

STATE OF MISSOURI



DEPARTMENT OF NATURAL RESOURCES

MISSOURI AIR CONSERVATION COMMISSION

PERMIT TO CONSTRUCT

Under the authority of RSMo 643 and the Federal Clean Air Act the applicant is authorized to construct the air contaminant source(s) described below, in accordance with the laws, rules and conditions as set forth herein.

Permit Number: 022009 - 005 Project Number: 2008-09-036

Parent Company: Lafarge North America, Inc.

Parent Company Address: 15100 E. Courtney Atherton Road, Sugar Creek, MO 64058

Installation Name: Lafarge North America, Inc.

Installation Address: 2620 N. Hwy 291, Sugar Creek, MO 64058

Location Information: Jackson County, S14, T50N, R32W

Application for Authority to Construct was made for:

The installation of two screens and associated equipment. This review was conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*.

-
- Standard Conditions (on reverse) are applicable to this permit.
- Standard Conditions (on reverse) and Special Conditions are applicable to this permit.

FEB. - 6, 2009

EFFECTIVE DATE


DIRECTOR OR DESIGNEE
DEPARTMENT OF NATURAL RESOURCES

STANDARD CONDITIONS:

Permission to construct may be revoked if you fail to begin construction or modification within two years from the effective date of this permit. Permittee should notify the Air Pollution Control Program if construction or modification is not started within two years after the effective date of this permit, or if construction or modification is suspended for one year or more.

You will be in violation of 10 CSR 10-6.060 if you fail to adhere to the specifications and conditions listed in your application, this permit and the project review. In the event that there is a discrepancy between the permit application and this permit, the conditions of this permit shall take precedence. Specifically, all air contaminant control devices shall be operated and maintained as specified in the application, associated plans and specifications.

You must notify the departments' Air Pollution Control Program of the anticipated date of start up of this (these) air contaminant source(s). The information must be made available not more than 60 days but at least 30 days in advance of this date. Also, you must notify the Department of Natural Resources Regional office responsible for the area within which you are located within 15 days after the actual start up of this (these) air contaminant source(s).

A copy of this permit and permit review shall be kept at the installation address and shall be made available to Department of Natural Resources' personnel upon request.

You may appeal this permit or any of the listed special conditions to the Administrative Hearing Commission (AHC), P.O. Box 1557, Jefferson City, MO 65102, as provided in RSMo 643.075.6 and 621.250.3. If you choose to appeal, you must file a petition with the AHC within 30 days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed. If it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the AHC.

If you choose not to appeal, this certificate, the project review and your application and associated correspondence constitutes your permit to construct. The permit allows you to construct and operate your air contaminant source(s), but in no way relieves you of your obligation to comply with all applicable provisions of the Missouri Air Conservation Law, regulations of the Missouri Department of Natural Resources and other applicable federal, state and local laws and ordinances.

The Air Pollution Control Program invites your questions regarding this air pollution permit. Please contact the Construction Permit Unit at (573) 751-4817. If you prefer to write, please address your correspondence to the Missouri Department of Natural Resources, Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102-0176, attention: Construction Permit Unit.

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Permit No.	
Project No.	2008-09-036

SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

The special conditions listed in this permit were included based on the authority granted the Missouri Air Pollution Control Program by the Missouri Air Conservation Law (specifically 643.075) and by the Missouri Rules listed in Title 10, Division 10 of the Code of State Regulations (specifically 10 CSR 10-6.060). For specific details regarding conditions, see 10 CSR 10-6.060 paragraph (12)(A)10. "Conditions required by permitting authority."

Lafarge North America, Inc.
Jackson County, S14, T50N, R32W

1. Emission Limitation – Particulate Matter Less than Ten (10) Microns in Diameter (PM₁₀)
 - A. Lafarge North America, Inc. shall emit less than 15.0 tons of PM₁₀ in any consecutive 12 month period from the equipment/activities of this permit. The equipment/activities are listed below in table 1.

Table 1: PM₁₀ Emissions Limit Equipment List

Emission Units	Equipment Description
EP01	Screen #2
EP02	Feeder for Screen #2
EP03	Product Conveyor #1 for Screen #2
EP04	Product Conveyor #2 for Screen #2
EP05	Product Conveyor #3 for Screen #2
EP06	Screen #1
EP07	Feeder for Screen #1
EP08	Product Conveyor #1 for Screen #1
EP09	Product Conveyor #2 for Screen #1
EP10	Product Conveyor #3 for Screen #1
EP11	Storage Pile for Screen #2
EP12	Diesel Engine for Screen #2 (181 hp)
EP13	Diesel Engine for Screen #1 (125 hp)

- B. Lafarge North America, Inc. shall maintain an accurate record of PM₁₀ emitted into the atmosphere from the equipment/activities in Table 1. Attachment A or an equivalent form shall be used for this purpose. Composite PM₁₀ emission factors were developed for the equipment/activities and included in Attachment A.
2. Lafarge North America, Inc. shall control dust from the vehicular activity areas of the storage piles created by the products from Screen #2 by using documented watering, chemical dust suppressants or paving.
 - A. If using documented watering, the following conditions would apply.
 1. The water application rate shall be 30 gallons per 1000 square feet at least once every four (4) hours.

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Permit No.	
Project No.	2008-09-036

SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

2. Meteorological precipitation of any kind, (e.g. a quarter inch or more rainfall, sleet, snow and/or freeze thaw conditions) which is sufficient in the amount or condition to achieve control of fugitive emissions from these areas while the areas are in use, may be substituted for water application.
 3. Watering may also be suspended when the ground is frozen, during periods of freezing conditions when watering would be inadvisable for traffic safety reasons or when there will be no traffic on the roads.
 4. Lafarge North America, Inc. shall maintain a log that documents daily water applications. This log shall include, but is not limited to, dates and volumes of water application. The log shall also record rationale for not applying water on days the areas are in use (e.g. meteorological situations, precipitation events, freezing, etc.)
 5. Lafarge North America, Inc. shall keep a record of tank size, total area of vehicular activity area to be watered and the resultant number of fills necessary to accomplish the required application rate. Lafarge North America, Inc. shall also keep a record of watering equipment breakdowns and repairs.
- B. If using chemical dust suppressants, the following conditions would apply.
1. The suppressant (such as magnesium chloride, calcium chloride, lignofulfonates, etc.) shall be applied in accordance with the manufacturer's suggested application rate and re-applied as necessary to achieve control of fugitive emissions from these areas.
 2. Lafarge North America, Inc. shall keep records of the time, date and the amount of material applied for each application of chemical dust suppressant on these areas.
- C. If paving is to be used, the following conditions would apply.
1. Lafarge North America, Inc. shall pave the specified vehicular activity areas around the storage piles with materials such as asphalt, concrete and/or other material(s) approved by the Air Pollution Control Program.
 2. Maintenance and/or repair of the surface shall be conducted as necessary to ensure that the physical integrity of the pavement is adequate to control fugitive emissions from these areas while the plant is operating.
 3. Lafarge North America, Inc. shall pave the affected haul roads and vehicular activity areas within thirty (30) days after the startup of the equipment in Table 1. This 30-day deadline to pave may be

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Permit No.	
Project No.	2008-09-036

SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

extended upon approval of the director. Until the paving is completed, Lafarge North America, Inc. shall apply chemical dust suppressants or documented watering.

3. Lafarge North America, Inc. shall maintain all records required by this permit for not less than five (5) years and shall make them available immediately to any Missouri Department of Natural Resources' personnel upon request.
4. Lafarge North America, Inc. Shall report to the Air Pollution Control Program Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten (10) days after any exceedances of the limitations imposed by this permit.

REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT AND OPERATE
SECTION (5) REVIEW

Project Number: 2008-09-036
Installation ID Number: 095-0030
Permit Number:

Lafarge North America, Inc.
2620 N. Hwy 291
Sugar Creek, MO 64058

Complete: October 17, 2008

Parent Company:
Lafarge North America, Inc.
15100 E. Courtney Atherton Road
Sugar Creek, MO 64058

Jackson County, S14. T50N, R32W

REVIEW SUMMARY

- Lafarge North America, Inc. has applied for authority to construct two (2) screens, six (6) conveyors, two (2) feeders and two (2) diesel engines.
- Hazardous Air Pollutant (HAP) emissions are expected from the proposed diesel engines in negligible amounts.
- Subpart OOO, *Standards of Performance for Nonmetallic Mineral Processing Plants*, of the New Source Performance Standards (NSPS) applies to the proposed equipment. Subpart IIII, *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines*, of the New Source Performance Standards (NSPS) does not apply to the diesel engines because the engines were manufactured before April 1, 2006.
- None of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) or the Maximum Achievable Control Technology (MACT) regulations apply to the proposed equipment. Subpart ZZZZ, *National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*, of the MACT does not apply to the diesel engines because the diesel engines have site ratings less than 500 brake horsepower.
- No air pollution control equipment is being used in association with the new equipment.
- This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of all pollutants are conditioned below de minimis levels.
- This installation is located in Jackson County, an attainment area for all criteria air pollutants.

- This installation is on the List of Named Installations [10 CSR 10-6.020(3)(B), Table 2].
- Ambient air quality modeling was not performed since the conditioned potential emissions of the application are below de minimis levels.
- Emissions testing is not required for the proposed equipment.
- A modification to its Part 70 Operating Permit is required for this installation within 1 year of equipment startup.
- Approval of this permit is recommended with special conditions.

INSTALLATION DESCRIPTION

Lafarge North America, Inc. operates both a Portland Cement plant and an aggregate production plant at this site. The Portland cement plant is referred to as the Sugar Creek site while the aggregate production plant is referred to as the Courtney Ridge site. The Portland Cement plant and the aggregate production plant are considered part of the same installation and the installation is considered a major source for both construction and operating permits.

A Part 70 Operating Permit was issued to the installation in September, 2000 (OP2000-099) which included both the aggregate and the cement plant. However, the installation applied for a Part 70 operating permit renewal in 2005 that only included the cement plant. This project is currently being evaluated by the Air Pollution Control Program. The installation also applied for and received a basic operating permit for the aggregate plant in March, 2008. Since both plants are considered part of the same installation, both plants should have to be included in the same operating permit. After the issuance of this permit, Lafarge North America shall submit a revised Part 70 Operating Permit Application within one year of startup of equipment that includes equipment from both plants.

The following permits have been issued to Lafarge North America, Inc. from the Air Pollution Control Program.

Table 2: Previous Permits Issued to the Installation (095-0030)

Permit Number	Description
0184-055	A Section (5) permit issued for the replacement of a finish mill with a higher capacity finish mill.
0790-002	A Section (5) permit to replace up to 10% of the well water used for cooling with non-hazardous wastewater from other industries.
0891-005	A Section (5) permit for the processing of non-hazardous separated solid industrial wastes
0891-005Am	Amendment to Permit No. 0891-005 to revise special conditions.
0891-005A	Amendment to Permit No. 0891-005 to revise special conditions.
1192-016	Section (5) permit for a new hopper and weigh feeder for clay.
0596-027	Section (5) permit for the construction of a deep limestone mine.
0897-019	Section (8) permit for the construction of a new preheater/precalciner cement plant at the existing installation.
0897-019A	Amendment to Permit No. 0897-019 to revise special conditions to reflect design changes in the new cement plant.
0897-019B	Amendment to Permit No. 0897-019 to revise language in the permit to allow for an increase in the maximum daily amount of aggregate production.
0897-019C	Amendment to Permit No. 0897-019 to revise the special conditions to address differences between the new ceent plant as originally proposed and the as-built plant.
012002-004	Section (5) permit for the construction of a new clinker reclaim system at the old Portland Cement plant.
082004-016	Section (5) permit for the use of alternate fuels in the preheater/precalciner cement kiln.
072004-028	Section (5) permit issued for the installation of a chlorine bypass system on the preheater/precalciner cement kiln.
112004-014	Section (5) permit for the installation of a hopper and screw conveyor to reclaim weathered clinker.
0897-019D	Section (8) permit to amend PM ₁₀ limits.
092005-015	Section (5) permit for the construction of a blended cement system.
062006-002	Section (5) permit to add kiln dust loading.
082004-016A	Amendment to Permit No. 082004-015 to increase the amount of landfill gas that can be combusted in the kiln.
082004-016B	Amendment to Permit No. 082004-015 to allow the use of alternative fuels in the cement kiln.

PROJECT DESCRIPTION

The installation proposes to install two screens and associated conveyors and diesel engines at its aggregate plant. Screen #1 has a maximum hourly design rate of 105 tons per hour and will be placed at the end of the aggregate production process to screen the final product. Three (3) product conveyors will be used with Screen #1, and they will load product into existing storage piles. Screen #2 has a maximum hourly design rate of 300 tons per hour and will be placed at the beginning of the aggregate production process (before the primary crusher). Three (3) product conveyors will be used with Screen #2 and they will load product into new storage piles. The screened aggregates will then be loaded into haul trucks and hauled to the primary crusher. The haul road used for this has been previously permitted. Since the hauling will be bottlenecked by

the primary crusher, the traffic on this haul road is not expected to increase beyond previously permitted numbers. Screen #1 and its conveyors will be powered by a 181 horsepower diesel engine and Screen #2 and its conveyors will be powered by a 125 horsepower diesel engine.

No control devices will be used with the proposed equipment.

EMISSIONS/CONTROLS EVALUATION

The PM₁₀ emission factors for the screens were obtained from the Environmental Protection Agency (EPA) document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition, section 11.19.2 (8/04). PM₁₀ emissions from the wind erosion of the new storage piles and the load-in to storage pile by conveyors were calculated from equations in AP-42, section 13.2.4. (11/06). Controlled emission factors were used for these sources because the installation had previously tested and confirmed that the inherent moisture content of the processed aggregates is greater than 1.5 wt. %.

PM₁₀ emission factors for vehicular activity around the new storage piles were calculated from equations in AP-42, section 13.2.2 (11/06). A 90% control efficiency was given for the use of documented watering, chemical suppressants or paving. Emissions from the diesel engines were calculated from emission factors in AP-42, section 3.3 (10/96).

Lafarge North America, Inc. accepted a limit of 15.0 tons per year of PM₁₀ so increment and NAAQS analysis would not be required. Attachment A contains composite emission factors that can be used to calculate and track annual PM₁₀ emissions.

Potential emissions of the application represent the potential of the new equipment, assuming continuous operation (8760 hours per year.) The following table provides an emissions summary for this project.

Table 3: Emissions Summary (tons per year)

Pollutant	Regulatory De Minimis Levels	¹Existing Potential Emissions	Existing Actual Emissions (2007 EIQ)	Potential Emissions of the Project	²New Project Conditioned Potential
PM ₁₀	15.0	639.17	188.38	18.67	<15.0
SO _x	40.0	3,807.95	362.51	2.82	2.26
NO _x	40.0	2,668	1736.2	42.95	34.43
VOC	40.0	131.98	92.11	3.51	2.81
CO	100.0	1164.28	549.22	9.25	7.42
HAPs	10.0/25.0	64.11	8.89	0.04	0.03

Note 1: Existing potential emissions for the installation were obtained by adding installation potential emissions from permit 062006-002 (Project 2005-09-045) and the potential emissions of projects 2006-03-055, 2006-06-004 and 2006-09-087.

Note 2: New project conditioned potential for PM₁₀ based on voluntary limit. All other pollutants proportionally reduced.

PERMIT RULE APPLICABILITY

This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of all pollutants are conditioned to below de minimis levels.

APPLICABLE REQUIREMENTS

Lafarge North America, Inc. shall comply with the following applicable requirements. The Missouri Air Conservation Laws and Regulations should be consulted for specific record keeping, monitoring, and reporting requirements. Compliance with these emission standards, based on information submitted in the application, has been verified at the time this application was approved. For a complete list of applicable requirements for your installation, please consult your operating permit.

GENERAL REQUIREMENTS

- *Submission of Emission Data, Emission Fees and Process Information*, 10 CSR 10-6.110
The emission fee is the amount established by the Missouri Air Conservation Commission annually under Missouri Air Law 643.079(1). Submission of an Emissions Inventory Questionnaire (EIQ) is required June 1 for the previous year's emissions.
- *Operating Permits*, 10 CSR 10-6.065
- *Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin*, 10 CSR 10-6.170
- *Restriction of Emission of Visible Air Contaminants*, 10 CSR 10-6.220
- *Restriction of Emission of Odors*, 10 CSR 10-2.070.

SPECIFIC REQUIREMENTS

- *New Source Performance Regulations*, 10 CSR 10-6.070 – *New Source Performance Standards (NSPS) for Nonmetallic Mineral Processing Plants*, 40 CFR Part 60, Subpart OOO.
- *Restriction of Emission of Sulfur Compounds*, 10 CSR 10-6.260

AMBIENT AIR QUALITY IMPACT ANALYSIS

Ambient air quality modeling was not performed since the conditioned potential emissions of the application are below de minimis levels.

STAFF RECOMMENDATION

On the basis of this review conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*, I recommend this permit be granted with special conditions.

Chia-Wei Young
Environmental Engineer

Date

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated August 6, 2008, received September 5, 2008, designating Lafarge North America, Inc. as the owner and operator of the installation.
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.
- Kansas City Regional Office Site Survey.

Attachment A - PM₁₀ Compliance Worksheet

Lafarge North America, Inc.
 Jackson County (S14, T50N, R32W)
 Project Number: 2008-09-036
 Installation ID Number: 095-0030
 Permit Number: _____

This sheet covers the month of _____

Emission Units	Description	Monthly Throughput (tons)	Composite Emission Factor (lbs/ton)	¹ Total Monthly Emissions (tons)
EP01, 02, 03, 04, 05, 11, and 13	Screen #2 and associated feeders, conveyors, diesel engine and storage piles		0.0116	
EP06, 07, 08, 09, 10 and 12	Screen #1 and associated feeders, conveyors and diesel engine		0.0076	
²Total Project Monthly PM₁₀ Emissions (tons) =				
Total Project Monthly PM₁₀ Emissions from the Previous Eleven (11) Months (ton) =				
³Total Project Annual (12-Month) PM₁₀ Emissions (tons) =				

Notes

- (1) Total Monthly Emissions (tons) is calculated by multiplying the Monthly Throughput (tons) by the Composite Emission Factor (lbs/ton) and dividing by 2,000.
- (2) Total Project Monthly Emissions (tons) calculated by summing the Total Monthly Emissions (tons/month) of each group of equipment.
- (3) Total Project Annual (12-Month) Emissions (tons) calculated by adding Total Project Monthly Emissions (tons) of the current month and the Total Project Monthly Emissions (tons) of the previous eleven (11) months.

Ms. Sarah Wallace
Environmental Manager
Lafarge North America
2620 N. Hwy 291
Sugar Creek, MO 64058

RE: New Source Review Permit - Project Number: 2008-09-036

Dear Ms. Wallace:

Enclosed with this letter is your permit to construct. Please study it carefully. Also, note the special conditions, if any, on the accompanying pages. The document entitled, "Review of Application for Authority to Construct," is part of the permit and should be kept with this permit in your files. Operation in accordance with these conditions, your new source review permit application and with your amended operating permit is necessary for continued compliance. The reverse side of your permit certificate has important information concerning standard permit conditions and your rights and obligations under the laws and regulations of the State of Missouri.

If you have any questions regarding this permit, please do not hesitate to contact Chia-Wei Young, at the departments' Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102 or at (573) 751-4817. Thank you for your attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Kendall B. Hale
New Source Review Unit Chief

KBH:cwyl

Enclosures

c: Kansas City Regional Office
PAMS File: 2008-09-036

Permit Number:

Ms. Sarah Wallace
Environmental and Public Affairs Manager
Lafarge North America, Inc.
15100 E Courtney-Atherton Rd
Sugar Creek, MO 64058

RE: New Source Review Permit Correction - Permit Number: 022009-005A
Project Number: 2010-07-003; Installation ID: 095-0321

Dear Ms. Wallace:

Your request for a determination of permit need for replacing Screen 1, the 105 ton per hour portable Pep screening plant (EP-06), with a 100 ton per hour portable Deister screening plant at Lafarge Quarry 2620 N. Hwy 291, Sugar Creek, MO, was reviewed by my staff. During the review, it became apparent that the engines powering Screen 1 and Screen 2 were incorrectly identified in the permit 022009-005. Also, inherent moisture and best management practices were incorrectly applied in the calculations.

Permit 022009-005 is being corrected to consistently refer to the 181 horsepower engine as EP-13 which powers Screen 2, and the 125 horsepower engine as EP-12 which powers Screen 1. Corrections also include applying the controls of 1.5% by weight inherent moisture and Best Management Practices to all appropriate processes, as well as using diesel with a sulfur content of 0.05% weight. Please replace the respective pages of permit 022009-005 with the attached pages. The attached pages reflect the corrections, and the installation of the new screen.

The proposed screening plant has a lower maximum hourly design rate and only two conveyors, compared to the higher maximum hourly design rate and three conveyors of the existing plant that was permitted under 022009-005. Due to the reduction in the number of conveyors, Conveyor #6 (EP-10) will no longer exist.

Installation 095-0321 (aggregate) and installation 095-0030 (Portland cement) are considered one installation for permitting purposes and is defined as a major source under construction and operating permits. Even though the installation is major, potential emissions of particulate matter less than ten microns in aerodynamic diameter (PM_{10}) from the corrected project itself (including inherent control from moisture content) are 5.58 tons per year, which is less than the de minimis level. According to Missouri State Rule 10 CSR 10-6.061, *Construction Permits*

Exemptions, like-kind replacements are exempt from the construction permit rule. Like-kind replacement is described in Missouri State Rule 10 CSR 10-6.061(3)(B)3 as follows:

"Replacement of like-kind emission units that do not involve either any appreciable change either in the quality or nature, or any increase either in the potential to emit or the effect on air quality, of the emissions of any air contaminant."

According to Missouri State Rule 10 CSR 10-6.061, *Construction Permit Exemptions*, **no construction permit is required** from the Missouri Air Pollution Control Program.

Emissions are summarized in Table 1. Potential Emissions of the Corrected Project include the new 100 ton per hour screen and controls. Conditioning the potential PM₁₀ emissions is no longer necessary. However, NO_x emissions have been conditioned, with other pollutants proportionately reduced.

Table 1: Emissions Summary (tons per year)

Pollutant	Regulatory De Minimis Levels	Potential Emissions of the Original Project	Conditioned Potential Emissions of the Original Project	Potential Emissions of the Corrected Project	Conditioned Potential Emissions of the Corrected Project
PM ₁₀	15.0	18.67	<15.0	7.00	6.52
SO _x	40.0	2.82	2.26	0.14	0.13
NO _x	40.0	42.95	34.43	42.95	<40.0
VOC	40.0	3.51	2.81	3.51	3.27
CO	100.0	9.25	7.42	9.25	8.62
HAPs	10/25.0	8.89	0.03	0.04	0.04

You are still obligated to meet all applicable air pollution control rules, Department of Natural Resources' rules, or any other applicable federal, state, or local agency regulations. Specifically, you should avoid violating 10 CSR 10-6.045 *Open Burning Requirements*, 10 CSR 10-2.070, *Restriction of Emission of Odors*, and 10 CSR 10-6.170 *Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin*.

Please be aware that New Source Performance Standards (NSPS) Subpart OOO *Standards of Performance for Nonmetallic Mineral Processing Plants* applies to this new screening plant. Any testing, monitoring, or record keeping required by NSPS must be followed in order for this facility to remain in compliance. A modification to the Part 70 Operating Permit is required for this installation within 1 year of equipment startup.

Ms. Sarah Wallace
Page Three

A copy of this letter should be kept with the unit and be made available to Department of Natural Resources' personnel upon verbal request. If you have any questions regarding this determination, please contact David Little at the Department's Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102 or by telephone at (573) 751-4817. Thank you for your time and attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Kyra L. Moore
Permits Section Chief

KLM:dll

c: Kansas City Regional Office
PAMS File: 2010-07-003

Page No.	3
Permit No.	022009-005A
Project No.	2010-07-003

SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

The special conditions listed in this permit were included based on the authority granted the Missouri Air Pollution Control Program by the Missouri Air Conservation Law (specifically 643.075) and by the Missouri Rules listed in Title 10, Division 10 of the Code of State Regulations (specifically 10 CSR 10-6.060). For specific details regarding conditions, see 10 CSR 10-6.060 paragraph (12)(A)10. "Conditions required by permitting authority."

Lafarge North America, Inc.
Jackson County, S14, T50N, R32W

1. **Superseding Condition**
The conditions of this permit supersede all special conditions found in the previously issued construction permit (022009-005) from the Air Pollution Control Program.
2. **Emission Limitation – Oxides of Nitrogen (NO_x)**
A. Lafarge North America, Inc. shall emit less than 40.0 tons of NO_x in any consecutive 12 month period from the equipment/activities of this permit. The equipment/activities are listed below in Table 1.

Table 1: PM₁₀ Emissions Limit Equipment List

Emission Units	Equipment Description
EP01	Screen #2
EP02	Feeder for Screen #2
EP03	Product Conveyor #1 for Screen #2
EP04	Product Conveyor #2 for Screen #2
EP05	Product Conveyor #3 for Screen #2
EP06	Screen #1
EP07	Feeder for Screen #1
EP08	Product Conveyor #1 for Screen #1
EP09	Product Conveyor #2 for Screen #1
EP11	Storage Pile for Screen #2
EP12	Diesel Engine for Screen #1 (125 hp)
EP13	Diesel Engine for Screen #2 (181 hp)

- B. Lafarge North America, Inc. shall maintain an accurate record of NO_x emitted into the atmosphere from the equipment/activities in Table 1. Attachment A or an equivalent form shall be used for this purpose.
3. Lafarge North America, Inc. shall control dust from the vehicular activity areas of the storage piles created by the products from Screen #2 and #1 by using documented watering, chemical dust suppressants or paving.
 - A. If using documented watering, the following conditions would apply.
 1. The water application rate shall be 30 gallons per 1000 square feet at least

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Permit No.	022009-005A
Project No.	2010-07-003

SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

2. once every four (4) hours.
 2. Meteorological precipitation of any kind, (e.g. a quarter inch or more rainfall, sleet, snow and/or freeze thaw conditions) which is sufficient in the amount or condition to achieve control of fugitive emissions from these areas while the areas are in use, may be substituted for water application.
 3. Watering may also be suspended when the ground is frozen, during periods of freezing conditions when watering would be inadvisable for traffic safety reasons or when there will be no traffic on the roads.
 4. Lafarge North America, Inc. shall maintain a log that documents daily water applications. This log shall include, but is not limited to, dates and volumes of water application. The log shall also record rationale for not applying water on days the areas are in use (e.g. meteorological situations, precipitation events, freezing, etc.)
 5. Lafarge North America, Inc. shall keep a record of tank size, total area of vehicular activity area to be watered and the resultant number of fills necessary to accomplish the required application rate. Lafarge North America, Inc. shall also keep a record of watering equipment breakdowns and repairs.
- B. If using chemical dust suppressants, the following conditions would apply.
1. The suppressant (such as magnesium chloride, calcium chloride, lignofulfonates, etc.) shall be applied in accordance with the manufacturer's suggested application rate and re-applied as necessary to achieve control of fugitive emissions from these areas.
 2. Lafarge North America, Inc. shall keep records of the time, date and the amount of material applied for each application of chemical dust suppressant on these areas.
- C. If paving is to be used, the following conditions would apply.
1. Lafarge North America, Inc. shall pave the specified vehicular activity areas around the storage piles with materials such as asphalt, concrete and/or other material(s) approved by the Air Pollution Control Program.
 2. Maintenance and/or repair of the surface shall be conducted as necessary to ensure that the physical integrity of the pavement is adequate to control fugitive emissions from these areas while the plant is operating.
 3. Lafarge North America, Inc. shall pave the affected haul roads and vehicular activity areas within thirty (30) days after the startup of the equipment in Table 1. This 30-day deadline to pave may be extended upon approval of the director. Until the paving is completed, Lafarge

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Permit No.	022009-005A
Project No.	2010-07-003

SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

North America, Inc. shall apply chemical dust suppressants or documented watering.

4. Lafarge North America, Inc. shall maintain all records required by this permit for not less than five (5) years and shall make them available immediately to any Missouri Department of Natural Resources' personnel upon request.
5. Lafarge North America, Inc. shall report to the Air Pollution Control Program Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten (10) days after any exceedances of the limitations imposed by this permit.

REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT AND OPERATE
SECTION (5) REVIEW

Project Number: 2010-07-003
Installation ID Number: 095-0030
Permit Number: 022009-005A

Lafarge North America, Inc.
2620 N. Hwy 291
Sugar Creek, MO 64058

Complete: July 1, 2010

Parent Company:
Lafarge North America, Inc.
15100 E. Courtney Atherton Rd.
Sugar Creek, MO 64058

Jackson County, S14, T50N, R32W

REVIEW SUMMARY

- Lafarge North America, Inc. has applied for authority to construct two (2) screens, five (5) conveyors, two (2) feeders, and two (2) diesel engines.
- Hazardous Air Pollutant (HAP) emissions are expected from the proposed diesel engines in negligible amounts.
- Subpart OOO, *Standards of Performance for Nonmetallic Mineral Processing Plants*, of the New Source Performance Standards (NSPS) applies to the proposed equipment. Subpart IIII, *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines*, of the New Source Performance Standards (NSPS) does not apply to the diesel engines because the engines were manufactured before April 1, 2006.
- None of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) apply to the proposed equipment. Maximum Achievable Control Technology (MACT) subpart ZZZZ, *National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*, applies to the diesel engines.
- Inherent moisture and Best Management Practices are being used as controls.
- This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of all pollutants are conditioned below de minimis levels.
- This installation is located in Jackson County, an attainment area for all criteria air pollutants.

The following permits have been issued to Lafarge North America, Inc. from the Air Pollution Control Program.

Table 2: Previous Permits Issued to the Installation (095-0030)

Permit Number	Description
0184-055	A Section (5) permit issued for the replacement of a finish mill with a higher capacity finish mill.
0790-002	A Section (5) permit to replace up to 10% of the well water used for cooling with non-hazardous wastewater from other industries.
0891-005	A Section (5) permit for the processing of non-hazardous separated solid industrial wastes
0891-005Am	Amendment to Permit No. 0891-005 to revise special conditions.
0891-005A	Amendment to Permit No. 0891-005 to revise special conditions.
1192-016	Section (5) permit for a new hopper and weigh feeder for clay.
0596-027	Section (5) permit for the construction of a deep limestone mine.
0897-019	Section (8) permit for the construction of a new preheater/precalciner cement plant at the existing installation.
0897-019A	Amendment to Permit No. 0897-019 to revise special conditions to reflect design changes in the new cement plant.
0897-019B	Amendment to Permit No. 0897-019 to revise language in the permit to allow for an increase in the maximum daily amount of aggregate production.
0897-019C	Amendment to Permit No. 0897-019 to revise the special conditions to address differences between the new ceent plant as originally proposed and the as-built plant.
012002-004	Section (5) permit for the construction of a new clinker reclaim system at the old Portland Cement plant.
082004-016	Section (5) permit for the use of alternate fuels in the preheater/precalciner cement kiln.
072004-028	Section (5) permit issued for the installation of a chlorine bypass system on the preheater/precalciner cement kiln.
112004-014	Section (5) permit for the installation of a hopper and screw conveyor to reclaim weathered clinker.
0897-019D	Section (8) permit to amend PM ₁₀ limits.
092005-015	Section (5) permit for the construction of a blended cement system.
062006-002	Section (5) permit to add kiln dust loading.
082004-016A	Amendment to Permit No. 082004-015 to increase the amount of landfill gas that can be combusted in the kiln.
082004-016B	Amendment to Permit No. 082004-015 to allow the use of alternative fuels in the cement kiln.

PROJECT DESCRIPTION

The installation proposes to install two screens and associated conveyors and diesel engines at its aggregate plant. Screen #1 has a maximum hourly design rate of 100 tons per hour and will be placed at the end of the aggregate production process to screen the final product. Two (2) product conveyors will be used with Screen #1, and they will load product into existing storage piles. Screen #2 has a maximum hourly design rate of 300 tons per hour and will be placed at the beginning of the aggregate production process (before the primary crusher). Three (3) product conveyors will be used with Screen #2 and they will load product into new storage piles. The screened aggregates will then be loaded into haul trucks and hauled to the primary crusher. The haul road used for this has been previously permitted. Since the hauling will be bottlenecked by the primary crusher, the traffic on this haul road is not expected to increase

beyond previously permitted numbers. Screen #1 and its conveyors will be powered by a 125 horsepower diesel engine and Screen #2 and its conveyors will be powered by a 181 horsepower diesel engine.

Inherent moisture and best management practices will be used with the proposed equipment.

EMISSIONS/CONTROLS EVALUATION

The PM₁₀ emission factors for the screens were obtained from the Environmental Protection Agency (EPA) document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition, section 11.19.2 (8/04). PM₁₀ emissions from the wind erosion of the new storage piles and the load-in to storage pile by conveyors were calculated from equations in AP-42, section 13.2.4. (11/06). Controlled emission factors were used for these sources because the installation had previously tested and confirmed that the inherent moisture content of the processed aggregates is greater than 1.5 wt. %.

PM₁₀ emission factors for vehicular activity around the new storage piles were calculated from equations in AP-42, section 13.2.2 (11/06). A 90% control efficiency was given for the use of documented watering, chemical suppressants or paving. Emissions from the diesel engines were calculated from emission factors in AP-42, section 3.3 (10/96).

Potential emissions of the application represent the potential of the new equipment, assuming continuous operation (8,760 hours per year.) The following table provides an emissions summary for this project.

Table 3: Emissions Summary (tons per year)

Pollutant	Regulatory <i>De Minimis</i> Levels	¹ Existing Potential Emissions	Existing Actual Emissions (2007 EIQ)	Potential Emissions of the Project	² New Project Conditioned Potential
PM ₁₀	15.0	639.17	188.38	7.00	6.52
SO _x	40.0	3,807.95	362.51	0.14	0.13
NO _x	40.0	2,668	1736.2	42.95	<40.0
VOC	40.0	131.98	92.11	3.51	3.27
CO	100.0	1164.28	549.22	9.25	8.62
HAPs	10.0/25.0	64.11	8.89	0.04	0.04

Note 1: Existing potential emissions for the installation were obtained by adding installation potential emissions from permit 062006-002 (Project 2005-09-045) and the potential emissions of projects 2006-03-055, 2006-06-004 and 2006-09-087.

Note 2: Corrected project conditioned potential for NO_x based on voluntary limit. All other pollutants proportionally reduced.

