

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:

072016-001

Project Number: 2015-11-050

Installation Number: 099-0113

Parent Company: Simpson Construction Materials, LLC

Parent Company Address: P.O. Box 250, Valley Park, MO 63088

Installation Name: Simpson Construction Materials, LLC – Barnhart Quarry

Installation Address: 850 Sulphur Springs Road, Sulphur Springs, MO 63052

Location Information: Jefferson County (S32, T42N, R6E)

Application for Authority to Construct was made for:

The installation of thirty (30) new conveyors/ stackers/ bins and one (1) new screen at the existing generic crushing plant. This review was conducted in accordance with Section (6), 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.


Prepared by
Ryan Schott
New Source Review Unit


Director of Designee
Department of Natural Resources
JUL 07 2016

Effective Date

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 Department's Air Pollution Control Program of the anticipated date of startup of these air contaminant sources. The information must be made available within 30 days of actual startup. 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 startup of these air contaminant sources.

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 sources(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.

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."

Simpson Construction Materials, LLC – Barnhart Quarry
Jefferson County (S32, T42N, R6E)

1. **Superseding Condition**
The conditions of this permit supersede all Special Conditions of Construction Permit 062012-003, previously issued by the Air Pollution Control Program.
2. **Generic Plant Designation and Maximum Combined Hourly Design Rate**
Simpson Construction Materials, LLC – Barnhart Quarry has been designated to be a Generic Plant Operation. The combined Maximum Hourly Design Rate (MHDR) of each of the following generic equipment types shall not exceed the rates and numbers listed in Table 1.

Table 1. Generic Equipment

Equipment Type	Combined MHDR (tons/hour)	Maximum Number of Units
Primary Crusher	500	1
Grizzly Feeder	500	1
Crushers (including Primary)	2,000	4
Conveyors, Stackers, Bins	25,000	50
Screens	3,500	7

3. **Generic Plant Equipment Identification Requirement**
 - A. Simpson Construction Materials, LLC – Barnhart Quarry shall submit the following information to the Air Pollution Control Program and the St. Louis Regional Office within 15 days of equipment startup.
 - 1) A master list of all equipment that will be permitted for use with the generic plant. This master list shall include at least the following information for each piece of equipment:
 - a) Manufacturer's name
 - b) Model Number
 - c) Actual MHDR
 - d) Date of Manufacture
 - e) Any other additional information that is necessary to uniquely identify the equipment
 - 2) A list of core equipment that will always be utilized with the generic plant. The core equipment associated with the generic plant shall include at least one primary unit that controls the rate of the process flow (e.g. a primary crusher or primary screen).

SPECIAL CONDITIONS:

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

- 3) A determination of the applicability of 40 CFR Part 60, Subpart 000, *Standards of Performance for Nonmetallic Mineral Processing Plants*, for each piece of equipment indicating whether each piece of equipment is subject to Subpart 000 and justification for this determination.
 - 4) Simpson Construction Materials, LLC – Barnhart Quarry shall notify the Air Pollution Control Program and the St. Louis Regional Office when new equipment is added to the master list and when core equipment is changed, within 30 days of the change.
 - B. Simpson Construction Materials, LLC – Barnhart Quarry shall maintain a list of the specific equipment currently being utilized with the generic plant. Any arrangement of the generic plant's equipment must be such that the core equipment is not bypassed in the process flow.
4. **Equipment Identification Requirement**
Simpson Construction Materials, LLC – Barnhart Quarry shall maintain easily read permanent markings on each component of the plant. These markings shall be the equipment's serial number or a company assigned identification number that uniquely identifies the individual component.
5. **Best Management Practices Requirement**
Simpson Construction Materials, LLC – Barnhart Quarry shall control fugitive emissions from all of the haul roads and vehicular activity areas at this site by performing Best Management Practices, as defined in Attachment AA.
6. **Ambient Air Impact Limitation**
 - A. Simpson Construction Materials, LLC – Barnhart Quarry shall not cause an exceedance of the National Ambient Air Quality Standard (NAAQS) for particulate matter less than ten microns in aerodynamic diameter (PM₁₀) of 150.0 µg/m³ 24-hour average in ambient air.
 - B. Simpson Construction Materials, LLC – Barnhart Quarry shall demonstrate compliance with Special Condition 6.A using Attachments A & B or another equivalent form that has been approved by the Air Pollution Control Program, including an electronic form. Simpson Construction Materials, LLC – Barnhart Quarry shall account for the impacts from other sources of PM₁₀ as instructed in Attachments A & B.
 - C. Simpson Construction Materials, LLC – Barnhart Quarry is exempt from the requirements of Special Condition 6.B when Simpson Construction Materials, LLC – Barnhart Quarry is the only plant operating at this site.

SPECIAL CONDITIONS:

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

7. Annual PM_{2.5} Emission Limitation
 - A. Simpson Construction Materials, LLC – Barnhart Quarry shall emit less than 10.0 tons of PM_{2.5} in any consecutive 12-month period from the entire installation.
 - B. Simpson Construction Materials LLC, - Barnhart Quarry shall demonstrate compliance with Special Condition 7.A. using Attachment C or another equivalent form that has been approved by the Air Pollution Control Program, including an electronic form.

8. Moisture Content Testing Requirement
 - A. Simpson Construction Materials, LLC – Barnhart Quarry shall verify that the moisture content of the processed rock is greater than or equal to 1.5% by weight.
 - B. Testing shall be conducted according to the method prescribed by the American Society for Testing Materials (ASTM) D-2216, C-566, or another method approved by the Director.
 - C. The initial test shall be conducted no later than 45 days after the start of operation. A second test shall be performed the calendar year following the initial test during the months of July or August.
 - D. The test samples shall be taken from rock that has been processed by the plant or from each source of aggregate (e.g. quarry).
 - E. The written analytical report shall include the raw data and moisture content of each sample, the test date and the original signature of the individual performing the test. The report shall be filed on-site or at the Simpson Construction Materials, LLC – Barnhart Quarry main office within 30 days of completion of the required test.
 - F. If the moisture content of either of the two tests is less than the moisture content in Special Condition 8.A, another test may be performed within 15 days of the noncompliant test. If the results of that test is less than the moisture content in Special Condition 8.A, Simpson Construction Materials, LLC – Barnhart Quarry shall either:
 - 1) Apply for a new permit to account for the revised information, or
 - 2) Submit a plan for the installation of wet spray devices to the Compliance/ Enforcement Section of the Air Pollution Control Program within 10 days of the second noncompliant test. The wet spray devices shall be installed and operational within 40 days of the second noncompliant test.

SPECIAL CONDITIONS:

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

- G. In lieu of testing, Simpson Construction Materials, LLC – Barnhart Quarry may obtain test results that demonstrate compliance with the moisture content in Special Condition 8.A from the supplier of the aggregate.

- 9. **Minimum Distance to Property Boundary Requirement**
The primary crusher (EP-5A) shall be located at least 1,150 feet from the nearest property boundary.

- 10. **Primary Equipment Requirement**
Simpson Construction Materials, LLC – Barnhart Quarry shall process all rock through the primary crusher (EP-5A). Bypassing the primary crusher is prohibited.

- 11. **Emergency Generator Operation Restriction**
Simpson Construction Materials, LLC – Barnhart Quarry shall only operate the emergency diesel generators (EG-1 & EG-2) during emergency situations and for short periods of time to perform maintenance and operational readiness testing. The maximum annual operating hours shall not exceed 500 hours.

- 12. **Record Keeping Requirement**
Simpson Construction Materials, LLC – Barnhart Quarry shall maintain all records required by this permit for not less than five years and make them available to any Missouri Department of Natural Resources' personnel upon request.

- 13. **Reporting Requirement**
Simpson Construction Materials, LLC – Barnhart Quarry shall report to the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than 10 days after any exceedances of the limitations imposed by this permit.

REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT AND OPERATE
SECTION (6) REVIEW

Project Number: 2015-11-050
Installation ID Number: 099-0113
Permit Number:

Installation Address:

Simpson Construction Materials, LLC –
Barnhart Quarry
850 Sulphur Springs Road
Sulphur Springs, MO 63052
Jefferson County (S32, T42N, R6E)

Parent Company:

Simpson Construction Materials, LLC
P.O. Box 250
Valley Park, MO 63088

REVIEW SUMMARY

- Simpson Construction Materials, LLC – Barnhart Quarry has applied for authority to install thirty (30) new conveyors/ stackers/ bins and one (1) new screen at the existing generic crushing plant.
- The application was deemed complete on December 17, 2015.
- The only expected HAP emissions are the result of emergency generator diesel combustion.
- 40 CFR 60 Subpart OOO – *Standards of Performance for Nonmetallic Mineral Processing Plants* applies to the equipment.
- None of the NESHAPs apply to this installation. None of the currently promulgated MACT regulations apply to the proposed equipment.
- Moisture content testing is being used to control PM, PM₁₀, and PM_{2.5} emissions from the equipment in this permit.
- This review was conducted in accordance with Section (6) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of PM_{2.5} are conditioned below the de minimis level.
- This installation is located in Jefferson County, a nonattainment area for the 8-hour ozone standard and the PM_{2.5} standard and an attainment area for all other criteria pollutants. Part of Jefferson County is a nonattainment area for lead. This installation is not located in the Jefferson County lead nonattainment area.
- This installation is not on the List of Named Installations found in 10 CSR 10-6.020(3)(B), Table 2. The installation's major source level is 250 tons per year and fugitive emissions are not counted toward major source applicability.

- Emissions testing is not required for the equipment.
- Submittal of an application to amend your Basic Operating Permit is required within 30 days of equipment startup.
- Approval of this permit is recommended with special conditions.

INSTALLATION DESCRIPTION

Simpson Construction Materials, LLC currently operates a generic rock-crushing plant at Barnhart Quarry in Jefferson County. The plant has a maximum production rate of 500 tons per hour. Equipment includes four (4) crushers, one (1) grizzly feeder, six (6) screens, twenty additional (20) conveyors/ stackers/ bins, and a 17,600 gallon diesel storage tank. Simpson Construction Materials, LLC – Barnhart Quarry currently has a Basic Operating Permit (Project No. 2014-06-025) that expires June 4, 2019.

The following New Source Review permits have been issued to Simpson Construction Materials, LLC – Barnhart Quarry from the Air Pollution Control Program:

Table 2: Permit History

Permit Number	Description
062012-003	Generic Rock-Crushing Plant

PROJECT DESCRIPTION

Simpson Construction Materials, LLC – Barnhart Quarry is requesting to install additional equipment at its existing generic crushing plant. The number of conveyors/ stackers/ bins will be increased from 20 units (15,000 tons per hour) to a total of 50 units (25,000 tons per hour), and the number of screens will be increased from 6 units (3,000 tons per hour) to 7 units (3,500 tons per hour). The new equipment will be installed in parallel with existing equipment; therefore, the overall maximum design rate of the generic plant will remain at 500 tons per hour. The plant will continue to use electric power, but it will now have stationary diesel engines to be used only in case of emergency power outages.

EMISSIONS/ CONTROLS EVALUATION

Emissions for the project were calculated using emission factors found in the United States EPA document AP-42 *Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources*, Fifth Edition (AP-42).

Emissions from the rock-crushing and handling equipment were calculated using emission factors from AP-42 Section 11.19.2 *Crushed Stone Processing and Pulverized Mineral Processing* (August 2004). The controlled emission factors were used because

the inherent moisture content of the crushed rock is greater than 1.5% by weight.

Emissions from the emergency diesel engines were calculated using emission factors from AP-42 Section 3.4 *Large Stationary Diesel and All Stationary Dual-fuel Engines* (October 1996). Per Special Condition 11, the emergency diesel engines were assumed to operate for a maximum of 500 hours annually.

Emissions from haul roads and vehicular activity areas were calculated using the predictive equation from AP-42 Section 13.2.2 *Unpaved Roads* (November 2006). A 90% control efficiency was applied to the emissions calculations for the use of BMPs. Emissions from load-in and load-out of storage piles were calculated using the predictive equation from AP-42 Section 13.2.4 *Aggregate Handling and Storage Piles* (November 2006). Emissions from wind erosion of storage piles were calculated using an equation found in the Air Pollution Control Program's Emissions Inventory Questionnaire Form 2.8 *Storage Pile Worksheet*.

The following table provides an emissions summary for this project. Existing potential emissions were taken from the installation's previous Construction Permit (062012-003). Existing actual emissions were taken from the installation's 2014 EIQ. Potential emissions of the project represent the potential of the new equipment, assuming continuous operations (8,760 hours per year for all but the generators). Potential emissions of the installation represent the total potential emissions of all new and existing equipment at the installation, assuming continuous operation. New installation conditioned potential emissions represent the emissions of the installation, after taking a voluntary PM_{2.5} de minimis limit.

Table 3: Emissions Summary (tons per year)

Pollutant	Regulatory De Minimis Levels	Existing Potential Emissions	Existing Actual Emissions (2014 EIQ)	Potential Emissions of the Project	Potential Emissions of the Installation	New Installation Conditioned Potential
PM	25.0	43.22	N/D	14.34	296.08	75.50
PM ₁₀	15.0	<15.0	1.02	4.85	100.25	25.63
PM _{2.5}	10.0	5.52	0.30	1.16	38.76	<10.0
SO _x	40.0	N/A	N/D	1.45	1.45	1.45
NO _x	40.0	N/A	N/D	11.49	11.49	11.49
VOC	40.0	0.22	N/D	0.29	0.29	0.29
CO	100.0	N/A	N/D	3.05	3.05	3.05
Total HAPs	25.0	N/A	N/D	0.01	0.01	0.01

N/A = Not Applicable; N/D = Not Determined

AMBIENT AIR QUALITY IMPACT ANALYSIS

An ambient air quality impact analysis (AAQIA) was performed for the entire plant to determine the impact of the pollutants listed in Table 4. The Air Pollution Control Program requires an AAQIA of PM₁₀ for all asphalt, concrete, and rock-crushing plants regardless of the level of PM₁₀ emissions if a permit is required. An AAQIA is required for other pollutants if their emissions exceed their respective de minimis or screening

model action level (SMAL). The AAQIA was performed using the Air Pollution Control Program’s generic nomographs and when appropriate the EPA modeling software AERSCREEN. For each pollutant that was modeled, the maximum concentration that occurs at or beyond the site boundary was compared to the NAAQS or RAL for the pollutant. If during continuous operation the modeled concentration of a pollutant is greater than the applicable NAAQS or RAL, the plant’s production is limited to ensure compliance with the standard. Although an AAQIA was performed for the existing equipment in the previous Construction Permit (062012-003), an updated AAQIA was performed for all existing equipment and new equipment in this project.

This plant uses BMPs to control emissions from haul roads and vehicular activity areas, so emissions from these sources were not included in the AAQIA. Instead they were addressed as a background concentration of 20 µg/m³ of PM₁₀ in accordance with the Air Pollution Control Program’s BMPs interim policy.

Table 4: Ambient Air Quality Impact Analysis

Pollutant	NAAQS (µg/m ³)	Averaging Time	^a Maximum Modeled Impact (µg/m ³)	Limited Impact (µg/m ³)	Background (µg/m ³)	^b Daily Limit (tons/day)
PM ₁₀ (same) ^c	150.0	24-hour	116.56	N/A	20.0	N/A
PM ₁₀ (separate) ^d	150.0	24-hour	N/A	25.89	20.0	5,000

N/A = Not Applicable

^aModeled impact at maximum capacity with controls

^bIndirect limit based on compliance with NAAQS

^cSolitary operation or operation with other plants that are owned by Simpson Construction Materials, LLC

^dOperation with other plants that are not owned by Simpson Construction Materials, LLC

OPERATING SCENARIOS

Simpson Construction Materials – Barnhart Quarry is permitted to operate with other plants located at this site as long as the NAAQS is not exceeded. The following scenarios explain how Simpson Construction Materials, LLC – Barnhart Quarry shall demonstrate compliance with the NAAQS.

- When Simpson Construction Materials, LLC – Barnhart Quarry is the only plant operating at this site, Simpson Construction Materials, LLC is not required to track the plant’s ambient impact.
- When plants that are owned by Simpson Construction Materials, LLC, which are referred to as same owner plants, are located at this site, Simpson Construction Materials, LLC must calculate the daily impact of each plant and limit the total impact of all plants below the NAAQS.
- When plants that are not owned by Simpson Construction Materials, LLC, which are referred to as separate owner plants, are located at this site, Simpson

Construction Materials, LLC must account for the impacts of these plants as a background concentration and add it to the total impact of all plants owned by Simpson Construction Materials, LLC that are operating at the site. This total is limited below the NAAQS. Simpson Construction Materials, LLC will limit the total impact of all plants they own and operate at the site to 25.89 $\mu\text{g}/\text{m}^3$ when any plants they do not own are located at the site. Simpson Construction Materials, LLC is not permitted to operate with any plant that is now owned by Simpson Construction Materials, LLC that has a separate owner background greater than 104.11 $\mu\text{g}/\text{m}^3$.

PERMIT RULE APPLICABILITY

This review was conducted in accordance with Section (6) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of $\text{PM}_{2.5}$ are conditioned below the de minimis level.

APPLICABLE REQUIREMENTS

Simpson Construction Materials, LLC – Barnhart Quarry 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.

GENERAL REQUIREMENTS

- *Submission of Emission Data, Emission Fees and Process Information*, 10 CSR 10-6.110
 - Per 10 CSR 10-6.110(4)(B)2.B(II) and (4)(B)2.C(II) a full EIQ is required for the first full calendar year the equipment (or modifications) approved by this permit are in operation.
- *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 10-6.165

SPECIFIC REQUIREMENTS

- *New Source Performance Regulations, 10 CSR 10-6.070*
 - 40 CFR Part 60, Subpart OOO – *Standards of Performance for Nonmetallic Mineral Processing Plants*

STAFF RECOMMENDATION

On the basis of this review conducted in accordance with Section (6), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*, it is recommended that this permit be granted with special conditions.

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated November 19, 2015, received November 20, 2015, designating Simpson Construction Materials, LLC as the owner and operator of the installation.

Attachment AA: Best Management Practices

Haul roads and vehicular activity areas shall be maintained in accordance with at least one of the following options when the portable plant is operating.

1. Pavement

- A. The operator shall pave the area with materials such as asphalt, concrete or other materials approved by the Air Pollution Control Program. The pavement will be applied in accordance with industry standards to achieve control of fugitive emissions¹ while the plant is operating.
- B. Maintenance and repair of the road surface will be conducted as necessary to ensure that the physical integrity of the pavement is adequate to achieve control of fugitive emissions from these areas while the plant is operating.
- C. The operator shall periodically wash or otherwise clean all of the paved portions of the haul roads as necessary to achieve control of fugitive emissions from these areas while the plant is operating.

2. Application of Chemical Dust Suppressants

- A. The operator shall apply a chemical dust suppressant (such as magnesium chloride, calcium chloride, lignosulfonates, etc.) to unpaved areas.
- B. The quantities of the chemical dust suppressant shall be applied and maintained in accordance with the manufacturer's recommendation (if available) and in sufficient quantities to achieve control of fugitive emissions from these areas while the plant is operating.
- C. The operator shall record the time, date and the amount of material applied for each application of the chemical dust suppressant agent on the above areas. The operator shall keep these records with the plant for not less than five (5) years and make these records available to Department of Natural Resources' personnel upon request.

3. Application of Water-Documented Daily

- A. The operator shall apply water to unpaved areas. Water shall be applied at a rate of 100 gallons per day per 1,000 square feet of unpaved or untreated surface area while the plant is operating.
- B. Precipitation may be substituted for watering if the precipitation is greater than one quarter of one inch and is sufficient to control fugitive emissions.
- C. 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.
- D. The operator shall record the date and volume of water application or the amount of precipitation that day. The operators shall also record the rationale for not watering (e.g. freezing conditions or not operating).
- E. The operator shall keep these records with the plant for not less than five (5) years, and the operator shall make these records available to Department of Natural Resources' personnel upon request.

¹ For purposes of this document, Control of Fugitive Emissions means to control particulate matter that is not collected by a capture system and visible emissions to the extent necessary to prevent violations of the air pollution law or regulation. (Note: control of visible emission is not the only factor to consider in protection of ambient air quality.)

APPENDIX A

Abbreviations and Acronyms

%	percent	m/s	meters per second
°F	degrees Fahrenheit	Mgal	1,000 gallons
acfm	actual cubic feet per minute	MW	megawatt
BACT	Best Available Control Technology	MHDR	maximum hourly design rate
BMPs	Best Management Practices	MMBtu	Million British thermal units
Btu	British thermal unit	MMCF	million cubic feet
CAM	Compliance Assurance Monitoring	MSDS	Material Safety Data Sheet
CAS	Chemical Abstracts Service	NAAQS ...	National Ambient Air Quality Standards
CEMS	Continuous Emission Monitor System	NESHAPs	National Emissions Standards for Hazardous Air Pollutants
CFR	Code of Federal Regulations	NO_x	nitrogen oxides
CO	carbon monoxide	NSPS	New Source Performance Standards
CO₂	carbon dioxide	NSR	New Source Review
CO_{2e}	carbon dioxide equivalent	PM	particulate matter
COMS	Continuous Opacity Monitoring System	PM_{2.5}	particulate matter less than 2.5 microns in aerodynamic diameter
CSR	Code of State Regulations	PM₁₀	particulate matter less than 10 microns in aerodynamic diameter
dscf	dry standard cubic feet	ppm	parts per million
EQ	Emission Inventory Questionnaire	PSD	Prevention of Significant Deterioration
EP	Emission Point	PTE	potential to emit
EPA	Environmental Protection Agency	RACT	Reasonable Available Control Technology
EU	Emission Unit	RAL	Risk Assessment Level
fps	feet per second	SCC	Source Classification Code
ft	feet	scfm	standard cubic feet per minute
GACT	Generally Available Control Technology	SDS	Safety Data Sheet
GHG	Greenhouse Gas	SIC	Standard Industrial Classification
gpm	gallons per minute	SIP	State Implementation Plan
gr	grains	SMAL	Screening Model Action Levels
GWP	Global Warming Potential	SO_x	sulfur oxides
HAP	Hazardous Air Pollutant	SO₂	sulfur dioxide
hr	hour	tph	tons per hour
hp	horsepower	tpy	tons per year
lb	pound	VMT	vehicle miles traveled
lbs/hr	pounds per hour	VOC	Volatile Organic Compound
MACT	Maximum Achievable Control Technology		
µg/m³	micrograms per cubic meter		

Mr. Tom Simpson
General Manager
Simpson Construction Materials, LLC – Barnhart Quarry
P.O. Box 250
Valley Park, MO 63088

RE: New Source Review Permit - Project Number: 2015-11-050

Dear Mr. Simpson:

Enclosed with this letter is your permit to construct. Please study it carefully and refer to Appendix A for a list of common abbreviations and acronyms used in the permit. Also, note the special conditions 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 your 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 were adversely affected by this permit decision, you may be entitled to pursue an appeal before the administrative hearing commission pursuant to Sections 621.250 and 643.075.6 RSMo. To appeal, you must file a petition with the administrative hearing commission within thirty 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 administrative hearing commission, whose contact information is: Administrative Hearing Commission, United States Post Office Building, 131 West High Street,

Mr Tom Simpson
Page Two

Third Floor, P.O. Box 1557, Jefferson City, Missouri 65102, phone: 573-751-2422,
fax: 573-751-5018, website: www.oa.mo.gov/ahc.

If you have any questions regarding this permit, please do not hesitate to contact Ryan Schott, at the Department of Natural Resources' 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

Susan Heckenkamp
New Source Review Unit Chief

SH:rsj

Enclosures

c: St. Louis Regional Office
PAMS File: 2015-11-050

Permit Number: