

Missouri Department of dnr.mo.gov

NATURAL RESOURCES

Michael L. Parson, Governor

Carol S. Comer, Director

SEP 17 2019

Mr. Joe Cook
Mine Engineer
Limestone Creek Quarry
3253 E. Chestnut Expy #1
Springfield. MO 65802

RE: New Source Review Permit - Project Number: 2019-06-012

Dear Mr. Cook:

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 and your new source review permit application are necessary for continued compliance. In addition, please note that Limestone Creek Quarry cannot operate with any other plants that have ambient impact limits based on the Air Pollution Control Program's nomographs. Please refer to the permits of any plant that you are operating with to see if their respective permits contain an ambient impact limit. 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.

This permit may include requirements with which you may not be familiar. If you would like the department to meet with you to discuss how to understand and satisfy the requirements contained in this permit, an appointment referred to as a Compliance Assistance Visit (CAV) can be set up with you. To request a CAV, please contact your local regional office or fill out an online request. The regional office contact information can be found at the following website: <http://dnr.mo.gov/regions/>. The online CAV request can be found at <http://dnr.mo.gov/cav/compliance.htm>.

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

If you have any questions regarding this permit, please do not hesitate to contact Kathy Kolb, at the department's 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



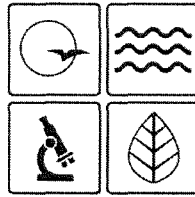
Susan Heckenkamp
New Source Review Unit Chief

SH:kka

Enclosures

c: Southwest Regional Office
PAMS File: 2019-06-012

Permit Number: **092019-007**



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: **092019-007**

Project Number: 2019-06-012
Installation ID: 057-0014

Parent Company: Joplin Stone Co.

Parent Company Address: 3253 E. Chestnut Expy #1, Springfield, MO 65802

Installation Name: Limestone Creek Quarry

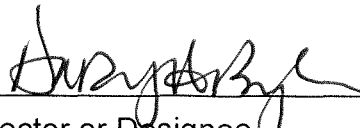
Installation Address: Intersection of County Road 95 and Route Z
Lockwood, MO 65682

Location Information: Dade County, S21 T30N R27W

Application for Authority to Construct was made for:
Construction of a new rock crushing plant at Limestone Creek Quarry. 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.



Director or Designee
Department of Natural Resources
SEP 17 2019

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 Enforcement and Compliance Section of 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 Enforcement and Compliance Section of the Department's Air Pollution Control Program of the anticipated date of start up of this (these) air contaminant source(s). The information must be made available within 30 days of actual startup. Also, you must notify the Department's 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 the permit application and this permit and permit review shall be kept at the installation address and shall be made available to Department's 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 using the contact information below.

Contact Information:

Missouri Department of Natural Resources
Air Pollution Control Program
P.O. Box 176
Jefferson City, MO 65102-0176
(573) 751-4817

The regional office information can be found at the following website:

<http://dnr.mo.gov/regions/>

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 (3)(E). "Conditions required by permitting authority."

1. **Best Management Practices Requirement**
Limestone Creek Quarry shall control fugitive emissions from all of the haul roads and vehicular activity areas at this site by performing BMPs as defined in Attachment AA.
2. **Annual Emission Limit**
 - A. Limestone Creek Quarry shall emit less than 15.0 tons of PM₁₀ in any 12-month period from the entire installation which consists of the equipment listed in Table 1 in the Table Section of this permit. The SSM emissions as reported to the Air Pollution Control Program's Compliance/Enforcement Section in accordance with the requirements of 10 CSR 10-6.050 *Start-Up, Shutdown, and Malfunction Conditions* shall be included in the limit.
 - B. Limestone Creek Quarry shall demonstrate compliance with Special Condition 2.A using Attachment A or another equivalent form that has been approved by the Air Pollution Control Program, including an electronic form.
3. **Moisture Content Testing Requirement**
 - A. Limestone Creek Quarry shall verify that the moisture content of the processed rock is greater than or equal to 1.5 percent 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) without the operation of water spray devices on the equipment.
 - 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 Limestone Creek Quarry main office within 30 days of completion of the required tes

SPECIAL CONDITIONS:

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

- F. If the moisture content of either of the two tests is less than the moisture content in Special Condition 3.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 3.A, Limestone Creek 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. Plans may be sent by mail to P.O. Box 176, Jefferson City, MO 65102 or by email at aircompliancereporting@dnr.mo.gov. The wet spray devices shall be installed and operational within 40 days of the second noncompliant test.
4. Primary Equipment Requirement
Limestone Creek Quarry shall process all rock through the primary crusher (EU-03). Bypassing the primary crusher is prohibited.
5. Record Keeping Requirement
Limestone Creek 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.
6. Reporting Requirement
Limestone Creek Quarry shall report to the Air Pollution Control Program, Compliance / Enforcement Section by mail to P.O. Box 176, Jefferson City, MO 65102 or by email at AirComplianceReporting@dnr.mo.gov, 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 (5) REVIEW

Project Number: 2019-06-012
Installation ID Number: 057-0014

Permit Number: 092019-007

Limestone Creek Quarry:
Intersection of County Road 95 and Route Z
Lockwood, MO 65682

Complete: June 7, 2019

Parent Company:
Joplin Stone Co.
3253 E. Chestnut Expy #1
Springfield, MO 65802

Dade County, S21 T30N R27W

PROJECT DESCRIPTION

Limestone Creek Quarry is owned by Joplin Stone Co. The site is located on the southeast corner of intersection of County Road 95 and Route Z in Dade County. They are developing the quarry to provide gravel products to the surrounding area.

Rock will be loaded directly from the muck pile into the crushing plant for processing. The plant will start as a single portable crusher and portable screen. After a year or less, more screens and a second or third crusher may be added. The total MHDR will not exceed 450 tph. Project emissions are based on all equipment in Table 1 and all material being processed through the primary crusher thus limiting all other equipment to a maximum of 450 tph. Haul Road 1 will be the pit haul road and it will be 1,000 feet (riprap to the crusher); Haul Road 2 is the second stage of the pit haul road and is 1,500 feet (crushed rock to storage piles); Haul Road 3 is the customer haul road and is 500 feet long. All unpaved roads and vehicular areas around the stockpiles will use BMPs. Water used to control dust emissions from the roads will be generated by storm water runoff in the pit and stored in a sump pond.

The crushing plant will be tracked to the base of the muck pile in the pit where an excavator will feed the rock into the crushing plant where it will be crushed and sized. The screened rock will be transported to the stock pile by a loader and then sold to the customers. Each portable plant will have its own set of spray bars for dust control. There is no special condition for the spray bars to be operational since Special Condition 3 requires a greater than 1.5% percent moisture content. The test shall be conducted without the operation of water spray devices. The site will have one off-highway truck, two loaders, an excavator and a water truck along with the rock crushing plant.

Limestone Creek Quarry rock crushing/screens plant will be tracked mounted and powered by a diesel engine(s). However they all meet the definition of a nonroad engine as defined in 40 CFR 89.2 and therefore, the emissions of the engines were not included in the project emissions.

This installation is located in Dade County, an attainment/unclassifiable area for all criteria pollutants.

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.

No permits have been issued to Limestone Creek Quarry from the Air Pollution Control Program. There have been various portable plants located there, but none are currently operating there.

TABLES

Table 1: Equipment List

Emission Unit	Equipment Description	MHDR tph
EU-01	Loading into crusher/grizzly	450
EU-02	Grizzly	450
EU-03	Primary Crusher	450
EU-04	Conveyor	450
EU-05	Portable Screen	450
EU-06	Conveyors (2) (a,b)	450
EU-07	Conveyor	450
EU-08	Secondary Crusher	450
EU-09	Conveyor	450
EU-10	Portable Screen	450
EU-11	Conveyors (a,b,c,d) (4)	450
EU-12	High Frequency Screen	450
EU-13	Conveyors (a,b,c) (3)	450
EU-20	Portable Crusher (Trial equipment and temporary operations)	450
EU-21	Portable Screen (Trial equipment and temporary operations)	450
EU-22	Conveyors (4) (a,b,c,d) (Trial Equipment and temporary operations)	450
EU-23	Stacker (4)	450
EU-24a	Load-in Storage Pile	450
EU-24b	Load-out Storage Pile	450
EU-24c	Vehicular Activity	1.8 VMT
EU-24d	Wind Erosion	8 acres
EU-25	Haul Road 1 (Pit) 1500 feet	6.24 VMT
EU-26	Haul Road 2 550 feet	2.29 VMT
EU-27	Haul Road 3 1000 feet	6.09 VMT

The table below summarizes the emissions of this project. The potential emissions of the process equipment, which excluded emissions from haul roads and wind erosion. There are no existing actual emissions since this is a new plant. The potential emissions of the application represent the emissions of all equipment and activities

assuming continuous operation (8760 hours per year). The conditioned potential emissions include emissions from sources that will limit their production to ensure compliance with the annual PM₁₀ de minimis emission limit.

Table 2: Emissions Summary (tons per year)

Air Pollutant	De Minimis Level/SMAL	^a Potential Emissions of Process Equipment	Existing Actual Emissions	^b Potential Emissions of the Application	Conditioned Potential Emissions
PM	25.0	29.41	N/A	171.20	41.56
PM ₁₀	15.0	12.63	N/A	61.79	<15.0
PM _{2.5}	10.0	1.19	N/A	11.88	2.88
SO _x	40.0	N/D	N/A	N/D	N/D
NO _x	40.0	N/D	N/A	N/D	N/D
VOC	40.0	N/D	N/A	N/D	N/D
CO	100.0	N/D	N/A	N/D	N/D
GHG (CO ₂ e)	N/A	N/D	N/A	N/D	N/D
GHG (mass)	N/A	N/D	N/A	N/D	N/D
Total HAPs	25.0	N/D	N/A	N/D	N/D

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

^a Excludes haul road and storage pile emissions

^b Includes haul road and storage pile emissions

EMISSIONS CALCULATIONS

Emissions for the project were calculated as described below and 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 equipment:

- 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 aggregate handling:

- 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 haul roads and vehicular activity areas:

- Calculated using the predictive equation from AP-42 Section 13.2.2 “Unpaved Roads,” November 2006.
- A 90% control efficiency for PM and PM₁₀ and a 74% control efficiency for PM_{2.5} were applied to the emission calculations for the use of BMPs.

Emissions from storage piles:

- Load-in and load-out of storage piles were calculated using the predictive equation from AP-42 Section 13.2.4.
- The moisture content of the aggregate is 1.5% by weight.
- 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."

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 PM₁₀ are conditioned to de minimis levels. Potential emissions of PM are above de minimis levels, but below major levels.

APPLICABLE REQUIREMENTS

Limestone Creek 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.
- No Operating Permit is required for this installation.
- *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

- 40 CFR 60 Subpart OOO, "Standards of Performance for Nonmetallic Mineral Processing Plants" applies to the equipment.
- None of the National Emission Standards for Hazardous Air Pollutants (NESHAPS) or National Emission Standards for Hazardous Air Pollutants for Source Categories

(MACTS) apply to the proposed equipment.

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*, 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 June 6, 2019, received June 7, 2019, designating Joplin Stone Co. 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 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 emissions 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, volume of water application and total surface area of active haul roads or the amount of precipitation that day. The operators shall also record the rational 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.

APPENDIX A

Abbreviations and Acronyms

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