____
7. Other Control Devices (include appropriate design information):

EMISSION CONTROL UNIT
(FORM 5-G2)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

IV. OPERATIONAL INFORMATION

1. Operational schedule: 24 (hours/day) 8760 (hours/year)
2. Raw products used by control device: Clinker and gypsum *
3. Operating information:

POLLUTANTS AND EMISSION CONTROL INFORMATION

POLLUTANT (name)	INLET CONCENTRATION (ppm or gr/DSCF[1])	OUTLET CONCENTRATION (ppm or gr/DSCF[1])	CONTROL EFFICIENCY (% weight)
PM10	Varies	0.05 gr/DSCF	Varies

[1] Specify percent O_2 or percent CO_2.

*This information is for descriptive purposes only and is not a limit on the type of material captured or processed by the equipment

EMISSION CONTROL UNIT
(FORM 5-G1)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

I. PERMIT NUMBER: 85-PO-12f

II. EQUIPMENT DESCRIPTION

1. General process description: Particle Capture
2. Equipment type: Dust Collector (negative pressure baghouse type)
3. Equipment description: D122
4. Equipment make, model & serial number: DCE Dalamatic
5. Emission unit(s) served by this equipment: Finish Mill – Gypsum Loading System
6. Maximum design or rated capacity: 1,400

III. EQUIPMENT DESIGN INFORMATION

1. Exhaust gas: Temperature: Ambient (F) Flow Rate: 1,400 (SCFM)
   Moisture: n/a (%) Oxygen: n/a (%)
   CO_2: n/a (%)
2. General: Manufacturer: DCE Pressure Drop: Unknown (in-Hg)
   Inlet Temp.: Ambient (F) Outlet Temp.: Ambient (F)
3. Catalyst data: Catalyst Type/Material: n/a
   Catalyst Life: _____ (years) Volume: _____ (ft^3)
   Space Velocity: _____ (ft^3/Ft) NH_3 Inj. Rate: _____ (gal/hr)
   NH_3 Inj. Temp.: _____ (F)
4. Baghouse data: Design: [ ] Positive Pressure [X] Negative Pressure
   Cleaning Method: Pulse Jet
   Fabric Material: Polyester Calendar
   Flow Rate: 1,400 (SCFM) Air/Cloth Ratio: 7
5. ESP data: Number of fields: _____ Cleaning Method: _____
   Power Input: _____
6. Scrubber data: Type/design: _____ Sorbent Type: _____
7. Other Control Devices (include appropriate design information):

EMISSION CONTROL UNIT
(FORM 5-G2)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

IV. OPERATIONAL INFORMATION

1. Operational schedule: 24 (hours/day) 8760 (hours/year)
2. Raw products used by control device: Clinker and gypsum *
3. Operating information:

POLLUTANTS AND EMISSION CONTROL INFORMATION

POLLUTANT (name)	INLET CONCENTRATION (ppm or gr/DSCF[1])	OUTLET CONCENTRATION (ppm or gr/DSCF[1])	CONTROL EFFICIENCY (% weight)
PM10	Varies	0.05 gr/DSCF	Varies

[1] Specify percent O_2 or percent CO_2.

*This information is for descriptive purposes only and is not a limit on the type of material captured or processed by the equipment

EMISSION CONTROL UNIT
(FORM 5-G1)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

I. PERMIT NUMBER: 85-PO-12f

II. EQUIPMENT DESCRIPTION

1. General process description: Particle Capture
2. Equipment type: Dust Collector (negative pressure baghouse type)
3. Equipment description: D123
4. Equipment make, model & serial number: DCE Dalamatic
5. Emission unit(s) served by this equipment: Finish Mill – Gypsum Loading System
6. Maximum design or rated capacity: 1,400

III. EQUIPMENT DESIGN INFORMATION

1. Exhaust gas: Temperature: Ambient (F) Flow Rate: 1,400 (SCFM)
   Moisture: n/a (%) Oxygen: n/a (%)
   CO_2: n/a (%)
2. General: Manufacturer: DCE Pressure Drop: Unknown (in-Hg)
   Inlet Temp.: Ambient (F) Outlet Temp.: Ambient (F)
3. Catalyst data: Catalyst Type/Material: n/a
   Catalyst Life: _____ (years) Volume: _____ (ft^3)
   Space Velocity: _____ (ft^3/Ft) NH_3 Inj. Rate: _____ (gal/hr)
   NH_3 Inj. Temp.: _____ (F)
4. Baghouse data: Design: [ ] Positive Pressure [X] Negative Pressure
   Cleaning Method: Pulse Jet
   Fabric Material: Polyester Calendered
   Flow Rate: 1,400 (SCFM) Air/Cloth Ratio: 7
5. ESP data: Number of fields: _____ Cleaning Method: _____
   Power Input: _____
6. Scrubber data: Type/design: _____ Sorbent Type: _____
7. Other Control Devices (include appropriate design information):

EMISSION CONTROL UNIT
(FORM 5-G2)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

IV. OPERATIONAL INFORMATION

1. Operational schedule: 24 (hours/day) 8760 (hours/year)
2. Raw products used by control device: Clinker and Gypsum *
3. Operating information:

POLLUTANTS AND EMISSION CONTROL INFORMATION

POLLUTANT (name)	INLET CONCENTRATION (ppm or gr/DSCF[1])	OUTLET CONCENTRATION (ppm or gr/DSCF[1])	CONTROL EFFICIENCY (% weight)
PM10	Varies	0.05 gr/DSCF	Varies

[1] Specify percent O_2 or percent CO_2.

*This information is for descriptive purposes only and is not a limit on the type of material captured or processed by the equipment

Storage and Shipping Department

EMISSION CONTROL UNIT
(FORM 5-G1)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

I. PERMIT NUMBER: 85-PO-14o

II. EQUIPMENT DESCRIPTION

1. General process description: Particle Capture
2. Equipment type: Dust Collector (negative pressure baghouse type)
3. Equipment description: J159
4. Equipment make, model & serial number: Sly, Dynaclone 13A
5. Emission unit(s) served by this equipment: Storage and Shipping
6. Maximum design or rated capacity: 11,280 SCFM

III. EQUIPMENT DESIGN INFORMATION

1. Exhaust gas: Temperature: 110 (F) Flow Rate: 11,280 (SCFM)
   Moisture: n/a (%) Oxygen: n/a (%)
   CO_2: n/a (%)
2. General: Manufacturer: Sly Pressure Drop: Unknown (in-Hg)
   Inlet Temp.: Ambient (F) Outlet Temp.: 110 (F)
3. Catalyst data: Catalyst Type/Material: n/a
   Catalyst Life: _____ (years) Volume: _____ (ft^3)
   Space Velocity: _____ (ft^3/Ft) NH_3 Inj. Rate: _____ (gal/hr)
   NH_3 Inj. Temp.: _____ (F)
4. Baghouse data: Design: [ ] Positive Pressure [X] Negative Pressure
   Cleaning Method: Pulse Jet
   Fabric Material: Polyproylene Felt
   Flow Rate: 11,280 (SCFM) Air/Cloth Ratio: 7
5. ESP data: Number of fields: _____ Cleaning Method: _____
   Power Input: _____
6. Scrubber data: Type/design: _____ Sorbent Type: _____
7. Other Control Devices (include appropriate design information):

EMISSION CONTROL UNIT
(FORM 5-G2)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

IV. OPERATIONAL INFORMATION

1. Operational schedule: 24 (hours/day) 8760 (hours/year)
2. Raw products used by control device: Cement, Clinker, and Raw Materials *
3. Operating information:

POLLUTANTS AND EMISSION CONTROL INFORMATION

POLLUTANT (name)	INLET CONCENTRATION (ppm or gr/DSCF[1])	OUTLET CONCENTRATION (ppm or gr/DSCF[1])	CONTROL EFFICIENCY (% weight)
PM10	Varies	0.05 gr/DSCF	Varies

[1] Specify percent O_2 or percent CO_2.

* This information is for descriptive purposes only and is not a limit on the type of material captured or processed by the equipment

EMISSION CONTROL UNIT
(FORM 5-G1)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

I. PERMIT NUMBER: 85-PO-14o

II. EQUIPMENT DESCRIPTION

1. General process description: Particle Capture
2. Equipment type: Dust Collector (negative pressure baghouse type)
3. Equipment description: J162
4. Equipment make, model & serial number: Sly Dynaclone 19A
5. Emission unit(s) served by this equipment: Storage and Shipping
6. Maximum design or rated capacity: 16,070 SCFM

III. EQUIPMENT DESIGN INFORMATION

1. Exhaust gas: Temperature: 220 (F) Flow Rate: 16,070 (SCFM)
   Moisture: n/a (%) Oxygen: n/a (%)
   CO_2: n/a (%)
2. General: Manufacturer: Sly Pressure Drop: Unknown (in-Hg)
   Inlet Temp.: Ambient (F) Outlet Temp.: 220 (F)
3. Catalyst data: Catalyst Type/Material: n/a
   Catalyst Life: _____ (years) Volume: _____ (ft^3)
   Space Velocity: _____ (ft^3/Ft) NH_3 Inj. Rate: _____ (gal/hr)
   NH_3 Inj. Temp.: _____ (F)
4. Baghouse data: Design: [ ] Positive Pressure [X] Negative Pressure
   Cleaning Method: Pulse Jet
   Fabric Material: Polypropylene Felt
   Flow Rate: 16,070 (SCFM) Air/Cloth Ratio: 7
5. ESP data: Number of fields: _____ Cleaning Method: _____
   Power Input: _____
6. Scrubber data: Type/design: _____ Sorbent Type: _____
7. Other Control Devices (include appropriate design information):

EMISSION CONTROL UNIT
(FORM 5-G2)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

IV. OPERATIONAL INFORMATION

1. Operational schedule: 24 (hours/day) 8760 (hours/year)
2. Raw products used by control device: Cement, Clinker, and Raw Materials *
3. Operating information:

POLLUTANTS AND EMISSION CONTROL INFORMATION

POLLUTANT (name)	INLET CONCENTRATION (ppm or gr/DSCF[1])	OUTLET CONCENTRATION (ppm or gr/DSCF[1])	CONTROL EFFICIENCY (% weight)
PM10	Varies	0.05 gr/DSCF	Varies

[1] Specify percent O_2 or percent CO_2.

* This information is for descriptive purposes only and is not a limit on the type of material captured or processed by the equipment

EMISSION CONTROL UNIT
(FORM 5-G1)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

I. PERMIT NUMBER: 85-PO-14o

II. EQUIPMENT DESCRIPTION

1. General process description: Particle Capture
2. Equipment type: Dust Collector (negative pressure baghouse type)
3. Equipment description: J165
4. Equipment make, model & serial number: Pulsair 180-8 A
5. Emission unit(s) served by this equipment: Storage and Shipping
6. Maximum design or rated capacity: 7,230 SCFM

III. EQUIPMENT DESIGN INFORMATION

1. Exhaust gas: Temperature: 110 (F) Flow Rate: 7,230 (SCFM)
   Moisture: n/a (%) Oxygen: n/a (%)
   CO_2: n/a (%)
2. General: Manufacturer: Pulsair Pressure Drop: Unknown (in-Hg)
   Inlet Temp.: Ambient (F) Outlet Temp.: 110 (F)
3. Catalyst data: Catalyst Type/Material: n/a
   Catalyst Life: _____ (years) Volume: _____ (ft^3)
   Space Velocity: _____ (ft^3/Ft) NH_3 Inj. Rate: _____ (gal/hr)
   NH_3 Inj. Temp.: _____ (F)
4. Baghouse data: Design: [ ] Positive Pressure [X] Negative Pressure
   Cleaning Method: Pulse Jet
   Fabric Material: Polyester Std
   Flow Rate: 7,230 (SCFM) Air/Cloth Ratio: 5
5. ESP data: Number of fields: _____ Cleaning Method: _____
   Power Input: _____
6. Scrubber data: Type/design: _____ Sorbent Type: _____
7. Other Control Devices (include appropriate design information):

EMISSION CONTROL UNIT
(FORM 5-G2)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

IV. OPERATIONAL INFORMATION

1. Operational schedule: 24 (hours/day) 8760 (hours/year)
2. Raw products used by control device: Cement, Clinker, and Raw Materials *
3. Operating information:

POLLUTANTS AND EMISSION CONTROL INFORMATION

POLLUTANT (name)	INLET CONCENTRATION (ppm or gr/DSCF[1])	OUTLET CONCENTRATION (ppm or gr/DSCF[1])	CONTROL EFFICIENCY (% weight)
PM10	Varies	0.05 gr/DSCF	Varies

[1] Specify percent O_2 or percent CO_2.

* This information is for descriptive purposes only and is not a limit on the type of material captured or processed by the equipment

EMISSION CONTROL UNIT
(FORM 5-G1)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

I. PERMIT NUMBER: 85-PO-14o

II. EQUIPMENT DESCRIPTION

1. General process description: Particle Capture
2. Equipment type: Dust Collector (negative pressure baghouse type)
3. Equipment description: J168
4. Equipment make, model & serial number: Pulsair 180-8 A
5. Emission unit(s) served by this equipment: Storage and Shipping
6. Maximum design or rated capacity: 7,230 SCFM

III. EQUIPMENT DESIGN INFORMATION

1. Exhaust gas: Temperature: 110 (F) Flow Rate: 7,230 (SCFM)
   Moisture: n/a (%) Oxygen: n/a (%)
   CO_2: n/a (%)
2. General: Manufacturer: Pulsair Pressure Drop: Unknown (in-Hg)
   Inlet Temp.: Ambient (F) Outlet Temp.: 110 (F)
3. Catalyst data: Catalyst Type/Material: n/a
   Catalyst Life: _____ (years) Volume: _____ (ft^3)
   Space Velocity: _____ (ft^3/Ft) NH_3 Inj. Rate: _____ (gal/hr)
   NH_3 Inj. Temp.: _____ (F)
4. Baghouse data: Design: [ ] Positive Pressure [X] Negative Pressure
   Cleaning Method: Pulse Jet
   Fabric Material: Polyester Std
   Flow Rate: 7,230 (SCFM) Air/Cloth Ratio: 5
5. ESP data: Number of fields: _____ Cleaning Method: _____
   Power Input: _____
6. Scrubber data: Type/design: _____ Sorbent Type: _____
7. Other Control Devices (include appropriate design information):

EMISSION CONTROL UNIT
(FORM 5-G2)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

IV. OPERATIONAL INFORMATION

1. Operational schedule: 24 (hours/day) 8760 (hours/year)
2. Raw products used by control device: Cement, Clinker, and Raw Materials *
3. Operating information:

POLLUTANTS AND EMISSION CONTROL INFORMATION

POLLUTANT (name)	INLET CONCENTRATION (ppm or gr/DSCF[1])	OUTLET CONCENTRATION (ppm or gr/DSCF[1])	CONTROL EFFICIENCY (% weight)
PM10	Varies	0.05 gr/DSCF	Varies

[1] Specify percent O_2 or percent CO_2.

* This information is for descriptive purposes only and is not a limit on the type of material captured or processed by the equipment

EMISSION CONTROL UNIT
(FORM 5-G1)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

I. PERMIT NUMBER: 85-PO-14o

II. EQUIPMENT DESCRIPTION

1. General process description: Particle Capture
2. Equipment type: Dust Collector (negative pressure baghouse type)
3. Equipment description: J174
4. Equipment make, model & serial number: Fabric Filter NW, 110-10-BR
5. Emission unit(s) served by this equipment: Storage and Shipping
6. Maximum design or rated capacity: 5,580 SCFM

III. EQUIPMENT DESIGN INFORMATION

1. Exhaust gas: Temperature: 110 (F) Flow Rate: 5,580 (SCFM)
   Moisture: n/a (%) Oxygen: n/a (%)
   CO_2: n/a (%)
2. General: Manufacturer: Fabric Filter NW Pressure Drop: Unknown (in-Hg)
   Inlet Temp.: Ambient (F) Outlet Temp.: 110 (F)
3. Catalyst data: Catalyst Type/Material: n/a
   Catalyst Life: _____ (years) Volume: _____ (ft^3)
   Space Velocity: _____ (ft^3/Ft) NH_3 Inj. Rate: _____ (gal/hr)
   NH_3 Inj. Temp.: _____ (F)
4. Baghouse data: Design: [ ] Positive Pressure [X] Negative Pressure
   Cleaning Method: Pulse Jet
   Fabric Material Polyester
   Flow Rate: 5,580 (SCFM) Air/Cloth Ratio: 7
5. ESP data: Number of fields: _____ Cleaning Method: _____
   Power Input: _____
6. Scrubber data: Type/design: _____ Sorbent Type: _____
7. Other Control Devices (include appropriate design information):

EMISSION CONTROL UNIT
(FORM 5-G2)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

IV. OPERATIONAL INFORMATION

1. Operational schedule: 24 (hours/day) 8760 (hours/year)
2. Raw products used by control device: Cement, Clinker, and Raw Materials *
3. Operating information:

POLLUTANTS AND EMISSION CONTROL INFORMATION

POLLUTANT (name)	INLET CONCENTRATION (ppm or gr/DSCF[1])	OUTLET CONCENTRATION (ppm or gr/DSCF[1])	CONTROL EFFICIENCY (% weight)
PM10	Varies	0.05 gr/DSCF	Varies

[1] Specify percent O_2 or percent CO_2.

* This information is for descriptive purposes only and is not a limit on the type of material captured or processed by the equipment

EMISSION CONTROL UNIT
(FORM 5-G1)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

I. PERMIT NUMBER: 85-PO-14o

II. EQUIPMENT DESCRIPTION

1. General process description: Particle Capture
2. Equipment type: Dust Collector (negative pressure baghouse type)
3. Equipment description: J321
4. Equipment make, model & serial number: Fabric Filter NW, 72-10 Top Removal
5. Emission unit(s) served by this equipment: Storage and Shipping
6. Maximum design or rated capacity: 4,930 SCFM

III. EQUIPMENT DESIGN INFORMATION

1. Exhaust gas: Temperature: 110 (F) Flow Rate: 4,930 (SCFM)
   Moisture: n/a (%) Oxygen: n/a (%)
   CO_2: n/a (%)
2. General: Manufacturer: Fabric Filter NW Pressure Drop: Unknown (in-Hg)
   Inlet Temp.: Ambient (F) Outlet Temp.: 110 (F)
3. Catalyst data: Catalyst Type/Material: n/a
   Catalyst Life: _____ (years) Volume: _____ (ft^3)
   Space Velocity: _____ (ft^3/Ft) NH_3 Inj. Rate: _____ (gal/hr)
   NH_3 Inj. Temp.: _____ (F)
4. Baghouse data: Design: [ ] Positive Pressure [X] Negative Pressure
   Cleaning Method: Pulse Jet
   Fabric Material: Polyester
   Flow Rate: 4,930 (SCFM) Air/Cloth Ratio: 7
5. ESP data: Number of fields: _____ Cleaning Method: _____
   Power Input: _____
6. Scrubber data: Type/design: _____ Sorbent Type: _____
7. Other Control Devices (include appropriate design information):

EMISSION CONTROL UNIT
(FORM 5-G2)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

IV. OPERATIONAL INFORMATION

1. Operational schedule: 24 (hours/day) 8760 (hours/year)
2. Raw products used by control device: Cement, Clinker, and Raw Materials *
3. Operating information:

POLLUTANTS AND EMISSION CONTROL INFORMATION

POLLUTANT (name)	INLET CONCENTRATION (ppm or gr/DSCF[1])	OUTLET CONCENTRATION (ppm or gr/DSCF[1])	CONTROL EFFICIENCY (% weight)
PM10	Varies	0.05 gr/DSCF	Varies

[1] Specify percent O_2 or percent CO_2.

* This information is for descriptive purposes only and is not a limit on the type of material captured or processed by the equipment

EMISSION CONTROL UNIT
(FORM 5-G1)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

I. PERMIT NUMBER: 85-PO-14o

II. EQUIPMENT DESCRIPTION

1. General process description: Particle Capture
2. Equipment type: Dust Collector (negative pressure baghouse type)
3. Equipment description: J345
4. Equipment make, model & serial number: Fabric Filter NW, 72-10 Top Removal
5. Emission unit(s) served by this equipment: Storage and Shipping
6. Maximum design or rated capacity: 4,930 SCFM

III. EQUIPMENT DESIGN INFORMATION

1. Exhaust gas: Temperature: 110 (F) Flow Rate: 4,930 (SCFM)
   Moisture: n/a (%) Oxygen: n/a (%)
   CO_2: n/a (%)
2. General: Manufacturer: Fabric Filter NW Pressure Drop: Unknown (in-Hg)
   Inlet Temp.: Ambient (F) Outlet Temp.: 110 (F)
3. Catalyst data: Catalyst Type/Material: n/a
   Catalyst Life: _____ (years) Volume: _____ (ft^3)
   Space Velocity: _____ (ft^3/Ft) NH_3 Inj. Rate: _____ (gal/hr)
   NH_3 Inj. Temp.: _____ (F)
4. Baghouse data: Design: [ ] Positive Pressure [X] Negative Pressure
   Cleaning Method: Pulse Jet
   Fabric Material: Polyester
   Flow Rate: 4,930 (SCFM) Air/Cloth Ratio: 7
5. ESP data: Number of fields: _____ Cleaning Method: _____
   Power Input: _____
6. Scrubber data: Type/design: _____ Sorbent Type: _____
7. Other Control Devices (include appropriate design information):

EMISSION CONTROL UNIT
(FORM 5-G2)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

IV. OPERATIONAL INFORMATION

1. Operational schedule: 24 (hours/day) 8760 (hours/year)
2. Raw products used by control device: Cement, Clinker, and Raw Materials *
3. Operating information:

POLLUTANTS AND EMISSION CONTROL INFORMATION

POLLUTANT (name)	INLET CONCENTRATION (ppm or gr/DSCF[1])	OUTLET CONCENTRATION (ppm or gr/DSCF[1])	CONTROL EFFICIENCY (% weight)
PM10	Varies	0.05 gr/DSCF	Varies

[1] Specify percent O_2 or percent CO_2.

* This information is for descriptive purposes only and is not a limit on the type of material captured or processed by the equipment

EMISSION CONTROL UNIT
(FORM 5-G1)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

I. PERMIT NUMBER: 85-PO-14o

II. EQUIPMENT DESCRIPTION

1. General process description: Particle Capture
2. Equipment type: Dust Collector (negative pressure baghouse type)
3. Equipment description: J350
4. Equipment make, model & serial number: Mikro Pulsair 36S8-30 B
5. Emission unit(s) served by this equipment: Storage and Shipping
6. Maximum design or rated capacity: 2,340 SCFM

III. EQUIPMENT DESIGN INFORMATION

1. Exhaust gas: Temperature: 110 (F) Flow Rate: 2,340 (SCFM)
   Moisture: n/a (%) Oxygen: n/a (%)
   CO_2: n/a (%)
2. General: Manufacturer: Mikro Pulsair Pressure Drop: Unknown (in-Hg)
   Inlet Temp.: Ambient (F) Outlet Temp.: 110 (F)
3. Catalyst data: Catalyst Type/Material: n/a
   Catalyst Life: _____ (years) Volume: _____ (ft^3)
   Space Velocity: _____ (ft^3/Ft) NH_3 Inj. Rate: _____ (gal/hr)
   NH_3 Inj. Temp.: _____ (F)
4. Baghouse data: Design: [ ] Positive Pressure [X] Negative Pressure
   Cleaning Method: Pulse Jet
   Fabric Material: Polyester
   Flow Rate: 2,340 (SCFM) Air/Cloth Ratio: 7
5. ESP data: Number of fields: _____ Cleaning Method: _____
   Power Input: _____
6. Scrubber data: Type/design: _____ Sorbent Type: _____
7. Other Control Devices (include appropriate design information):

EMISSION CONTROL UNIT
(FORM 5-G2)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

IV. OPERATIONAL INFORMATION

1. Operational schedule: 24 (hours/day) 8760 (hours/year)
2. Raw products used by control device: Cement, Clinker, and Raw Materials *
3. Operating information:

POLLUTANTS AND EMISSION CONTROL INFORMATION

POLLUTANT (name)	INLET CONCENTRATION (ppm or gr/DSCF[1])	OUTLET CONCENTRATION (ppm or gr/DSCF[1])	CONTROL EFFICIENCY (% weight)
PM10	Varies	0.05 gr/DSCF	Varies

[1] Specify percent O_2 or percent CO_2.

* This information is for descriptive purposes only and is not a limit on the type of material captured or processed by the equipment

EMISSION CONTROL UNIT
(FORM 5-G1)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	**FACILITY NAME:**
Lehigh Southwest Cement Company	Redding Plant

I. PERMIT NUMBER: 85-PO-14o

II. EQUIPMENT DESCRIPTION

1. General process description: Particle Capture
2. Equipment type: Dust Collector (negative pressure baghouse type)
3. Equipment description: J387
4. Equipment make, model & serial number: Mac EQ 39AVSC36 Style II
5. Emission unit(s) served by this equipment: Storage and Shipping
6. Maximum design or rated capacity: 3,300 SCFM

III. EQUIPMENT DESIGN INFORMATION

1. Exhaust gas: Temperature: Ambient (F) Flow Rate: 3,300 (SCFM)
   Moisture: n/a (%) Oxygen: n/a (%)
   CO_2: n/a (%)
2. General: Manufacturer: Mac EQ Pressure Drop: Unknown (in-Hg)
   Inlet Temp.: Ambient (F) Outlet Temp.: Ambient (F)
3. Catalyst data: Catalyst Type/Material: n/a
   Catalyst Life: _____ (years) Volume: _____ (ft^3)
   Space Velocity: _____ (ft^3/Ft) NH_3 Inj. Rate: _____ (gal/hr)
   NH_3 Inj. Temp.: _____ (F)
4. Baghouse data: Design: [ ] Positive Pressure [X] Negative Pressure
   Cleaning Method: Pulse Jet
   Fabric Material: Polyester
   Flow Rate: 3,300 (SCFM) Air/Cloth Ratio: 2.55
5. ESP data: Number of fields: _____ Cleaning Method: _____
   Power Input: _____
6. Scrubber data: Type/design: _____ Sorbent Type: _____
7. Other Control Devices (include appropriate design information):

EMISSION CONTROL UNIT
(FORM 5-G2)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

IV. OPERATIONAL INFORMATION

1. Operational schedule: 24 (hours/day) 8760 (hours/year)
2. Raw products used by control device: Cement, Clinker, and Raw Materials *
3. Operating information:

POLLUTANTS AND EMISSION CONTROL INFORMATION

POLLUTANT (name)	INLET CONCENTRATION (ppm or gr/DSCF[1])	OUTLET CONCENTRATION (ppm or gr/DSCF[1])	CONTROL EFFICIENCY (% weight)
PM10	Varies	0.05 gr/DSCF	Varies

[1] Specify percent O_2 or percent CO_2.

* This information is for descriptive purposes only and is not a limit on the type of material captured or processed by the equipment

EMISSION CONTROL UNIT
(FORM 5-G1)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

I. PERMIT NUMBER: 85-PO-14o

II. EQUIPMENT DESCRIPTION

1. General process description: Particle Capture
2. Equipment type: Dust Collector (negative pressure baghouse type)
3. Equipment description: J257
4. Equipment make, model & serial number: MAC 96AVS36 Sty3, 108127-001-1
5. Emission unit(s) served by this equipment: Storage and Shipping
6. Maximum design or rated capacity: 2,500 SCFM

III. EQUIPMENT DESIGN INFORMATION

1. Exhaust gas: Temperature: 110 (F) Flow Rate: 2,500 (SCFM)
   Moisture: n/a (%) Oxygen: n/a (%)
   CO_2: n/a (%)
2. General: Manufacturer: Mac Pressure Drop: 6 (in-H2O)
   Inlet Temp.: Ambient (F) Outlet Temp.: 110 (F)
3. Catalyst data: Catalyst Type/Material: n/a
   Catalyst Life: _____ (years) Volume: _____ (ft^3)
   Space Velocity: _____ (ft^3/Ft) NH_3 Inj. Rate: _____ (gal/hr)
   NH_3 Inj. Temp.: _____ (F)
4. Baghouse data: Design: [ ] Positive Pressure [X] Negative Pressure
   Cleaning Method: Pulse Jet
   Fabric Material 16 Oz Singe Polyester Dacron Cuff Top
   Flow Rate: 2,500 (SCFM) Air/Cloth Ratio: 5.7
5. ESP data: Number of fields: _____ Cleaning Method: _____
   Power Input: _____
6. Scrubber data: Type/design: _____ Sorbent Type: _____
7. Other Control Devices (include appropriate design information):

EMISSION CONTROL UNIT
(FORM 5-G2)

DISTRICT:	< DISTRICT USE ONLY >
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

IV. OPERATIONAL INFORMATION

1. Operational schedule: 24 (hours/day) 8760 (hours/year)
2. Raw products used by control device: Cement, Clinker, and Raw Materials *
3. Operating information:

POLLUTANTS AND EMISSION CONTROL INFORMATION

POLLUTANT (name)	INLET CONCENTRATION (ppm or gr/DSCF[1])	OUTLET CONCENTRATION (ppm or gr/DSCF[1])	CONTROL EFFICIENCY (% weight)
PM10	Varies	0.05 gr/DSCF	Varies

[1] Specify percent O_2 or percent CO_2.

* This information is for descriptive purposes only and is not a limit on the type of material captured or processed by the equipment

Form 5-H

Form 5-I2

Form 5-J1

Form 5-M

EXEMPT EQUIPMENT
(FORM 5-H)

DISTRICT:	➢ DISTRICT USE ONLY ≺
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME: Lehigh Southwest Cement Company	FACILITY NAME: Redding Plant

I. EQUIPMENT EXEMPT FROM DISTRICT PERMIT REQUIREMENTS (SEE DISTRICT RULE 2:5)*

EXEMPT EQUIPMENT	EQUIPMENT DESCRIPTION	BASIS FOR EXEMPTION
Coal Offloading System	various conveyors, storage pile	Exempt per District Rule 2:5.k - minor source with emissions less than 0.5 tons/yr
Coke Offloading System	various conveyors, hopper, storage pile	Exempt per District Rule 2:5.k - minor source with emissions less than 0.5 tons/yr
Whole and Shredded Tire Feed Systems	various conveyors, bucket elevator	Exempt per District Rule 2:5.k - minor source with emissions less than 0.5 tons/yr
Secondary Fuels - Offloading	unloading hopper, various conveyors	Exempt per District Rule 2:5.k - minor source with emissions less than 0.5 tons/yr
Clinker Emergency Discharge System	dump chute, pile formation and movement	Exempt per District Rule 2:5.k - minor source with emissions less than 0.5 tons/yr
Dust Collectors Discharging to Clinker Storage Hall from Finish Mill Building	dust collectors D87, D88, D89	Exempt per District Rule 2:5.k - minor source with emissions less than 0.5 tons/yr
Dust Collectors	dust collectors R115, C160, C162	Exempt per District Rule 2:5.k - minor source with emissions less than 0.5 tons/yr
Dust Collectors	dust collectors J44A, J52A, J61A, J294, and J390	Exempt per District Rule 2:5.k - minor source with emissions less than 0.5 tons/yr
Belt Conveyor Transfer Points	transfer points B18, B19	Exempt per District Rule 2:5.k – minor source with emissions less than 0.5 tons/yr
Finish Grinding Ball Sorter	ball sorter	Exempt per District Rule 2:5.k – minor source with emissions less than 0.5 tons/yr
Maintenance Operations	solvent degreasing	Exempt per District Rule 2:5.k – minor source with emissions less than 0.5 tons/yr
Maintenance Operations	painting	Exempt per District Rule 2:5.k – minor source with emissions less than 0.5 tons/yr
Maintenance Operations	welding	Trivial under Title V per EPA white paper – plant maintenance and upkeep.
Storage Operations	motor oil, hydraulic oil, diesel, air entraining reagent, and grinding aid storage tanks	Exempt per District Rule 2:5.k - minor source with emissions less than 0.5 tons/yr
Mobile Equipment	quarries and crushing department mobile equipment and quarry drills	Exempt per District Rule 2:5.k – minor source with emissions less than 0.5 tons/yr
Outdoor Storage Piles	outdoor storage piles	Exempt per District Rule 2:5.k – minor source with emissions less than 0.5 tons/yr

EXEMPT EQUIPMENT	EQUIPMENT DESCRIPTION	BASIS FOR EXEMPTION
Building Ventilating Fans	building ventilating fans	Exempt per District Rule 2:5.k – minor source with emissions less than 0.5 tons/yr
IC Engines	various emergency stand-by engines	Exempt per District Rule 2:5.a - internal combustion engines-Exempt
Air Conditioners	various facility air conditioners	Exempt per District Rule 2:5.b - air conditioners
Laboratory and Associated Equipment	bench scale crusher, typical laboratory equipment and operations	Exempt per District Rule 2:5.k - minor source with emissions less than 0.5 tons/yr

* A more detailed list of equipment exempt from District permit requirements and/or insignificant/trivial under Title V regulations is included in Section V.

COMPLIANCE PLAN
(FORM 5-I2)

DISTRICT:	➢ DISTRICT USE ONLY ≺
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME: Lehigh Southwest Cement Company	FACILITY NAME: Redding Plant

III. COMPLIANCE CERTIFICATION

Under penalty of perjury, I certify the following:

☒ *Based on information and belief formed after reasonable inquiry, the source identified in this application will continue to comply with the applicable federal requirement(s) with which the source is in compliance identified in enclosed table;*

☒ *Based on information and belief formed after reasonable inquiry, the source identified in this application will comply with the future-effective applicable federal requirement(s) identified in the application, on a timely basis*[1] ;

☐ *Based on information and belief formed after reasonable inquiry, the source identified in this application is not in compliance with the applicable federal requirement(s), identified in form 5-I1, and I have attached a compliance plan schedule.*[2]*

10/30/12

Signature of Responsible Official **Date**

1. Unless a more detailed schedule is expressively required by the applicable federal requirement.

2. At the time of expected permit issuance, if the source expects to be out of compliance with an applicable federal requirement, the applicant is required to provide a compliance schedule with this application, with the following exception. A source which is operating under a variance that is effective for less than 90 days need not submit a Compliance Schedule. For sources operating under a variance, which is in effect for more than 90 days, the Compliance Schedule is the schedule that was approved as part of the variance granted by the hearing board.

   The compliance schedule shall contain a schedule of remedial measures, including an enforceable sequence of actions with milestones, leading to compliance with this applicable federal requirement. For sources operating under a variance, the compliance schedule is part of the variance granted by the hearing board. The compliance schedule shall resemble, and be at least as stringent as that contained in any judicial consent decree or administrative order to which the source is subject. For sources not operating under a variance, consult the Air Pollution Control Officer regarding procedures for obtaining a compliance schedule.

Quarries and Crushing Department

Equipment	Applicable Federal Requirements	Methods Used to Determine Compliance				In Compliance?
		Monitoring	Reporting	Recordkeeping	Test Methods	
Limestone Crusher (Allis-Chalmers)	40 CFR Part 60.670 (Subpart OOO)	Opacity; Hourly clinker production	Semi Annual Compliance Reports	Monitoring records	EPA Methods 9 and 22	Yes
Shale Crusher	-	Opacity; Hourly clinker production	Semi Annual Compliance Reports	Monitoring records	EPA Methods 5, 9, 22	Yes
Raise Shaft Sly Dust Collector B-13	-	Opacity; Hourly clinker production	Semi Annual Compliance Reports	Monitoring records	EPA Methods 5, 9, 22	Yes
Limestone Belt Transfer Sly Dust Collector B-25	-	Opacity; Hourly clinker production	Semi Annual Compliance Reports	Monitoring records	EPA Methods 5, 9, 22	Yes
Shale Crusher Sly Dust Collector C-36	-	Opacity; Hourly clinker production	Semi Annual Compliance Reports	Monitoring records	EPA Methods 5, 9, 22	Yes
Secondary Crusher BHA Model 505-4220 Dust Collector C-34	-	Opacity; Hourly clinker production	Semi Annual Compliance Reports	Monitoring records	EPA Methods 5, 9, 22	Yes
Transfer Building Sly Dust Collector C-38	-	Opacity; Hourly clinker production	Semi Annual Compliance Reports	Monitoring records	EPA Methods 5, 9, 22	Yes
Pre-blending Dome Building	-	Performance Testing	Semi Annual Compliance Reports	Monitoring records	EPA Method 23	Yes
Shale 30" x 42" Jaw Crusher C168	40 CFR Part 60.670 (Subpart OOO)	Opacity; Hourly clinker production	Semi Annual Compliance Reports	Monitoring records	EPA Methods 9 and 22	Yes

Raw Milling and Kiln Department

Equipment	Applicable Federal Requirements	Methods Used to Determine Compliance				In Compliance?
		Monitoring	Reporting	Recordkeeping	Test Methods	
Cement In-Line Kiln/Raw Mill With Baghouse Dust Collector (S260)	40 CFR Part 60.62; 40 CFR Part 60.65; 40 CFR Part 60.7; 40 CFR Part 60.1344; 40 CFR Part 63	Stack gas opacity using COM; stack gas CO, NOx, SO2; PM; dioxins/furans; flowrate; inlet temperature; combustion system inspection; periodic emissions testing of pM and THC; performance testing; prepare Operations and Maintenance Plan	Monthly Kiln Stack Emissions; Performance Tests; Semi Annual Reports of Excess Emissions	Daily/Monthly total NOx, SO2, THC, and CO; production rates; permit limit exceedances; average medium density fiberboard fuel usage and total usage hours; bi-annual training records for Good Combustion Practices	EPA Methods 5 COM or 9, and 23	Yes
Shredded Tire and Automated Whole Tire Fuel Feed Systems	-	-	-	-	-	-
Raw Mix Tanks Dust Collector (C172)	40 CFR Part 63	EPA Method 9 every 5 years; EPA Method 22 monthly, or as specified in O&M Plan	Semi Annual Compliance Reports	Monitoring records	EPA Methods 9 and 22	Yes
Clinker Handling Dust Collector (G418-1)	-	-	-	-	-	-
Blending Silos Dust Collector (F173)	40 CFR Part 63	EPA Method 9 every 5 years; EPA Method 22 monthly, or as specified in O&M Plan	Semi Annual Compliance Reports	Monitoring records	EPA Methods 9 and 22	Yes
Raw Storage Silo Dust Collector (F184)	40 CFR Part 63	EPA Method 9 every 5 years; EPA Method 22 monthly, or as specified in O&M Plan	Semi Annual Compliance Reports	Monitoring records	EPA Methods 9 and 22	Yes
Pre-Heater Kiln Feed Bin Dust Collector (F350)	40 CFR Part 63	EPA Method 9 every 5 years; EPA Method 22 monthly, or as specified in O&M Plan	Semi Annual Compliance Reports	Monitoring records	EPA Methods 9 and 22	Yes
R-1 Silo Dust Collectors (G231 & G244)	40 CFR Part 63	EPA Method 9 every 5 years; EPA Method 22 monthly, or as specified in O&M Plan	Semi Annual Compliance Reports	Monitoring records	EPA Methods 9 and 22	Yes
Deep Bucket Conveyor Dust Collector (G425)	40 CFR Part 63	EPA Method 9 every 5 years; EPA Method 22 monthly, or as specified in O&M Plan	Semi Annual Compliance Reports	Monitoring records	EPA Methods 9 and 22	Yes
Roller Mill Rock Feeders Dust Collector (S210)	40 CFR Part 63	EPA Method 9 every 5 years; EPA Method 22 monthly, or as specified in O&M Plan	Semi Annual Compliance Reports	Monitoring records	EPA Methods 9 and 22	Yes
Bucket (meal) Elevator Dust Collector (S253)	40 CFR Part 63	EPA Method 9 every 5 years; EPA Method 22 monthly, or as specified in O&M Plan	Semi Annual Compliance Reports	Monitoring records	EPA Methods 9 and 22	Yes
Coal Unloading Facility	40 CFR Part 63	EPA Method 9 every 5 years; EPA Method 22 monthly, or as specified in O&M Plan	Semi Annual Compliance Reports	Monitoring records	EPA Methods 9 and 22	Yes
Coal Silo Dust Collector (G206)	-	-	-	-	-	-
Indirect Coal Firing System Dust Collector (G465)	-	-	-	-	-	-
Clinker Cooler (Closed System)	-	-	-	-	-	-
Secondary Fuel System	-	-	-	-	-	-

Finish Grinding Department						
		Methods Used to Determine Compliance				
Equipment	Applicable Federal Requirements	Monitoring	Reporting	Recordkeeping	Test Methods	In Compliance?
Finish Mills with Six (6) Dust Collectors: EA87, EA92/93, EB147/148, EB142, E34/35, E30	40 CFR Part 63.1348	Prepare Operations and Maintenance Plan; Method 9 every 5 years; Method 22 daily	Semi Annual Compliance Reports	Monitoring records	EPA Methods 9 and 22	Yes
C Mill Feed Elevator (E8) Dust Collector, E12	40 CFR Part 63.1348	Prepare Operations and Maintenance Plan; Method 9 every 5 years; Method 22 monthly	Semi Annual Compliance Reports	Monitoring records	EPA Methods 9 and 22	Yes
C Mill Gypsum Weigh Feeder Dust Collector, E230	40 CFR Part 63.1348	Prepare Operations and Maintenance Plan; Method 9 every 5 years; Method 22 monthly	Semi Annual Compliance Reports	Monitoring records	EPA Methods 9 and 22	Yes
C Mill Clinker Weigh Feeder Dust Collector, E231	40 CFR Part 63.1348	Prepare Operations and Maintenance Plan; Method 9 every 5 years; Method 22 monthly	Semi Annual Compliance Reports	Monitoring records	EPA Methods 9 and 22	Yes
Gypsum Elevator Dust Collector, D34	40 CFR Part 63.1348	Prepare Operations and Maintenance Plan; Method 9 every 5 years; Method 22 monthly	Semi Annual Compliance Reports	Monitoring records	EPA Methods 9 and 22	Yes
Synthetic Gypsum Loading System Dust Collectors: D122, D123	40 CFR Part 63.1348	Prepare Operations and Maintenance Plan; Method 9 every 5 years; Method 22 monthly	Semi Annual Compliance Reports	Monitoring records	EPA Methods 9 and 22	Yes

Storage and Shipping Department						
		Methods Used to Determine Compliance				
Equipment	Applicable Federal Requirements	Monitoring	Reporting	Recordkeeping	Test Methods	In Compliance?
Dust Collectors: J159, J162, J165, J168, J174, J321, J345, J350, J390, J294, J387	40 CFR Part 63.1348	Prepare Operations and Maintenance Plan; monitor opacity using method 9 or 22 every 5-years	Semi Annual Compliance Reports	Monitoring records	EPA Methods 9 and 22	Yes

Emergency Standby Internal Combustion Engines						
		Methods Used to Determine Compliance				
Equipment	Applicable Federal Requirements	Monitoring	Reporting	Recordkeeping	Test Methods	In Compliance?
Detroit Model V-71 489 Brake Horsepower Diesel Engine (ID # R100A)	40 CFR Part 63	Operating requirements	Semi Annual Compliance Reports	Notifications, Maintenance, Performance Tests and Evaluations, Emergency/Malfunctions and Corrective Actions	-	Yes
Multi-Component System of Five Caterpillar Model ZW3516-CAT, 2132 Brake Horsepower (Each) Diesel Engines (ID #'s M151, M152, M153, M154, M155) with Miratech Combikat Diesel Particulate Filters)	40 CFR Part 63	Operating and emission requirements	Semi Annual Compliance Reports	Notifications, Maintenance, Performance Tests and Evaluations, Emergency/Malfunctions and Corrective Actions	-	Yes

Facility-wide Requirements						
		Methods Used to Determine Compliance				
Equipment	Applicable Federal Requirements	Monitoring	Reporting	Recordkeeping	Test Methods	In Compliance?
Facility-wide	40 CFR Part 60.7; 40 CFR 63.10; 40 CFR Part 63.1354; 40 CFR pArt 63.1355	-	24-hr notification to be provided for scheduled maintenance; notification to be provided within 4-hr of emissions exceedance; permit deviations within 10-days of incident; monitoring report to be submitted every 6-months; compliance certification reports; notification of physical or operational change	Retained onsite for at least 5-years: reports; notifications; measurements (CEMS, monitoring devices, and performance testing measurements); calibration records; adjustments/maintenance records;	EPA Methods 9 and 22	Yes

COMPLIANCE PLAN CERTIFICATION
(FORM 5-J1)

DISTRICT: Shasta County Air Quality Management District	➢ DISTRICT USE ONLY ≺ DISTRICT ID:
COMPANY NAME: Lehigh Southwest Cement Company	FACILITY NAME: Redding Plant

I. CERTIFICATION STATUS

1. **Indicate the dates the applicant intends to submit the COMPLIANCE CERTIFICATION REPORT to the district during the entire permit term. The district federal operating permits rule requires the applicant to submit this report at least annually.**

   Submitted to the District annually by August 14 of each year.

2. **For sources required to have a schedule of compliance to remedy a violation, indicate the dates the applicant intends to submit CERTIFIED PROGRESS REPORTS to the district during the permit term. The district federal operating permits rule requires the applicant to submit this report at least semiannually.**

   N/A

3. **Describe the compliance status of the source with respect to applicable enhanced monitoring, and compliance certification requirements of Section 114(a)(3) of the Clean Air Act:**

   As per 40 CFR 64.2(b)(1)(i), CAM does not apply to emissions limitations or standards proposed after November 15, 1990, pursuant to section 111 or 112 of the Clean Air Act.

CERTIFICATION STATEMENT
(FORM 5-M)

DISTRICT:	< DISTRICT USE ONLY =
Shasta County Air Quality Management District	DISTRICT ID:
COMPANY NAME:	FACILITY NAME:
Lehigh Southwest Cement Company	Redding Plant

Identify, by checking off below, the forms and attachments that are part of your application. If the application contains forms or attachments that are not identified below, please identify these attachments in the blank space provided below. Review the instructions if you are unsure of the forms and attachments that need to be included in a complete application.

Forms included with application

_X__ Stationary Source Summary Form

_X__ Total Stationary Source Emission Form

_X__ Compliance Plan Form (See Table)

__X_ Compliance Plan Certification Form

_X__ Exempt Equipment Form

_X__ Certification Statement Form

List other forms or attachments

_____
_____
_____
_____

[ ] check here if additional forms listed on back

Attachments included with applications

___ Description of Operating Scenarios

_X__ Sample emission calculations

_X__ Fugitive emission estimates

_X__ List of Applicable requirements

___ Discussion of units out of compliance with applicable federal requirements and, if required, submit a schedule of Compliance

__X_ Facility schematic showing emission points

___ NSR Permit

___ PSD Permit

___ Enhanced monitoring protocols

___ Risk management verification per 112(r)

List Other Forms or Attachments (cont.)

I certify under penalty of law, based on information and belief formed after reasonable inquiry, that the information contained in this application, composed of the forms and attachments identified above, are true, accurate, and complete.

I certify that I am the responsible official, as defined in Rule 5.

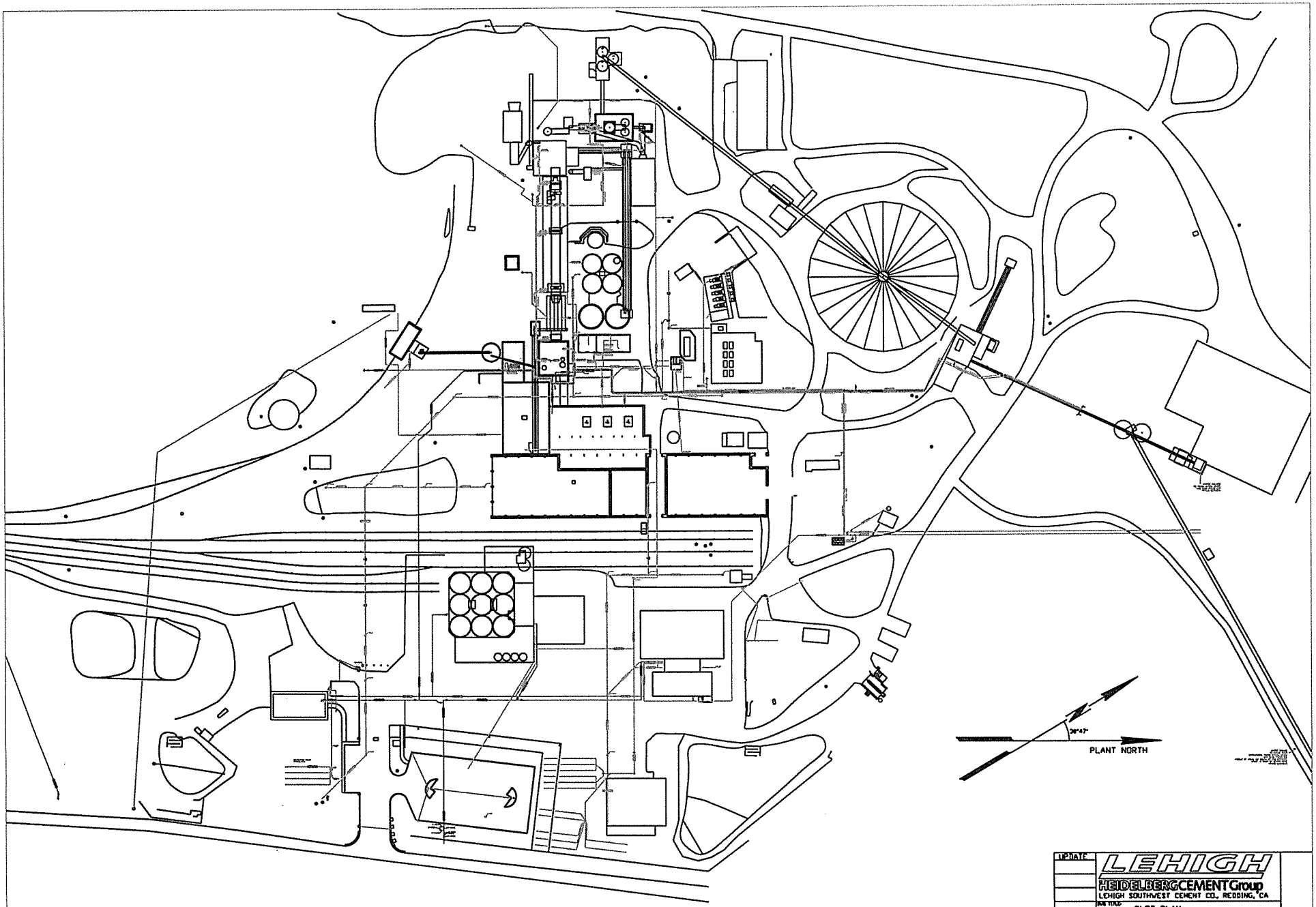
Signature of Responsible Official Date

James Ellison
Print Name of Responsible Official

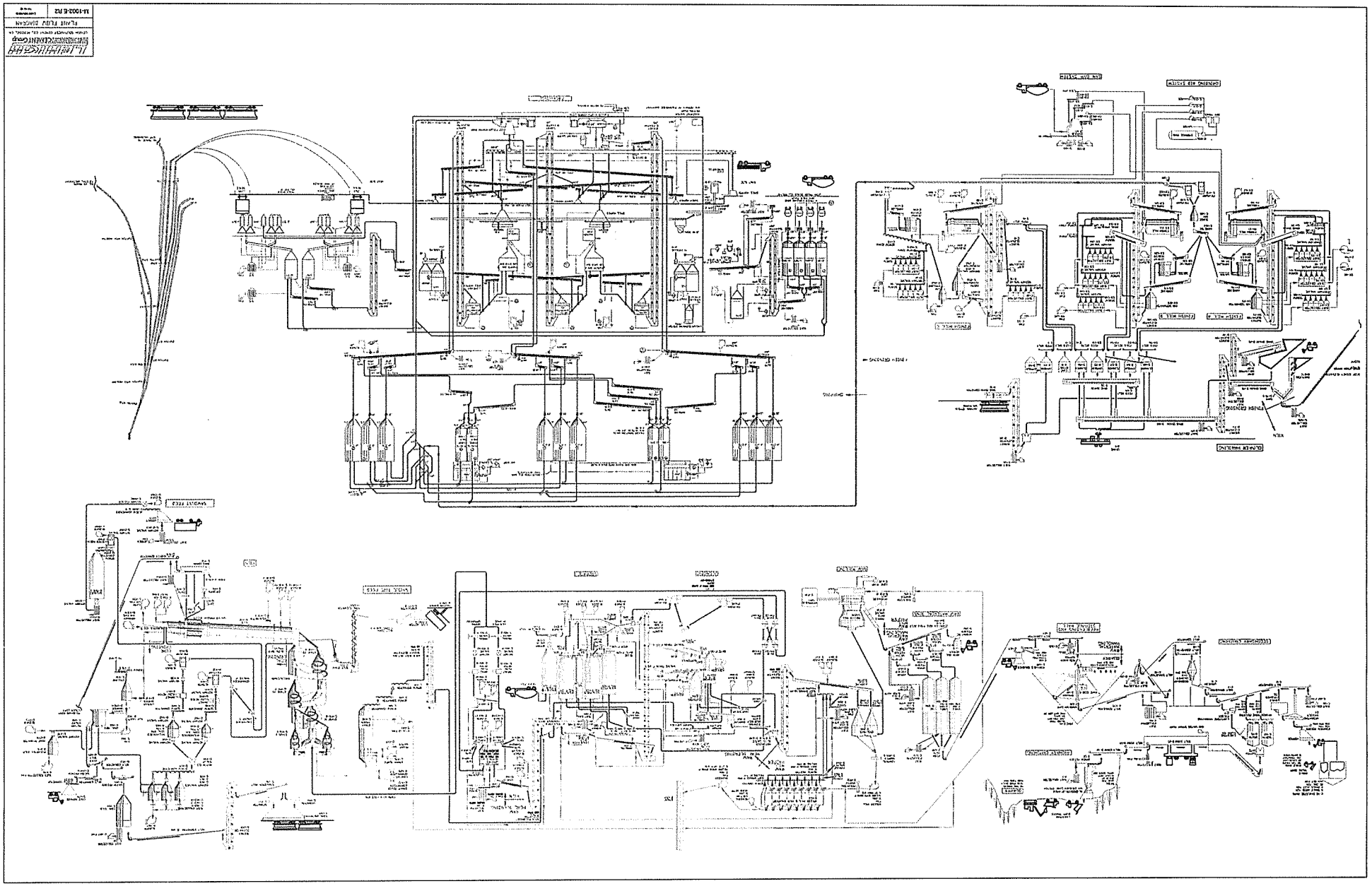
PLANT Manager
Title of Responsible Official and Company Name

Appendix B

Plot Plan and Process Flow Diagrams



UPDATE	LEHIGH HEIDELBERGCEMENT Group LEHIGH SOUTHWEST CEMENT CO., REDDING, CA			
	DWG TITLE: PLOT PLAN			
	FILE NAME: M-1001 Plant Plan Viewdwg			DIMENS
12/3/2010	DRAWN BY: Kyle Smith	DATE: 10/1/09	REV: A	FEET



Appendix C

Emission Calculations

Criteria Emissions Calculations

Lehigh Cement - PTE for Criteria Pollutants

Summary

Equipment	NOx (TPY)	CO (TPY)	SOx (as SO2) (TPY)	PM-10 (TPY)	VOC (as TOC) (TPY)
Kiln [a]	954	5,067	101	--	18
Dust Collectors	--	--	--	962	--
Internal Combustion	88	19	6	6	7
Fugitives	--	--	--	56	--
TOTAL	**1,042**	**5,086**	**107**	**1,025**	**25**

a) Kiln PM-10 emissions are included in the dust collector emissions

Lehigh Cement - PTE from Dust Collectors

Criteria Pollutants

	PM10 Emissions (TPY)
Total PM10 Emissions from Dust Collectors (TPY)	**961.85**

Finish Mill - Permit 85-PO-12f

Equipment Name	Grain Loading [a] (gr/DSCF)	Flow Rate (DSCFM)	Operating Hours (hrs/yr)	PM10 Emissions (TPY)
EA87	0.05	13,500	8,760	25.34
EA92/93	0.05	27,000	8,760	50.68
EB147/148	0.05	27,000	8,760	50.68
EB142	0.05	13,500	8,760	25.34
E35/34	0.05	27,000	8,760	50.68
E30	0.05	13,500	8,760	25.34
E12	0.05	900	8,760	1.69
E230	0.05	1,400	8,760	2.63
E231	0.05	1,400	8,760	2.63
D34	0.05	1,500	8,760	2.82
D122	0.05	1,400	8,760	2.63
D123	0.05	1,400	8,760	2.63
TOTAL				**243.09**

a) Per permit condition 15

Quarry and Crushing - Permit 85-PO-13g

Equipment Name	Grain Loading [a] (gr/DSCF)	Flow Rate (DSCFM)	Operating Hours (hrs/yr)	PM10 Emissions (TPY)
R-115-DC	0.1	3,000	8,760	11.26
R-116-DC	0.1	3,000	8,760	11.26
B-13	0.1	4,000	8,760	15.02
B-25	0.1	3,620	8,760	13.59
C-36	0.1	5,010	8,760	18.81
C-34	0.1	21,695	8,760	81.45
C-38	0.1	3,640	8,760	13.67
TOTAL				**165.06**

a) Based on Title V permit condition A7

Raw Mill and Kiln - 85-PO-14o

Equipment Name	Grain Loading [a] (gr/DSCF)	Flow Rate (DSCFM)	Operating Hours (hrs/yr)	PM10 Emissions (TPY)
S260 - Roller Mill [b]	--	--	4,380	37.67
S260 - Roller Mill Bypass [b]	--	--	4,380	39.20
C172	0.1	3,500	8,760	13.14
G418-1 [c]	0.04	9,000	8,760	13.52
F173	0.1	9,850	8,760	36.98
F184	0.1	6,700	8,760	25.15
F350	0.1	13,000	8,760	48.81
G425	0.1	3,000	8,760	11.26
S210	0.1	6,000	8,760	22.53
S253	0.1	12,000	8,760	45.05
G206	0.1	6,000	8,760	22.53
G465	0.1	23,500	8,760	88.23
G228F	0.1	2,680	8,760	10.06
G228G	0.1	2,530	8,760	9.50
G228NA	0.1	156	8,760	0.59
G270	0.1	1,800	8,760	6.76
TOTAL				**430.96**

a) Based on Title V condition B9

b) Based on 85-PO-14o condition 18. (Assumed 50% of time on, 50% bypass)

c) Based on 85-PO-14o condition 25.

Storage and Shipping Department - 85-PO-15h

Equipment Name	Grain Loading [a] (gr/DSCF)	Flow Rate (DSCFM)	Operating Hours (hrs/yr)	PM10 Emissions (TPY)
J159	0.05	11,280	8,760	21.17
J162	0.05	16,070	8,760	30.17
J165	0.05	7,230	8,760	13.57
J168	0.05	7,230	8,760	13.57
J174	0.05	5,580	8,760	10.47
J321	0.05	4,930	8,760	9.25
J345	0.05	4,930	8,760	9.25
J350	0.05	2,340	8,760	4.39
J387	0.05	3,300	8,760	6.19
J257	0.05	2,500	8,760	4.69
TOTAL				**122.75**

a) Permit 85-PO-15h condition 15.

Lehigh Cement - PTE from Kiln
Criteria Pollutants

85-PO-14o Raw Mill and Kiln, Conditions 16-20

	NOx (TPY)	CO (TPY)	SOx (as SO2) (TPY)	PM-10 [a] (TPY)	TOC (TPY)
Kiln Emissions	954	5067	100.9	--	17.5

a) Included in the dust collector for S260

Lehigh Cement - PTE from ICE

Criteria Pollutants

	NOx (TPY)	CO (TPY)	SOx (TPY)	PM-10 (TPY)	TOC (TPY)
TOTAL	**88.4**	**19.0**	**5.8**	**6.3**	**7.0**

Emiss. Factors AP42 Table 3.3-1	NOx (lb/hp-hr)	CO (lb/hp-hr)	SOx (lb/hp-hr)	PM-10 (lb/hp-hr)	TOC (lb/hp-hr)
Diesel	0.031	0.00668	0.00205	0.0022	0.00247

85-PO-13g - Quarry Drills

	HP	hrs/year	NOx (TPY)	CO (TPY)	SOx (TPY)	PM-10 (TPY)	TOC (TPY)
R115-Quarry Drill	400	8,760	54.3	11.7	3.6	3.9	4.3
R116-Quarry Drill	200	8,760	27.2	5.9	1.8	1.9	2.2
TOTAL			**81.5**	**17.6**	**5.4**	**5.8**	**6.5**

85-PO-14o - Raw Mill and Kiln

	HP	hrs/year	NOx (TPY)	CO (TPY)	SOx (TPY)	PM-10 (TPY)	TOC (TPY)
Hobart Welder Engine	67	80	0.083	0.018	0.005	0.006	0.007

Lehigh Cement - PTE from Fugitive Dust
Criteria Pollutants

	PM10 Emissions (TPY)
Total PM10 Emissions from Fugitives (TPY)	56.42

Roads

Paved - Calculated using AP-42 13.2.1

	Silt Loading[a] (g/m^2)	Avg. Weight (tons)	Wet Days per year	EF (lbs/VMT)	VMT	Uncontrolled PM10 (TPY)	75% Control PM10 (TPY)
In Plant	70	24.36	88	2.56	1,485	1.90	0.48
Product/Raw Trucks	70	27.5	88	2.90	3,732	5.41	1.35
TOTAL						**7.32**	**1.83**

a) Table 13.2.1-3 for Sand and Gravel Processing

Unpaved - Calculated using AP-42 13.2.2

	Silt Content[a] (%)	Avg. Weight (tons)	EF (lbs/VMT)	VMT	Uncontrolled PM10 (TPY)	75% Control PM10 (TPY)
Limestone Quarry	4.8	69.96	27.13	11,305.70	153.35	38.34
Shale Quarry	4.8	54.15	24.17	1,809.00	21.87	5.47
TOTAL					**175.22**	**43.80**

a) Table 13.2.2-1 Mean silt content (%) for Sand And Gravel Processing

Operational Fugitives

Piles - Based on AP-42 13.2.4

6.6	Average Wind Speed (mph)	From 16 years of NOAA monthly averages

	Moisture Content (%)	EF (lb/ton handled)	Tons Handled (TPY)	Emissions PM10 (TPY)
Clinker Storage Piles	0.25	2.95E-02	606,265	8.95
Iron Ore Storage Piles [a]	5.4	4.00E-04	209,942	0.04
R.M.Reject Storage Pile [a]	0.92	4.77E-03	209,942	0.50
Coal Storage Pile	4.5	5.16E-04	80,505	0.02
Pet.Coke Storage Pile	7.8	2.39E-04	80,927	0.01
Gypsum Pile	14	1.05E-04	63,641	0.00
Diat.Earth Pile [b]	14	1.05E-04	--	--
Emerg.Limestone Pile [c]	0.7	6.99E-03	101,219	0.35
Shale Pile	5.4	4.00E-04	111,310	0.02
Coal Unloading	4.5	5.16E-04	85,250	0.02
Pre-blending dome bldg	--	1.69E-03	1,049,187	0.44
TOTAL				**10.37**

a) Remainder of raw feed equally dispersed.

b) Handles shale now.

c) Assumed to be 10% of limestone handled.

Crushing - Based on AP-42 11.19.2

	EF (lb/ton crushed)	Tons Crushed (TPY)	Emissions PM10 (TPY)
Primary Crusher Fugitives	0.00054	1,012,187	0.273
Stationary Shale Crusher	0.00054	27,000	0.007
C-168 Shale Crusher	0.00054	10,000	0.003
TOTAL			**0.283**

Quarry Blasting - Based on AP-42 11.9

	Area Blasted per Blast (ft^2)	EF (lb/blast)	Total Blasts (blasts/yr)	Emissions PM10 (TPY)
Quarry	7,296	4.54	58	0.13

Lehigh Cement - PTE from Insignificant Activities

Criteria Pollutants

	NOx (TPY)	CO (TPY)	SOx (TPY)	PM-10 (TPY)	TOC (TPY)
TOTAL	6.8	1.5	0.5	2.4	0.5

Dust Collectors

Raw Mill and Kiln - 85-PO-14o

Equipment Name	Grain Loading [a] (gr/DSCF)	Flow Rate (DSCFM)	Operating Hours (hrs/yr)	PM10 Emissions (TPY)
R115	0.1	3,000	350	0.45
G231 *	0.1	1,400	60	0.04
G244 *	0.1	18,445	60	0.47
J294	0.05	1,572	1,400	0.47
J390	0.05	1,510	1,400	0.45
TOTAL				1.88

* Not in service. Assumed up to 60 hr/yr of operation.

Internal Combustion

Emiss. Factors AP42 Table 3.3-1	NOx (lb/hp-hr)	CO (lb/hp-hr)	SOx (lb/hp-hr)	PM-10 (lb/hp-hr)	TOC (lb/hp-hr)
Diesel	0.031	0.00668	0.00205	0.0022	0.00247

99-PO-35b - Emergency ICE

	HP	hrs/year	NOx (TPY)	CO (TPY)	SOx (TPY)	PM-10 (TPY)	TOC (TPY)
R100	489	30	0.227	0.049	0.015	0.016	0.018

99-PO-36b - Emergency ICE

	HP	hrs/year	NOx (TPY)	CO (TPY)	SOx (TPY)	PM-10 (TPY)	TOC (TPY)
R151	2132	40	1.322	0.285	0.087	0.094	0.105
R152	2132	40	1.322	0.285	0.087	0.094	0.105
R153	2132	40	1.322	0.285	0.087	0.094	0.105
R154	2132	40	1.322	0.285	0.087	0.094	0.105
R155	2132	40	1.322	0.285	0.087	0.094	0.105
TOTAL			6.609	1.424	0.437	0.469	0.527

Hazardous Air Pollutant Emissions Calculations

EMISSION CALCULATIONS

Company Name: Lehigh Southwest Cement Company
{ Calaveras Cement Company }

Emission Year: PTE

Device # / Process / Equipment / Control:

1 : Limestone Quarry Operations ..... crusher; conveyors ..... wet suppression + baghouses (2)
2 : Shale Quarry Operations ..... crusher; conveyors ..... wet suppression + baghouses (2)
3 : Diatomite Handling System ..... crusher; conveyors ..... wet suppression + baghouses (2)
4 : Limestone Secondary Crushing System ..... crusher; screen; convyrs .... wet suppression + baghouses (2)
5 : Shale Secondary Crushing System ..... crusher; screen; convyrs .... wet suppression + baghouses (2)
6 : Diatomite Secondary Crushing System ..... crusher; screen; convyrs .... wet suppression + baghouses (2)
7 : Raw Milling / Homogenization / Feeding Sys ... conveyors ..... baghouses (2)
8 : Rotary Kiln and Raw Mill System ..... kiln; mill ..... baghouses (2)
9 : Clinker Transport and Storage System ..... conveyors ..... baghouses (2)
10 : Finish Mill System ..... conveyors; mill ..... baghouses (2)
11 : Cement Distribution and Shipment System ..... conveyors; silos ..... baghouses (3)
12 : Coal Handling and Milling System ..... conveyors; silos; mill ..... wet material + baghouses (2)
13 : Gypsum Handling System ..... conveyors ..... wet material + baghouses (2)
14 : Coke Handling and Milling System ..... conveyors; silos; mill ..... wet material + baghouses (2)
15 : Synthetic Gypsum Handling System ..... conveyors ..... wet material + baghouses (2)

Abbreviations: e.y. = emission year; max = maximum; act = actual; avg = average (for / = e.y.)

Device #1	Process Rate -- e.y. (tons/yr)	Process Rate -- max (tons/hr)	Operation Time (hrs/yr)	Emission Factor -- act (lbs/ton)	Emission Rate -- avg (lbs/yr)	Emission Rate -- max (lbs/hr)	Emission Rate -- avg (lbs/hr)
Arsenic	1012187	591	1714	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Beryllium	1012187	591	1714	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cadmium	1012187	591	1714	9.52E-09	9.64E-03	5.62E-06	5.62E-06
Chromium (hex)	1012187	591	1714	1.17E-09	1.18E-03	6.91E-07	6.91E-07
Lead	1012187	591	1714	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Manganese	1012187	591	1714	2.34E-06	2.37E+00	1.38E-03	1.38E-03
Mercury	1012187	591	1714	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nickel	1012187	591	1714	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Selenium	1012187	591	1714	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Zinc	1012187	591	1714	1.39E-07	1.41E-01	8.21E-05	8.21E-05

Device #2	Process Rate -- e.y. (tons/yr)	Process Rate -- max (tons/hr)	Operation Time (hrs/yr)	Emission Factor -- act (lbs/ton)	Emission Rate -- avg (lbs/yr)	Emission Rate -- max (lbs/hr)	Emission Rate -- avg (lbs/hr)
Arsenic	37000	297	125	1.58E-07	5.85E-03	4.69E-05	4.69E-05
Beryllium	37000	297	125	3.84E-08	1.42E-03	1.14E-05	1.14E-05
Cadmium	37000	297	125	1.16E-08	4.29E-04	3.45E-06	3.45E-06
Chromium (hex)	37000	297	125	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Lead	37000	297	125	6.17E-08	2.28E-03	1.83E-05	1.83E-05
Manganese	37000	297	125	8.22E-05	3.04E+00	2.44E-02	2.44E-02
Mercury	37000	297	125	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nickel	37000	297	125	1.92E-07	7.10E-03	5.70E-05	5.70E-05
Selenium	37000	297	125	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Zinc	37000	297	125	8.22E-06	3.04E-01	2.44E-03	2.44E-03

Device #3	Process Rate -- e.y. (tons/yr)	Process Rate -- max (tons/hr)	Operation Time (hrs/yr)	Emission Factor -- act (lbs/ton)	Emission Rate -- avg (lbs/yr)	Emission Rate -- max (lbs/hr)	Emission Rate -- avg (lbs/hr)
Arsenic	37000	306	121	7.94E-08	2.94E-03	2.43E-05	2.43E-05
Beryllium	37000	306	121	1.15E-08	4.26E-04	3.52E-06	3.52E-06
Cadmium	37000	306	121	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chromium (hex)	37000	306	121	1.83E-08	6.77E-04	5.60E-06	5.60E-06
Lead	37000	306	121	9.93E-08	3.67E-03	3.04E-05	3.04E-05
Manganese	37000	306	121	3.89E-06	1.44E-01	1.19E-03	1.19E-03
Mercury	37000	306	121	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nickel	37000	306	121	4.37E-07	1.62E-02	1.34E-04	1.34E-04
Selenium	37000	306	121	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Zinc	37000	306	121	8.34E-07	3.09E-02	2.55E-04	2.55E-04

Device #4	Process Rate -- e.y. (tons/yr)	Process Rate -- max (tons/hr)	Operation Time (hrs/yr)	Emission Factor -- act (lbs/ton)	Emission Rate -- avg (lbs/yr)	Emission Rate -- max (lbs/hr)	Emission Rate -- avg (lbs/hr)
Arsenic	1012187	411	2460	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Beryllium	1012187	411	2460	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cadmium	1012187	411	2460	9.35E-10	9.46E-04	3.85E-07	3.85E-07
Chromium (hex)	1012187	411	2460	1.15E-10	1.16E-04	4.73E-08	4.73E-08
Lead	1012187	411	2460	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Manganese	1012187	411	2460	2.30E-07	2.33E-01	9.46E-05	9.46E-05
Mercury	1012187	411	2460	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nickel	1012187	411	2460	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Selenium	1012187	411	2460	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Zinc	1012187	411	2460	1.36E-08	1.38E-02	5.60E-06	5.60E-06

Device #5	Process Rate -- e.y. (tons/yr)	Process Rate -- max (tons/hr)	Operation Time (hrs/yr)	Emission Factor -- act (lbs/ton)	Emission Rate -- avg (lbs/yr)	Emission Rate -- max (lbs/hr)	Emission Rate -- avg (lbs/hr)
Arsenic	37000	297	125	3.77E-09	1.39E-04	1.12E-06	1.12E-06
Beryllium	37000	297	125	9.18E-10	3.40E-05	2.73E-07	2.73E-07
Cadmium	37000	297	125	2.79E-10	1.03E-05	8.29E-08	8.29E-08
Chromium (hex)	37000	297	125	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Lead	37000	297	125	1.48E-09	5.48E-05	4.40E-07	4.40E-07
Manganese	37000	297	125	1.97E-06	7.29E-02	5.85E-04	5.85E-04
Mercury	37000	297	125	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nickel	37000	297	125	4.59E-09	1.70E-04	1.36E-06	1.36E-06
Selenium	37000	297	125	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Zinc	37000	297	125	1.97E-07	7.29E-03	5.85E-05	5.85E-05

Device #6	Process Rate -- e.y. (tons/yr)	Process Rate -- max (tons/hr)	Operation Time (hrs/yr)	Emission Factor -- act (lbs/ton)	Emission Rate -- avg (lbs/yr)	Emission Rate -- max (lbs/hr)	Emission Rate -- avg (lbs/hr)
Arsenic	37000	306	121	3.28E-09	1.21E-04	1.00E-06	1.00E-06
Beryllium	37000	306	121	4.76E-10	1.76E-05	1.46E-07	1.46E-07
Cadmium	37000	306	121	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chromium (hex)	37000	306	121	7.54E-10	2.79E-05	2.31E-07	2.31E-07
Lead	37000	306	121	4.10E-09	1.52E-04	1.25E-06	1.25E-06
Manganese	37000	306	121	1.61E-07	5.96E-03	4.92E-05	4.92E-05
Mercury	37000	306	121	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nickel	37000	306	121	1.80E-08	6.66E-04	5.50E-06	5.50E-06
Selenium	37000	306	121	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Zinc	37000	306	121	3.44E-08	1.27E-03	1.05E-05	1.05E-05

Device #7	Process Rate -- e.y. (tons/yr)	Process Rate -- max (tons/hr)	Operation Time (hrs/yr)	Emission Factor -- act (lbs/ton)	Emission Rate -- avg (lbs/yr)	Emission Rate -- max (lbs/hr)	Emission Rate -- avg (lbs/hr)
Arsenic	1115936	174	6421	6.66E-08	7.43E-02	1.16E-05	1.16E-05
Beryllium	1115936	174	6421	1.07E-08	1.19E-02	1.86E-06	1.86E-06
Cadmium	1115936	174	6421	3.37E-08	3.76E-02	5.86E-06	5.86E-06
Chromium (hex)	1115936	174	6421	2.52E-08	2.81E-02	4.38E-06	4.38E-06
Lead	1115936	174	6421	7.03E-08	7.85E-02	1.22E-05	1.22E-05
Manganese	1115936	174	6421	2.89E-05	3.23E+01	5.02E-03	5.02E-03
Mercury	1115936	174	6421	5.92E-09	6.61E-03	1.03E-06	1.03E-06
Nickel	1115936	174	6421	1.85E-07	2.06E-01	3.22E-05	3.22E-05
Selenium	1115936	174	6421	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Zinc	1115936	174	6421	1.04E-05	1.16E+01	1.81E-03	1.81E-03

Device #8[a] (ER) { mill operation: "on" }	Emission Rate -- e.y. (tons/yr)	Emission Rate -- max (tons/yr)	Operation Time -- max (hrs/yr)	Operation Time -- avg (hrs/yr)	Emission Rate -- e.y. (lbs/yr)	Emission Rate -- max (lbs/hr)	Emission Rate -- avg (lbs/hr)
Arsenic	0.00E+00	0.00E+00	6421	6232	0.00E+00	0.00E+00	0.00E+00
Benzene	1.23E-01	1.33E-01	6421	6232	2.46E+02	4.14E-02	3.95E-02
Beryllium	0.00E+00	0.00E+00	6421	6232	0.00E+00	0.00E+00	0.00E+00
Cadmium	0.00E+00	0.00E+00	6421	6232	0.00E+00	0.00E+00	0.00E+00
Chromium	4.05E-04	4.37E-04	6421	6232	8.10E-01	1.36E-04	1.30E-04
Chromium (hex)	1.60E-04	1.73E-04	6421	6232	3.21E-01	5.39E-05	5.15E-05
Dioxins (PCDD)	1.13E-07	1.22E-07	6421	6232	2.27E-04	3.81E-08	3.64E-08
Formaldehyde	5.42E-01	5.85E-01	6421	6232	1.08E+03	1.82E-01	1.74E-01
Furans (PCDF)	9.16E-09	9.88E-09	6421	6232	1.83E-05	3.08E-09	2.94E-09
Hydrogen Chloride	4.92E+00	5.31E+00	6421	6232	9.85E+03	1.65E+00	1.58E+00
Lead	9.16E-04	9.88E-04	6421	6232	1.83E+00	3.08E-04	2.94E-04
Manganese	3.65E-03	3.93E-03	6421	6232	7.29E+00	1.22E-03	1.17E-03
Mercury	1.79E-02	1.94E-02	6421	6232	3.59E+01	6.03E-03	5.76E-03
Nickel	0.00E+00	0.00E+00	6421	6232	0.00E+00	0.00E+00	0.00E+00
PAH (compilation)	3.74E-04	4.03E-04	6421	6232	7.48E-01	1.26E-04	1.20E-04
PAH -- Naphthalene	2.13E-02	2.30E-02	6421	6232	4.26E+01	7.16E-03	6.84E-03
PCB	2.92E-05	3.15E-05	6421	6232	5.84E-02	9.81E-06	9.37E-06
Selenium	0.00E+00	0.00E+00	6421	6232	0.00E+00	0.00E+00	0.00E+00
Vinyl Chloride	6.08E-02	6.55E-02	6421	6232	1.22E+02	2.04E-02	1.95E-02
Zinc	5.98E-03	6.45E-03	6421	6232	1.20E+01	2.01E-03	1.92E-03

Device #8[b] (ER) { mill operation: "off" }	Emission Rate -- e.y. (tons/yr)	Emission Rate -- max (tons/yr)	Operation Time -- max (hrs/yr)	Operation Time -- avg (hrs/yr)	Emission Rate -- avg (lbs/yr)	Emission Rate -- max (lbs/hr)	Emission Rate -- avg (lbs/hr)
Arsenic	0.00E+00	0.00E+00	779	1523	0.00E+00	0.00E+00	0.00E+00
Benzene	3.05E-02	1.62E-02	779	1523	6.11E+01	4.16E-02	4.01E-02
Beryllium	0.00E+00	0.00E+00	779	1523	0.00E+00	0.00E+00	0.00E+00
Cadmium	3.76E-05	2.00E-05	779	1523	7.52E-02	5.12E-05	4.94E-05
Chromium	2.12E-04	1.13E-04	779	1523	4.25E-01	2.89E-04	2.79E-04
Chromium (hex)	2.86E-05	1.52E-05	779	1523	5.73E-02	3.90E-05	3.76E-05
Dioxins (PCDD)	4.93E-08	2.62E-08	779	1523	9.87E-05	6.72E-08	6.48E-08
Formaldehyde	6.37E-02	3.38E-02	779	1523	1.27E+02	8.68E-02	8.37E-02
Furans (PCDF)	1.62E-08	8.60E-09	779	1523	3.24E-05	2.21E-08	2.13E-08
Hydrogen Chloride	1.10E+01	5.86E+00	779	1523	2.21E+04	1.50E+01	1.45E+01
Lead	1.97E-04	1.05E-04	779	1523	3.94E-01	2.69E-04	2.59E-04
Manganese	1.47E-03	7.80E-04	779	1523	2.94E+00	2.00E-03	1.93E-03
Mercury	2.57E-02	1.36E-02	779	1523	5.13E+01	3.49E-02	3.37E-02
Nickel	0.00E+00	0.00E+00	779	1523	0.00E+00	0.00E+00	0.00E+00
PAH (compilation)	2.10E-04	1.13E-04	779	1523	4.20E-01	2.89E-04	2.76E-04
PAH -- Naphthalene	3.72E-03	1.97E-03	779	1523	7.43E+00	5.06E-03	4.88E-03
PCB	2.29E-05	1.22E-05	779	1523	4.58E-02	3.12E-05	3.01E-05
Selenium	1.10E-04	5.82E-05	779	1523	2.19E-01	1.49E-04	1.44E-04
Vinyl Chloride	1.33E-02	7.03E-03	779	1523	2.65E+01	1.80E-02	1.74E-02
Zinc	1.33E-03	7.03E-04	779	1523	2.65E+00	1.80E-03	1.74E-03

Device #9	Process Rate -- e.y. (tons/yr)	Process Rate -- max (tons/hr)	Operation Time (hrs/yr)	Emission Factor -- act (lbs/ton)	Emission Rate -- avg (lbs/yr)	Emission Rate -- max (lbs/hr)	Emission Rate -- avg (lbs/hr)
Arsenic	459810	96	6333	1.97E-08	9.06E-03	1.89E-06	1.43E-06
Beryllium	459810	96	6333	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cadmium	459810	96	6333	3.07E-09	1.41E-03	2.94E-07	2.23E-07
Chromium (hex)	459810	96	6333	1.71E-09	7.86E-04	1.64E-07	1.24E-07
Lead	459810	96	6333	1.16E-08	5.33E-03	1.11E-06	8.42E-07
Manganese	459810	96	6333	4.99E-07	2.29E-01	4.78E-05	3.62E-05
Mercury	459810	96	6333	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nickel	459810	96	6333	1.11E-07	5.10E-02	1.06E-05	8.06E-06
Selenium	459810	96	6333	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Zinc	459810	96	6333	3.93E-07	1.81E-01	3.76E-05	2.85E-05

Device #10	Process Rate -- e.y. (tons/yr)	Process Rate -- max (tons/hr)	Operation Time (hrs/yr)	Emission Factor -- act (lbs/ton)	Emission Rate -- avg (lbs/yr)	Emission Rate -- max (lbs/hr)	Emission Rate -- avg (lbs/hr)
Arsenic	636405	103	6155	8.18E-08	5.21E-02	8.46E-06	8.46E-06
Beryllium	636405	103	6155	8.86E-09	5.64E-03	9.16E-07	9.16E-07
Cadmium	636405	103	6155	2.42E-08	1.54E-02	2.50E-06	2.50E-06
Chromium (hex)	636405	103	6155	2.45E-08	1.56E-02	2.53E-06	2.53E-06
Lead	636405	103	6155	7.84E-08	4.99E-02	8.11E-06	8.11E-06
Manganese	636405	103	6155	2.39E-05	1.52E+01	2.47E-03	2.47E-03
Mercury	636405	103	6155	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nickel	636405	103	6155	1.88E-07	1.20E-01	1.94E-05	1.94E-05
Selenium	636405	103	6155	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Zinc	636405	103	6155	8.52E-06	5.42E+00	8.81E-04	8.81E-04

Device #11	Process Rate -- e.y. (tons/yr)	Process Rate -- max (tons/hr)	Operation Time (hrs/yr)	Emission Factor -- act (lbs/ton)	Emission Rate -- avg (lbs/yr)	Emission Rate -- max (lbs/hr)	Emission Rate -- avg (lbs/hr)
Arsenic	636405	135	4704	9.46E-09	6.02E-03	1.28E-06	1.28E-06
Beryllium	636405	135	4704	1.02E-09	6.49E-04	1.38E-07	1.38E-07
Cadmium	636405	135	4704	2.80E-09	1.78E-03	3.79E-07	3.79E-07
Chromium (hex)	636405	135	4704	2.84E-09	1.81E-03	3.84E-07	3.84E-07
Lead	636405	135	4704	9.06E-09	5.77E-03	1.23E-06	1.23E-06
Manganese	636405	135	4704	2.76E-06	1.76E+00	3.73E-04	3.73E-04
Mercury	636405	135	4704	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nickel	636405	135	4704	2.17E-09	1.38E-03	2.94E-07	2.94E-07
Selenium	636405	135	4704	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Zinc	636405	135	4704	9.85E-07	6.27E-01	1.33E-04	1.33E-04

Device #12	Process Rate -- e.y. (tons/yr)	Process Rate -- max (tons/hr)	Operation Time (hrs/yr)	Emission Factor -- act (lbs/ton)	Emission Rate -- avg (lbs/yr)	Emission Rate -- max (lbs/hr)	Emission Rate -- avg (lbs/hr)
Arsenic	80505	10	7481	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Beryllium	80505	10	7481	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cadmium	80505	10	7481	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chromium (hex)	80505	10	7481	3.50E-09	2.82E-04	3.47E-08	3.77E-08
Lead	80505	10	7481	1.40E-07	1.13E-02	1.39E-06	1.51E-06
Manganese	80505	10	7481	2.80E-07	2.25E-02	2.77E-06	3.01E-06
Mercury	80505	10	7481	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nickel	80505	10	7481	2.80E-07	2.25E-02	2.77E-06	3.01E-06
Selenium	80505	10	7481	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Zinc	80505	10	7481	5.25E-07	4.23E-02	5.20E-06	5.65E-06

Device #13	Process Rate -- e.y. (tons/yr)	Process Rate -- max (tons/hr)	Operation Time (hrs/yr)	Emission Factor -- act (lbs/ton)	Emission Rate -- avg (lbs/yr)	Emission Rate -- max (lbs/hr)	Emission Rate -- avg (lbs/hr)
Arsenic	31820	51	629	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Beryllium	31820	51	629	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cadmium	31820	51	629	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chromium (hex)	31820	51	629	3.51E-10	1.12E-05	1.78E-08	1.78E-08
Lead	31820	51	629	7.79E-09	2.48E-04	3.94E-07	3.94E-07
Manganese	31820	51	629	9.93E-07	3.16E-02	5.02E-05	5.02E-05
Mercury	31820	51	629	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nickel	31820	51	629	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Selenium	31820	51	629	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Zinc	31820	51	629	4.09E-08	1.30E-03	2.07E-06	2.07E-06

Device #14	Process Rate -- e.y. (tons/yr)	Process Rate -- max (tons/hr)	Operation Time (hrs/yr)	Emission Factor -- act (lbs/ton)	Emission Rate -- avg (lbs/yr)	Emission Rate -- max (lbs/hr)	Emission Rate -- avg (lbs/hr)
Arsenic	80927	11	7481	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Beryllium	80927	11	7481	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cadmium	80927	11	7481	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chromium (hex)	80927	11	7481	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Lead	80927	11	7481	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Manganese	80927	11	7481	2.85E-07	2.31E-02	3.08E-06	3.08E-06
Mercury	80927	11	7481	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nickel	80927	11	7481	3.74E-06	3.03E-01	4.05E-05	4.05E-05
Selenium	80927	11	7481	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Zinc	80927	11	7481	2.52E-06	2.04E-01	2.73E-05	2.73E-05

Device #15	Process Rate -- e.y. (tons/yr)	Process Rate -- max (tons/hr)	Operation Time (hrs/yr)	Emission Factor -- act (lbs/ton)	Emission Rate -- avg (lbs/yr)	Emission Rate -- max (lbs/hr)	Emission Rate -- avg (lbs/hr)
Arsenic	31820.25	4	8784	1.34E-07	4.25E-03	7.04E-06	4.60E-07
Beryllium	31820.25	4	8784	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cadmium	31820.25	4	8784	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chromium (hex)	31820.25	4	8784	4.09E-07	1.30E-02	2.15E-05	1.41E-06
Lead	31820.25	4	8784	1.51E-07	4.79E-03	7.94E-06	5.18E-07
Manganese	31820.25	4	8784	9.27E-07	2.95E-02	4.88E-05	3.19E-06
Mercury	31820.25	4	8784	7.29E-09	2.32E-04	3.84E-07	2.51E-08
Nickel	31820.25	4	8784	5.85E-05	1.86E+00	3.07E-03	2.01E-04
Selenium	31820.25	4	8784	2.26E-07	7.19E-03	1.19E-05	7.78E-07
Zinc	31820.25	4	8784	4.87E-07	1.55E-02	2.57E-05	1.68E-06

Total All Devices	Emission Rate -- avg (lbs/yr)	Emission Rate -- max (lbs/hr)	Emission Rate -- avg (lbs/hr)
Arsenic	1.55E-01	1.04E-04	9.65E-05
Benzene	3.07E+02	8.29E-02	7.96E-02
Beryllium	2.01E-02	1.83E-05	1.83E-05
Cadmium	1.42E-01	6.98E-05	6.79E-05
Chromium	1.24E+00	4.25E-04	4.09E-04
Chromium (hex)	4.40E-01	1.28E-04	1.05E-04
Dioxins (PCDD)	3.26E-04	1.05E-07	1.01E-07
Formaldehyde	1.21E+03	2.69E-01	2.58E-01
Furans (PCDF)	5.08E-05	2.52E-08	2.42E-08
Hydrogen Chloride	3.19E+04	1.67E+01	1.61E+01
Lead	2.39E+00	6.59E-04	6.28E-04
Manganese	6.56E+01	3.90E-02	3.88E-02
Mercury	8.72E+01	4.10E-02	3.95E-02
Nickel	2.59E+00	3.37E-03	5.02E-04
PAH (compilation)	1.17E+00	4.15E-04	3.96E-04
PAH -- Naphthalene	5.01E+01	1.22E-02	1.17E-02
PCB	1.04E-01	4.10E-05	3.95E-05
Selenium	2.27E-01	1.61E-04	1.45E-04
Vinyl Chloride	1.48E+02	3.85E-02	3.69E-02

Greenhouse Gas Emissions Calculations

Lehigh Cement - GHG PTE Estimate

Based on 40 CFR 98 Parts C and H, and AP-42

Results in Metric Tons

	CO_2 (mt/yr)	CH_4 (mt/yr)	N_2O (mt/yr)	CO_2e (mt/yr)
Kiln	674,719	--	--	674,719
ICE Combustion	2,952	0	0	2,962
TOTAL	**677,671**	**0**	**0**	**677,681**

Results in Short Tons

	CO_2 (st/yr)	CH_4 (st/yr)	N_2O (st/yr)	CO_2e (st/yr)
Kiln	743,877	--	--	743,877
ICE Combustion	3,255	0	0	3,266
TOTAL	**747,132**	**0**	**0**	**747,143**

Lehigh Cement - GHG PTE Estimate from Kiln

Based on measured hourly CO2 rate

These cells are inputs from the input page. The remainder are calculated values

Input Information

169,835	CO2 (lb/hr)
8,760	Hours per year

Unit ID	E.F. CO2 (lb/hr)	Hours/Year	CO_2 (st/yr)	CO_2 (mt/yr)
Kiln	169,835	8,760	743,877	674,719

Lehigh Cement - GHG PTE Estimate from Combustion in ICE

Based on 40 CFR 98 Part C and AP-42

These cells are inputs from the input page. The remainder are calculated values

Input Information

0.007	BSFC (mmBtu/hp-hr) AP-42
30	Hours per year (489 HP)
40	Hours per year (each 2132 HP)
8760	Hours per year (each quarry drill)
80	Hours per year (welder)

GWP

CO_2	CH_4	N_2O
1	21	310

Unit ID	Brake Horsepower	hp-hr/yr	mmBtu/yr
R100	489	14,670	102.69
R151	2132	85,280	596.96
R152	2132	85,280	596.96
R153	2132	85,280	596.96
R154	2132	85,280	596.96
R155	2132	85,280	596.96
R115-Quarry Drill	400	3,504,000	24,528.00
R116-Quarry Drill	200	1,752,000	12,264.00
Hobart Welder Engine	67	5,360	37.52
		Total mmBtu Diesel =	**39,917.01**

mmBtu/yr Diesel	EF_{CO2} (kg/mmBtu)	EF_{CH4} (kg/mmBtu)	EF_{N2O} (kg/mmBtu)	CO_2 (mt/yr)	CH_4 (mt/yr)	N_2O (mt/yr)	CO_2e (mt/yr)
39,917.01	73.96	0.003	0.0006	**2952.26**	**0.12**	**0.02**	**2962.20**

Appendix D

Proposed Revisions to Operation & Maintenance Plan

LEHIGH SOUTHWEST CEMENT COMPANY
Operation and Maintenance Plan

Redding Facility
Portland Cement NESHAP

Revised October 2012
Version 1.0

Black & Veatch Project 065188 File 32.0100 Document 065188-DRH-002

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BLACK & VEATCH CORPORATION
Environmental, Health & Safety Services
11401 Lamar Avenue, Overland Park, Kansas 66211

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Document Version	Date	Description of Changes	Prepared By	Approved By
1.0	3/8/2002	Initial issue.	DRH, B&V	
2.0	10/2007		M. Meinen	
3.0	1/7/2011		K. Stringham	
4.0	10/29/2012	Equipment & temperature updates. Title V Renewal.	KF AECOM	

SECTION	TITLE	REVISION NUMBER	REVISION DATE
1	Introduction	4	10/29/2012
2	Regulatory Overview	4	10/29/2012
3	Responsibilities	4	10/29/2012
4	Periodic Audit of OMP	4	10/29/2012
A	In-Line Kiln / Raw Mill System	4	10/29/2012
B	Finish Mill System	4	10/29/2012
C	Storage and Material Handling Systems	4	10/29/2012

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PROCEDURES

APPENDICES

1. INTRODUCTION

This Operation and Maintenance Plan ("OMP" or "Plan") has been developed to satisfy the requirements of 40 CFR 63.1350 and § 63.6(e)(1) and (e)(2). The purpose of the OMP is to ensure on-going compliance with the specific standards and requirements of 40 CFR Subpart LLL. As such, the focus of this OMP is on the operation, maintenance, and inspection of those source components, pollution control equipment, or monitoring devices that have a direct impact on the ability of affected sources to meet emission standards and requirements.

The basic structure of this OMP is based on the requirements of 40 CFR 63.1350(a). The appendices contain additional information, forms, references, and guidance intended to assist plant personnel with the implementation of the OMP. The information in the appendices is not required by 40 CFR 63.1350(a) to be included as a part of the OMP and therefore should not be considered binding. It is the intention of Lehigh Southwest Cement Company to append, modify, and/or delete anything contained in these appendices as necessary without notifying or receiving approval from the Administrator.

2. REGULATORY OVERVIEW

As the result of a June 14, 1999 U.S. Environmental Protection Agency ("USEPA") rulemaking, Lehigh Southwest Cement Company (hereinafter referred to as "Lehigh") will be subject to additional emissions standards for hazardous air pollutants. The National Emissions Standards for Hazardous Air Pollutants for Source Categories; Portland Cement Manufacturing Industry (hereinafter referred to as the "PC NESHAP") or 40 CFR subpart LLL establishes limits for emissions of particulate matter (as a surrogate for HAP metals), opacity, and dioxins/furans (D/F) for existing major sources of non-hazardous waste kilns at portland cement plants. The compliance date for existing applicable facilities is June 14, 2002.

Lehigh is a major source as defined in 40 CFR 63.2. As a major source, Lehigh is subject to emissions standards for the in-line kiln/raw mill, finish mills, raw material storage, clinker storage, finished product storage, conveying system transfer points, bagging and bulk loading and unloading systems.

A. Basic Monitoring Requirements for the OMP

As provided in §63.1350(a), the written operations and maintenance plan shall include the following information.

1. Procedures for the proper operation and maintenance of the affected source and air pollution control devices in order to meet the applicable emission limits and operating limits of the PC NESHAP;

2. Corrective actions to be taken when required by §63.1350(e) which requires that the corrective actions specified in this plan for the finish mills, mill sweeps, and air separator particulate matter control devices be initiated within one-hour;

3. Procedures to be used during an inspection of the components of the combustion system of the in-line kiln/raw mill at least once per year; and

4. Procedures to be used to periodically monitor affected sources subject to opacity standards under §§63.1346 and 63.1348. At Lehigh, these affected sources include each new and existing raw material, clinker, or finished product storage bin; conveying system transfer points; bagging systems; and bulk loading and unloading systems. These procedures must include the following -

   a. Conduct a monthly 1-minute visible emissions test of each affected source in accordance with Method 22 of Appendix A of 40 CFR part 60. The test must be conducted while the affected source is in operation.

   b. If no visible emissions are observed in six consecutive monthly tests for any affected source, the frequency of testing may be decreased from monthly to semi-annually for that affected source. If visible emissions are observed during any semi-annual test, testing of that affected source must be resumed on a monthly basis and that schedule must be maintained until no visible emissions are observed in six consecutive monthly tests before reverting back to semi-annual testing intervals.

   c. If no visible emissions are observed during the semi-annual test for any affected source, the frequency of testing may be decreased from semi-annually to annually for that affected source. If visible emissions are observed during any annual test, testing of that affected source shall be resumed on a monthly basis and that schedule shall be maintained until no visible emissions are observed in six consecutive monthly tests.

   d. If visible emissions are observed during any Method 22 test, a 6-minute test of opacity must be conducted in accordance with Method 9 of appendix A of 40 CFR part 60. The Method 9 test must begin within one hour of any observation of visible emissions.

B. Summary of Emissions Standards

A summary of the affected sources at Lehigh and applicable standards are summarized in Table 1 below. The compliance date for these affected source is June 14, 2002.

Table 1. Summary of Affected Sources and Standards.

Affected Source	Pollutant	Emission Limit [1]
In-Line Kiln / Raw Mill	PM	0.15 kg/Mg feed (dry basis)
	Opacity	20%
	D/F	• 0.20 ng/dscm TEQ [2] **OR** • 0.40 ng/dscm TEQ [2] (APCD operating at ≤

Affected Source	Pollutant	Emission Limit [1]
		400°F)
	Temp - Mill On	239°F (3-hr rolling avg) [3]
	Temp - Mill Off	438°F (3-hr rolling avg) [3]
Finish Mills (including Air Separators)	Opacity	10%
Raw Material, Clinker, Finished Product Storage	Opacity	10%
Affected Conveying System Transfer Points	Opacity	10%
Bagging and Bulk Loading and Unloading Systems	Opacity	10%

[1] All limits apply except during periods of startup, shutdown, or malfunction as specified in 40 CFR 63.6(f)(1) and § 63.6(h)(1).
[2] Corrected to 7% O_2.
[3] Operating parameter limits determined during the August 2012 D/F performance test. Performance testing for D/F must be repeated every 30 months. Therefore, the most recent D/F performance test results should be consulted to determine current operating parameter limits.

C. Monitoring Requirements

A summary of the monitoring requirements for each affected source group at Lehigh is summarized in Table 2 below. The compliance date for these affected source is June 14, 2002.

Table 2. Summary of Compliance Demonstration Requirements for Affected Sources.

Affected Source	Pollutant	Monitoring Requirement
In-Line Kiln / Raw Mill	Opacity	Continuous Opacity Monitor
	D/F	Annual Combustion System Inspection Continuous Temperature Monitor[1]
Finish Mills	Opacity	Bag Leak Detection Systems[2] **or** Daily 6-minute Method 22
Raw Material, Clinker, Finished Product Storage	Opacity	Monthly **or** Semi-Annual (as applicable) 1-minute Method 22
Affected Conveying System Transfer Points	Opacity	Monthly **or** Semi-Annual (as applicable) 1-minute Method 22
Bagging and Bulk Loading and Unloading Systems	Opacity	Monthly **or** Semi-Annual (as applicable) 1-minute Method 22

[1] The continuous temperature monitor must be calibrated quarterly.
[2] The use of Bag Leak Detection Systems in lieu of the daily visual emissions observations required by 40 CFR 63.1350(e) is part of the Settlement Agreement between APCA and EPA. This option will be exercised only after promulgation of the changes contained in the Settlement Agreement in the Federal Register.

3. RESPONSIBILTIES

Key responsibilities are assigned to allow for smooth implementation of this plan. Although specific procedures may be performed by various plant personnel, overall responsibilities are outlined below to assist plant personnel with OMP implementation and to establish a framework through which NESHAP compliance will be maintained.

A. Plant Manager

The Plant Manager has overall responsibility for NESHAP regulatory compliance. The Plant Manager is responsible for oversight of the air quality control program at the plant and for ensuring that the procedures in this plan are implemented and adhered to by plant personnel.

B. Kiln Engineer

The Kiln Engineer is responsible for day-to-day implementation of the O&M plan at the facility. The Production Manager will report to the Environmental Engineer on all matters of NESHAP compliance. Specific duties of the Production Manager might include:

1. Notify Maintenance Manager and Plant Manager of potential non-compliance with emissions or monitoring standards;

2. Oversight of training for production employees on the procedures outlined in the O&M plan; and

3. Periodically review O&M plan in accordance with section 4 below and suggest updates to any procedures or appendices necessary to effectively implement the O&M plan.

C. Maintenance Manager

The Maintenance Manager will consult with plant personnel on inspection and maintenance needs of affected sources and associated pollution control equipment. The Maintenance Manager also provides guidance on the implementation and performance of this plan. Specific duties of the Maintenance Manager might include:

1. Schedule and review the inspection and preventative maintenance procedures included in this plan;

2. Receive and review specific inspection and maintenance procedures conducted by plant personnel;

3. Ensure that the necessary maintenance is carried out based on inspection results;

4. Maintain files of quality control program data, including periodic check forms and maintenance work orders, in electronic filing system;

5. Ensure spare parts are maintained at the plant; and

6. Periodically review O&M plan in accordance with section 4 below and suggest updates to any procedures or appendices necessary to effectively implement the O&M plan.

7. Schedule and report periodic visible emissions observations.

D. Electrical Superintendent

The Electrical Superintendent is responsible for the proper operation, calibration, and maintenance of continuous temperature monitoring equipment and continuous opacity monitoring equipment. Specific duties of the Electrical Superintendent might include:

1. Conduct or oversee the performance of quality control program as required by 40 CFR 63.8(d) and PS-1 of appendix B to part 60 for the COMS and continuous temperature monitor at the inlet to the main baghouse;

2. Perform necessary corrective action for the COMS and continuous temperature monitor at the inlet to the main baghouse;

3. Maintain files of quality control program data, including periodic checks, audits, and corrective action data;

4. Ensure spare parts for the COMS and continuous temperature monitor at the inlet to the main baghouse are maintained at the plant; and

5. Checks to ensure that the data acquisition system computer is programmed to correctly calculate the three-hour rolling average temperature measured at the inlet to the main baghouse. The three-hour rolling average temperature is to be calculated anew each time the raw mill is changed from on to off, or from off to on.

E. Control Room Operator

The Control Room Operator has the overall responsibility of monitoring the continuous opacity and temperature measurements at the inlet to the main baghouse. Specific duties of the Control Room Operator might include:

1. Monitor COMS fault warning systems and alarms;

2. Periodically check the data acquisition and management system computer to verify that the computer is operational;

3. Checks to ensure that the three-hour rolling average temperature measured at the inlet to the main baghouse is within applicable operating limits; and

4. Reports any alarms, computer fault messages, malfunctions, process upsets, missing or erroneous data, or process problems that impair the ability of the in-line kiln / raw mill system to meet or demonstrate compliance with applicable opacity or operating parameter limits to the Kiln Engineer.

F. Environmental Engineer

The Environmental Engineer has the responsibility of ensuring compliance with all federal, state, and local environmental regulations including the notification,

reporting, record keeping requirements of 40 CFR part 63 subparts A and LLL. Specific tasks of the environmental manager might include:

1. Ensure that appropriate plant personnel are familiar with applicable emissions standards and compliance demonstration requirements;

2. Inform plant personnel of the content of the operation and maintenance plan and ensure that the plan is effectively implemented; and

3. Identify the need to update the operation and maintenance plan and revise the plan according to the procedures outlined in section 4.

4. Provide annual training to applicable employees on the contents of the O&M Plan.

4. PERIODIC REVIEW OF OMP

A complete review of the O&M plan as well as all appendices including procedures, checklists, forms, and affected source list will be conducted periodically. The suggested frequency for this review is every five years to correspond with the Title V permit renewal process or as otherwise necessary. The review will be coordinated by the Environmental Engineer and will include input by the Kiln Engineer, Maintenance Managers, and other plant personnel, as necessary. The results of checks, inspections, and maintenance performed during the year will be used as the basis for this review.

A. The goal of this periodic review is to:

1. Update all requirements contained in the OMP to include any changes or additions to Subpart LLL;

2. Update the OMP, as necessary, to reflect current equipment, personnel, regulations, and procedures;

3. Ensure contents of OMP are effective for ensuring compliance with Subpart LLL;

4. Update all appendices or other supporting documents to ensure effective implementation of the procedures in the OMP;

5. Streamline regulatory compliance efforts by coordinating OMP responsibilities with operating or construction permit requirements;

6. Evaluate the frequencies of preventative maintenance activities and determine if individual procedures should be conducted more or less often; and

7. Determine if specific preventative maintenance activities are necessary and sufficient for the current scope of the OMP.

B. This periodic review will ensure that OMP along with all materials used in the implementation of the plan are appropriate for NESHAP compliance while minimizing extraneous activities and resource requirements.

C. Any changes determined to be necessary to the OMP (excluding any appendices, forms, or other material used to implement the plan) will be submitted to the Shasta County Air Quality Management District (SCAQMD).

D. Notes on Revising the OMP

As required by 40 CFR 63.1350(a), the written operations and maintenance plan must be submitted to the Administrator for review and approval as part of the application for a part 70 permit. The OMP contains all information required by 40 CFR 63.1350. However, the procedures used to implement the OMP are contained in the appendices to the OMP. This structure allows the requirements of the OMP to be federally enforceable as intended by 40 CFR 63.1350 while still allowing Lehigh the flexibility to revise, as necessary, the procedures implementing the OMP.

E. OMP Recordkeeping Requirements

This OMP or the most current version of the OMP must be kept on-site for the life of each 40 CFR 63 Subpart LLL affected source. All records in support of 40 CFR 63 Subpart LLL including notification, records, and reports must be kept on-site for 5 years following the date on which the notification, record, or report is prepared [40 CFR 63.10(b)(1)].

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Revision: 0

SYSTEM: In-Line Kiln / Raw Mill

EQUIPMENT: Rotary Kiln and Roller Mill

PURPOSE: The purpose of this procedure is to provide air quality protection measures, achieve emissions limits, and satisfy NESHAP Subpart LLL requirements for development of operations and maintenance procedures. This procedure also explains the regulatory standards, monitoring requirements, and operation, inspection and maintenance procedures necessary to ensure on-going compliance with applicable standards.

1. INTRODUCTION

A. The cement kiln system is a single dry process rotary kiln equipped with a 4 stage cyclonic preheater. The kiln system uses a variety of fuels to provide the thermal input necessary to convert raw materials into clinker. These fuels include fossil fuels (i.e. coal, petroleum coke, etc.) as well as non-hazardous fuels such as tire-derived fuels and agricultural waste fuels. The raw materials fed to the kiln process include materials obtained from both on-site and off-site sources. Raw materials may include limestone, shale/clay, alumina, silica, iron ore, and/or other raw material additives.

B. Hot exhaust gases from the rotary kiln pass counter-currently through the downward-moving raw materials in the preheat tower. The hot exhaust gases exiting the preheat tower are cooled in a spray tower before being routed to the main baghouse or to the roller mill. Exhaust gases entering the roller mill are used as a source of heat for drying raw materials and carrying the crushed materials into cyclones.

C. The kiln exhaust gases exiting the roller mill cyclone are then routed to the particulate matter control device (PMCD), referred to as the main baghouse. Fines from the cyclone discharge are routed to the Raw Feed Blending and Storage System.

2. REGULATORY OVERVIEW

Standards affecting the in-line kiln/raw mill system include limits on particulate matter (PM), opacity, and dioxins and furans (D/F).

A. Particulate Matter (PM)

PM emissions from the in-line kiln/raw mill system are limited as a surrogate for HAP metals including arsenic, cadmium, chromium and lead. PM emissions from

the in-line kiln/raw mill are limited to 0.15 kg PM per Mg (0.30 lb per ton) of kiln feed (dry basis).

B. Dioxins and Furans (D/F)

D/F emissions from the in-line kiln/raw mill system are limited to:

1. 0.20 ng per dscm ($8.7x10^{-11}$ gr per dscf) (TEQ) corrected to seven percent oxygen; or

2. 0.40 ng per dscm ($1.7x10^{-10}$ gr per dscf) (TEQ) corrected to seven percent oxygen, when the average of the performance test run average temperatures at the inlet to the particulate matter control device is 204 °C (400 °F) or less.

C. Opacity

Opacity from the in-line kiln/raw mill system is limited to 20 percent based on a six-minute average.

D. Temperature

The temperature of the kiln exhaust gases at the inlet to the particulate matter control device is limited according to the average of the run average temperatures measured during the most recent performance test conducted in accordance with 40 CFR 63.1349(b)(3). This performance testing must be repeated every 30 months.

During performance testing, temperature limits are established for two modes of operation, (1) raw mill on and (2) raw mill off. Compliance with the temperature limits are based on a three-hour rolling average period that begins anew each time the operating mode is changed from on to off, or from off to on.

Note that the temperature limits do not apply during periods of startup, shutdown, or malfunction. Startup and shutdown periods are defined in the Startup, Shutdown, and Malfunction Plan and include those periods when the raw mill is switched from on to off or from off to on. For monitoring purposes, the three-hour rolling average temperature is calculated during periods of startup and shutdown even though the temperature limit is not applicable during these periods. Furthermore, the three-hour rolling average temperature limit does not apply until at least three hours after initial startup or after a change in raw mill operating status.

3. OPERATING PROCEDURES

A. Dioxin / Furan and Temperature at PMCD Inlet

On-going compliance with the D/F limit will be achieved by operating the in-line kiln / raw mill system below the operating limits set during the most recent D/F performance test measured at the inlet to the particulate matter control device. The temperature at the inlet to the Main Baghouse is regulated by the spray tower and/or an inlet cooling air damper. The spray tower cools kiln exhaust

gases by introducing tiny water droplets into the air stream. The damper when open introduces ambient temperature cooling air into the gas stream.

Proper operation of the spray tower in cooling kiln exhaust gases is achieved through automatic controls that regulate the water feed rate. Once the spray cooler has been started and operation has stabilized as outlined in the Startup, Shutdown, and Malfunction Plan, little additional operator attention is required.

The temperature of the kiln exhaust gases at the inlet to the Main Baghouse are continuously monitored as required by 40 CFR 63.1350(f)(1). These readings are used as an indicator of proper operation of the spray tower and cooling air damper.

B. Particulate Matter and Opacity

The affected source will ensure on-going compliance with the particulate matter and opacity limits by properly operating the particulate matter control device, Main Baghouse, at all times when the kiln and/or roller mill are in operation. The Main Baghouse operates under negative pressure with a reverse air cleaning mechanism. The key operating parameters of air pollution control device affecting particulate matter emissions and opacity are given below.

1. Operating Temperature.

   The upper gas temperature of the kiln exhaust gases entering the baghouse must be maintained below 500 °F to ensure that the integrity of the filter media (i.e. filament glass) is maintained. The lower gas temperature of the kiln exhaust gases entering the baghouse must be maintained above the dew point (120 °F) to prevent condensation. Condensation must be avoided to prevent corrosion, bag blinding, and cake-release problems.

   The temperature of the kiln exhaust gases at the inlet to the Main Baghouse are continuously monitored as required by 40 CFR 63.1350(f)(1).

2. Pressure Drop.

   The baghouse is operated to maintain a pressure drop across the system within a range of 2 to 10 in. w.c. The pressure drop is an indication of filter cake formation which impacts the effectiveness of particulate control. Filter cake formation is a function of the bag cleaning cycle. The frequency and duration of bag cleaning is set to maintain the desired pressure drop.

3. Negative Pressure at Baghouse Inlet

   Draft or pressure indication at the kiln baghouse inlet is monitored by the control room operator during operation as an indicator of proper operation of in-line kiln/raw mill exhaust containment.

4. MAINTENANCE AND INSPECTION PROCEDURES

The maintenance and inspection procedures outlined below focus on those systems that could impact the ability of the affected source to meet applicable Subpart LLL standards. These procedures are also intended to satisfy the requirements of 40 CFR 63.1350(a)(3).

A. Rotary Kiln and Preheater

1. Annual Combustion System Inspection

40 CFR 63.1350(a)(3) requires the combustion system of the kiln be inspected at least once per year. The purpose of the annual inspection is to ensure good combustion and thus limit primary formation of D/F in the kiln. Primary D/F formation in the kiln occurs as a result of insufficient oxygen, poor mixing, low temperature, and short residence time. The following inspection procedures are conducted annually to ensure that the specific components of the combustion system that control these factors are sufficient for maintaining good combustion practices.

Two sets of inspection procedures are provided depending upon the operating status of the burner during the annual inspection.

a. Inspection Procedures when Burner is **On-Line**

The following visual inspection procedures may be conducted using video monitoring equipment or by looking directly through the burner hood.

1. Check integrity of refractory and carriage that supports burner pipes for proper alignment.

2. Check continuous monitoring data for CO, NOx, and HC for elevated readings as an indicator that the combustion system is operating consistent with good combustion practices.

b. Inspection Procedures when Burner is **Off-Line**

1. Inspect burners for erosion, corrosion, plugging, or other alterations that may adversely affect performance.

2. Check burner air supply and burner condition.

The results of this annual inspection must be included in the Semi-Annual Summary Report required by 40 CFR 63.10(e)(3)(vi) if the inspection was conducted during the reporting period. [40 CFR 63.1354(b)(9)(iv)]

2. Periodic Inspection and Preventative Maintenance Procedures

a. During operation of the rotary kiln, the preheat tower is periodically inspected to prevent 4th stage blockage to the extent possible.

b. Preventative maintenance procedures include cleaning of the preheat tower, as necessary, to avoid blockage. Cleaning may involve air cannons, water lances, cardox, manual cleaning, or various other methods.

c. Frequency of preheat tower inspections for blockage will vary depending on maintenance and malfunction history. As a general guideline, inspections are routinely scheduled during each shift.

B. Dust Collector

1. Weekly Inspection Procedures

The following inspection procedures have been developed to ensure proper maintenance of certain components of the Main Baghouse that are critical to the ability of the baghouse to achieve applicable emission limits.

a. Verify that the overall pressure drop monitor on the Main Baghouse is functioning and within the proper range.

b. Visually inspect dust collector and immediate ductwork to ensure both are in good working order.

c. Verify that the following dust collector components are operational: bag cleaning mechanism, fans, timing controls, and dust removal system.

The frequency of these inspection procedures will vary based on historical inspection results, maintenance history, and operating schedule. As a general guideline, the periodic inspection procedures listed above are performed on a weekly basis.

2. Annual Inspection Procedures

The following inspection procedures have been developed for preventative maintenance of certain components of the main baghouse that are critical to the ability of the dust collector to achieve applicable emission limits.

a. Verify integrity of containment structures including housing and piping (i.e. check for wear and/or leakage);

b. Check the cleaning sequence of the dust collector;

c. Inspect bags for leaks and wear. (Look for obvious holes or tears in the bags.)

The frequency of these inspection procedures will vary based on historical inspection results, maintenance history, and operating schedule. As a general guideline, the periodic inspection procedures listed above are performed on an annual basis.

3. Maintenance Procedures

Depending upon the outcome of periodic inspections, preventative maintenance may be necessary. The specific preventative maintenance measures taken will vary depending upon observations made during periodic inspections and may include any of the following -

a. Repair/replacement of filter bags;

b. Repair/replace leaks in the containment structure of the dust collector or immediate ductwork.

C. Spray Cooling System

1. Periodic Inspection Procedures

Continuous monitoring of the temperature of kiln exhaust gases at the inlet to the Main Baghouse serves as an indicator of proper operation of the Spray Tower. If temperature spikes are consistently observed, the following inspection procedures of certain components of the Spray Tower may be used to identify the appropriate preventative maintenance needs of the system. The frequency of these inspection procedures will be determined by the Maintenance Manager and will vary depending upon the frequency of temperature spikes.

a. Verify that water supply system is functioning;

b. Check for proper operation of water supply pumps and water line (i.e. check for blockage and leakage);

c. Check filters for buildup; and

d. Verify that pressure indicators are functioning and check pressure drop as an indicator of plugging in pipes, manifolds, and spray nozzles.

2. Maintenance Procedures

Depending upon the outcome of periodic inspections, preventative maintenance may be necessary. The specific preventative maintenance measures taken will vary depending upon observations made during periodic inspections and may include any of the following -

a. Repair/replace leaks, cracks, and loose fittings;

b. Clean out plugged pipes, manifolds, spray nozzles, filters, etc.;

c. Check oil levels on water supply pumps and lubricate pump motor bearings, as necessary.

5. MONITORING PROCEDURES

The monitoring procedures outlined below are consistent with Subpart LLL standards. These procedures are intended to satisfy the requirements of 40 CFR 63.1350(c) and (f).

A. Continuous Opacity Monitor System (COMS)

As required by 40 CFR 63.1350(c)(1), a continuous opacity monitor system is used as an indicator of compliance with the opacity standards for the in-line kiln / raw mill system. The COMS is calibrated, operated, and maintained in accordance with the provisions of 40 CFR part 63 subpart A and PS-1 of appendix B to part 60.

B. Temperature Monitor

As required by 40 CFR 63.1350(f), a continuous monitor is used to record the temperature of kiln exhaust gases at the inlet to the particulate matter control device. The three-hour rolling average temperature is calculated automatically by the computers in the control room. The following guidelines are followed when programming the computer to determine compliance with the temperature limit on the kiln exhaust gases at the inlet to the particulate matter control device -

1. The three-hour rolling average is calculated as the average of 180 successive one-minute average temperatures.

2. Periods of time when one-minute averages are not available are ignored when calculating three-hour rolling averages. When one-minute averages become available, the first one-minute average is added to the previous 179 values to calculate the three-hour rolling average

3. When the operating status of the raw mill is changed from off to on, or from on to off, the calculation of the three-hour rolling average temperature begins anew, without considering previous recordings. Note, however, that the APCD inlet temperature limit does not apply during periods of startup and shutdown. Refer to the Startup, Shutdown, Malfunction Plan for specific definitions of the startup and shutdown periods.

4. The three-hour rolling average temperature limit does not apply until at least three hours after initial startup or after a change in raw mill operating status.

Calibration of the thermocouple used to monitor compliance with the NESHAP operating limits must be verified at least once every three months.

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SYSTEM: Finish Mill System

EQUIPMENT: Finish Mills A, B, and C

PURPOSE: The purpose of this procedure is to provide air quality protection measures, achieve emissions limits, and satisfy NESHAP Subpart LLL requirements for development of operations and maintenance procedures. This procedure also explains the regulatory standards, monitoring requirements, and operation, inspection and maintenance procedures necessary to ensure on-going compliance with applicable standards.

1. INTRODUCTION

A. The finish mill system includes three separate milling systems that process clinker, limestone and gypsum into a finely ground mixture. The clinker, limestone and gypsum are fed to the finish mills via weigh feeders. Ground cement is then discharged from each mill into an air stream that pneumatically transports the material through a mechanical air separator. The separator segregates the ground cement by particle size before transferring materials meeting the size specification to the Storage and Shipping Department.

B. Dust collectors are used to control particulate emissions from each finish mill system. The finish mill system includes a total of six emission points. Each mill sweep dust collector is vented directly to the atmosphere while the air separator dust collectors of each finish mill are ducted together before discharging to the atmosphere.

C. Each finish mill discharge stack may be equipped with a particulate detector to monitor filter bag bleedthrough and to identify leaks and bag failures.

2. REGULATORY OVERVIEW

Standards affecting the finish mill system include limits on the opacity of discharges from the mill sweep or air separator air pollution control devices.

A. Opacity

Opacity from the mill sweep or air separator air pollution control devices is limited to 10 percent based on a six-minute average.

3. OPERATING PROCEDURES

A. Opacity

The affected sources will ensure on-going compliance with the opacity limit by properly operating each particulate matter control device at all times that the corresponding finish mill is in operation. Several dust collectors are used to control emissions from the finish mill system. Each baghouse operates under negative pressure with a reverse air cleaning mechanism. The key operating parameters of fabric filter control systems affecting the opacity of emissions are given below.

1. Pressure Drop.

The baghouse is operated to maintain a pressure drop across the system within a range of 2 to 10 in. w.c. The pressure drop is an indication of filter cake formation which impacts the effectiveness of particulate control. Filter cake formation is function of the bag cleaning cycle. The frequency and duration of bag cleaning is set to maintain the desired pressure drop.

4. MAINTENANCE AND INSPECTION PROCEDURES

The maintenance and inspection procedures outlined below focus on those systems that could impact the ability of the affected source to meet applicable Subpart LLL standards. These procedures are also intended to satisfy the requirements of 40 CFR 63.1350(a)(3).

A. Dust Collectors

1. Periodic Inspection Procedures

The following inspection procedures have been developed to ensure proper maintenance of certain components of the finish mill system dust collectors that are critical to the ability of each to achieve applicable emission limits.

The frequency of these inspection procedures will vary based on historical inspection results, maintenance history, and operating schedule. As a general guideline, the periodic inspection procedures listed below are performed each week that the finish mill system is in operation.

a. If the dust collector is equipped with a functioning pressure drop indicator, verify that pressure drop is within the appropriate range;

b. Verify that the dust collector and immediate ductwork are in good working order by conducting a visual inspection;

c. Verify that the following dust collector components are operational: bag cleaning mechanism, fans, timing controls, and dust removal system.

2. Additional Inspection Procedures

The following inspection procedures have been developed for preventative maintenance of certain components of dust collectors that are critical to the ability of each to achieve applicable emission limits.

The frequency of these inspection procedures will vary based on historical inspection results, maintenance history, and operating schedule. As a general guideline, the periodic inspection procedures listed below are performed on an annual basis.

a. Verify integrity of containment structures including housing and piping (i.e. check for obvious wear and/or leakage);

b. Check the cleaning sequence of the dust collector.

3. Maintenance Procedures

Depending upon the outcome of periodic inspections, preventative maintenance may be necessary. The specific preventative maintenance measures taken will vary depending upon observations made during periodic inspections and may include any of the following -

a. Repair/replacement of filter bags;

b. Repair/replace leaks in the containment structure of the dust collector or immediate ductwork.

5. PERIODIC MONITORING PROCEDURES

The periodic monitoring procedures outlined below are intended to satisfy the requirements of 40 CFR 63.1350(e) while providing for an alternate means of periodic monitoring that involves use of a bag leak detection system. These procedures are consistent with Subpart LLL standards and the Settlement Agreement between USEPA and the American Portland Cement Alliance (APCA), Case No. 99-1322. The option to use Bag Leak Detection Systems in lieu of the daily visual emissions observations required by 40 CFR 63.1350(e) will be exercised only after promulgation of the changes contained in the Settlement Agreement in the Federal Register. Additionally, the option to conduct a second visual emissions observation before conducting a Method 9 test is also dependent upon the terms of the Settlement Agreement being incorporated into the rule. As such, procedure B.4 below will not be followed until after the changes contained in the Settlement Agreement have been promulgated.

A. Bag Leak Detection System (BLDS)

The following monitoring procedures apply to each finish mill system discharge stack that is equipped with a bag leak detection system. These procedures apply only to BLDS that serve as the primary mechanism by which on-going compliance with the opacity limit set forth in 40 CFR 63.1347 is demonstrated as an alternative to the monitoring requirements of 40 CFR 63.1350(e). The following inspection and maintenance procedures for each BLDS are performed on a semi-annual basis.

1. Inspect mounting flanges and clean as required.
2. Inspect optical sensors. Clean optics and replace diffusers, as required.
3. Check for any obvious flaws in the microprocessor electronics.
4. Inspect the purge air system and replace filters as required.
5. Inspect terminations at the sensors and microprocessor.
6. Inspect alignment of sensors and realign if necessary.

B. Visible Emissions Observations

Periodic visual emissions observations in accordance with 40 CFR 63.1350(e) are required for each finish mill without a bag leak detection systems or if the bag leak detection system is down, malfunctioning, or removed from service. The periodic visual emissions observation requirements of 40 CFR 63.1350(e) are outlined below.

1. Visual emissions observations of the mill sweep and air separator particulate matter control device (PMCD) are conducted each day that the affected source is in operation and the bag leak detection system is non-functional.
2. The procedures of Method 22 of appendix A of part 60 will be used for all visual emissions observations.
3. The duration of the Method 22 test is six minutes.
4. If visible emissions are observed, conduct a follow-up Method 22 test within 24 hours of the end of the Method 22 test in which visible emissions were observed (ref. Settlement Agreement between USEPA and APCA, Case No. 99-1322).
5. If visible emissions are observed during the follow-up Method 22 test, conduct a Method 9 test. The duration of the Method 9 test is 30 minutes.
6. The appropriate corrective actions outlined in section 6 below will be initiated within one-hour after any visual emissions observation.

6. CORRECTIVE ACTIONS

The corrective actions provided in this section were developed to satisfy the requirements of 40 CFR 63.1350(e)(1). The procedures outlined below must be initiated within one-hour of observing visual emissions as outlined in 40 CFR 63.1350(e).

A. Immediate Response Procedures

The following actions will be taken within one-hour of observing visual emissions following the Method 22 procedures.

1. Record the time and location of the visual emissions observation;

2. Inform Environmental Engineer (or other responsible personnel) of the occurrence of a visual emissions observation including time and location;

3. Initiate all appropriate inspection procedures listed in section 4 above.

B. Subsequent Response Procedures

The following response procedures will be initiated if the Method 9 test conducted as a result of two consecutive visual emissions observations indicates an exceedance of the opacity limit.

1. Based on the results of the inspection, initiate maintenance as appropriate; and

2. Record duration of excess emissions event and maintenance performed on the particulate matter control device as required by 40 CFR 63.10(b)(2).

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SYSTEM: Storage and Material Handling Systems

EQUIPMENT: Raw Material, Clinker, Finished Product Storage Bins; Conveying System Transfer Points; Bagging Systems; and Bulk Loading and Unloading Systems

PURPOSE: The purpose of this procedure is to provide air quality protection measures, achieve emissions limits, and satisfy NESHAP Subpart LLL requirements for development of operations and maintenance procedures. This procedure also explains the regulatory standards, monitoring requirements, and operation, inspection and maintenance procedures necessary to ensure on-going compliance with applicable standards.

1. INTRODUCTION

A. The raw material, clinker, and finished product storage systems consists of both storage silos and surge bins. Affected sources include only those raw material, clinker, and finished product storage bins that meet the EPA definition of a bin. EPA has defined a bin as "a man-made enclosure for storage of raw materials, clinker, or finished product prior to further processing."

B. Emissions from storage bins occur as a result bin loading and unloading as well as entrainment of dust particles from air circulation in the bin. Stack emissions from raw material, clinker, and finished product storage bins are controlled with fabric filter dust collectors. Fugitive emissions from raw material and clinker storage systems are controlled with containment structures that provide a total enclosure.

C. Conveying systems are used to transfer raw materials, solid fuels, clinker, and finished product from one piece of equipment or location to another location within the facility. Affected sources that comprise these systems include feeders, belt conveyors, bucket elevators, and pneumatic systems.

D. Stack emissions from conveying system transfer points are controlled with fabric filter dust collectors. Dust suppression of fugitive sources is sometimes accomplished through the use of enclosures and drop chutes at transfer points.

E. The bagging and bulk loading and unloading systems include cement packaging and bulk loadout via railcar and truck.

F. Dust generated during bagging and bulk loading and unloading is collected and vented to dust collectors. Fugitive emissions from bagging and bulk loading and unloading operations are contained via loading spouts to the extent possible.

2. REGULATORY OVERVIEW

Standards affecting the storage and material handling systems include limits on the opacity of discharges from conveyor system transfer points; raw material, clinker, and finished product storage bins; bagging and bulk loading and unloading systems; and dust collectors controlling these sources.

A. Opacity

Opacity from each conveyor system transfer points; raw material, clinker, and finished product storage bins; bagging and bulk loading and unloading systems is limited to 10 percent based on a six-minute average.

3. OPERATING PROCEDURES

A. Opacity

Each affected source with uncontrolled emissions that have the potential to exceed the 10 percent opacity limit are equipped with fabric filter control equipment to ensure compliance with the NESHAP standard. As such, affected sources will ensure on-going compliance with the opacity limit by properly operating each particulate matter control device at all times that the corresponding affected source is in operation. A variety of fabric filter dust collectors are utilized depending on the characteristic of the system and emissions being controlled. In each case, however, the key operating parameters of fabric filter control systems affecting the opacity of emissions are the same.

1. Pressure Drop.

The baghouse is operated to maintain a pressure drop across the system within a range of 2 to 8 in. w.c. The pressure drop is an indication of filter cake formation, which impacts the effectiveness of particulate control. Filter cake formation is function of the bag cleaning cycle. The frequency and duration of bag cleaning is set to maintain the desired pressure drop.

2. Cleaning Air Pressure.

The cleaning pressure is maintained between 60 to 100 psig to allow for proper cleaning of the bags.

4. MAINTENANCE AND INSPECTION PROCEDURES

The maintenance and inspection procedures outlined below focus on those systems that could impact the ability of the affected source to meet applicable Subpart LLL standards. These procedures are also intended to satisfy the requirements of 40 CFR 63.1350(a)(3).

A. Dust Collectors

1. Periodic Inspection Procedures

The following inspection procedures have been developed to ensure proper maintenance of certain components of affected dust collectors that are critical to the ability of affected sources to achieve applicable emission limits.

The frequency of these inspection procedures will vary based on historical inspection results, maintenance history, and operating schedule. As a general guideline, the periodic inspection procedures listed below are performed weekly for dust collectors that are continuously operated and monthly for dust collectors that operate intermittently.

a. If the dust collector is equipped with a functioning pressure drop indicator, verify that the dust collector is operating within the appropriate range;

b. Verify that the dust collector and immediate ductwork in good working order by conducting a visual inspection;

c. Verify that the following dust collector components are operational: bag cleaning mechanism, fans, timing controls, and dust removal system.

2. Additional Inspection Procedures

The following inspection procedures have been developed for preventative maintenance of certain components of affected dust collectors that are critical to the ability of each affected source to achieve applicable emission limits.

The frequency of these inspection procedures will vary based on historical inspection results, maintenance history, and operating schedule. As a general guideline, the periodic inspection procedures listed below will be performed on an annual basis.

a. Verify integrity of containment structures including housing and piping (i.e. check for wear and/or leakage);

b. Check the cleaning sequence of the dust collector;

c. Inspect bags for leaks and wear.

3. Maintenance Procedures

Depending upon the outcome of periodic inspections, preventative maintenance may be necessary. The specific preventative maintenance measures taken will vary depending upon observations made during periodic inspections and may include any of the following -

a. Repair/replacement of filter bags;

b. Repair/replace leaks in the containment structure of the dust collector or immediate ductwork.

5. PERIODIC MONITORING PROCEDURES

The periodic monitoring procedures outlined below are consistent with Subpart LLL standards. These procedures are intended to satisfy the requirements of 40 CFR 63.1350(e).

A. Visible Emissions Observations

Periodic visual emissions observations in accordance with 40 CFR 63.1350(a) are required for each affected source subject to the provisions of 40 CFR 63.1348. Refer to Appendix 6 for a list of affected sources and associated control equipment subject to this requirement. Note that this requirement does not apply to totally enclosed conveying system transfer points.

The periodic visual emissions observation requirements of 40 CFR 63.1350(a)(4) are outlined below.

1. Visual emissions observations are conducted periodically while the affected source is in operation. The frequency for visual emissions varies according to the following:

a. Initially, visual emissions observations must be conducted on each affected source on a monthly basis;

b. If no visible emissions are observed in six consecutive monthly tests for any affected source, the frequency of visible emissions observations may be decreased from monthly to semi-annually for that affected source.

c. If no visible emissions are observed during the semi-annual test for any affected source, the frequency of visible emissions observations may be decreased from semi-annually to annually for that affected source.

d. If visible emissions are observed during any semi-annual or annual test, visible emissions observations of that affected

source must resume on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.

2. The procedures of Method 22 of appendix A of part 60 will be used for all visual emissions observations.

3. The duration of the Method 22 test is one minute.

4. If visible emissions are observed during any Method 22 test, conduct a 6-minute Method 9 test. The Method 9 test must begin within one hour of any observation of visible emissions.