

**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: 072018-003

Project Number: 2018-05-018  
Installation Number: 109-0007

Parent Company: Bailey Quarries, Inc.

Parent Company Address: P.O. Box 430, Republic, MO 65738

Installation Name: Bailey Quarries, Inc. - Chesapeake Quarry

Installation Address: 21959 Highway 174, Mt. Vernon, MO 65738

Location Information: Lawrence County, S21/22/8 27, T28N, R25W

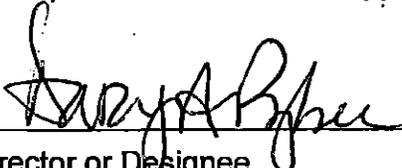
Application for Authority to Construct was made for:

New aggregate screening plant at an existing permitted site. 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.

  
Prepared by  
Jordan Hull  
New Source Review Unit

  
Director or Designee  
Department of Natural Resources

JUL 09 2018

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 (12)(A)10. "Conditions required by permitting authority."*

**Bailey Quarries, Inc. - Chesapeake Quarry**  
**Lawrence County, S21/22/8 27, T28N, R25W**

1. **Wet Suppression Control System Requirement**
  - A. Bailey Quarries, Inc. - Chesapeake Quarry shall install and operate a wet spray device on EP-21 (3 deck screen) and EP-13 (conveyors).
  - B. Watering may be suspended during periods of freezing condition, when use of the wet spray device may damage the equipment. During these conditions, Bailey Quarries, Inc. - Chesapeake Quarry shall adjust the production rate to control emissions from these units. Bailey Quarries, Inc. - Chesapeake Quarry shall record a brief description of such events.
2. **Record Keeping and Reporting Requirements**
  - A. Bailey Quarries, Inc. - Chesapeake Quarry shall maintain all records required by this permit for not less than five years and shall make them available immediately to any Missouri Department of Natural Resources' personnel upon request
  - B. Bailey Quarries, Inc. - Chesapeake Quarry shall report to the Air Pollution Control Program's Compliance/Enforcement Section, by mail at P.O. Box 176, Jefferson City, MO 65102 or by email at [AirComplianceReporting@dnr.mo.gov](mailto:AirComplianceReporting@dnr.mo.gov), no later than 10 days after the end of the month during which any record required by this permit shows an exceedance of a limitation imposed by this permit.

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

Project Number: 2018-05-018  
Installation ID Number: 109-0007  
Permit Number: 072018-003

Installation Address:

Bailey Quarries, Inc. - Chesapeake Quarry  
21959 Highway 174  
Mt. Vernon, MO 65738

Parent Company:

Bailey Quarries, Inc.  
P.O. Box 430  
Republic, MO 65738

Lawrence County, S21/22/ & 27, T28N, R25W

REVIEW SUMMARY

- Bailey Quarries, Inc. - Chesapeake Quarry has applied for authority to construct a new aggregate screening plant.
- The application was deemed complete on May 21, 2018.
- HAP emissions are not expected from the proposed equipment.
- 40 CFR 60 Subpart OOO, "Standards of Performance for Nonmetallic Mineral Processing Plants" does not apply to the proposed equipment in this project as the screen is built pre-1983.
- None of the NESHAPs apply to this installation. None of the currently promulgated MACT regulations apply to the proposed equipment.
- Wet spray devices are being used to control the PM, PM<sub>10</sub>, & PM<sub>2.5</sub> emissions from the equipment in this permit.
- This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. The conditioned potential emissions of all pollutants are conditioned below de minimis. Potential unconditioned emissions of PM are above de minimis level but below the major source level.
- This installation is located in Lawrence 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.

- Ambient air quality modeling was not performed since potential emissions of the application are below de minimis levels.
- Emissions testing is not required for the equipment as a part of this permit. Testing may be required as part of other state, federal or applicable rules.
- An amendment to the most recent Basic Operating Permit is required for this installation within 30 days of commencement of operations.
- Approval of this permit is recommended with special conditions.

### INSTALLATION/PROJECT DESCRIPTION

Bailey Quarries, Inc. owns and operates a limestone rock quarry located at 21959 Highway 174 in Mt. Vernon, MO. The rock crushing operation was permitted in permit 112005-004. Bailey Quarries, Inc. – Chesapeake Quarry would like to add an additional three deck screen and associated conveyors to the current system. The new system has an MHDR of 400 tph. The new screen will be used to screen fine material and is anticipated to run 50% of the operating time. Since the only rock being screened is what is coming through the existing permitted rock crushing system, haul roads and storage pile area have not changed. Water spray devices are being utilized on the deck and conveyors to control particulate emissions.

The following New Source Review permits have been issued to Bailey Quarries, Inc. - Chesapeake Quarry from the Air Pollution Control Program.

Table 1: Permit History

Permit Number	Description
1290-001	New CEMCO impact tertiary crusher and conveyors.
0196-008	Increase production
0399-009	Move plant on property
0399-009A	Amend for co-location
112005-004	Rock crushing- electrosab -BMP

### EMISSIONS/CONTROLS EVALUATION

Emissions from the project equipment was calculated using emission factors from AP-42 Section 11.19.2 "Crushed Stone Processing and Pulverized Mineral Processing," August 2004. Wet spray devices will be used to control particulate matter. The controlled emission factors listed from AP-42 Section 11.19.2 were used to calculate controlled potential emission for this project.

The following table provides an emissions summary for this project. Existing potential emissions were taken from permit 112005-004. Existing actual emissions were taken from the installation's 2017 EIQ. Unconditional potential emissions of the project do not

take into account the use of controls. Potential emissions of the project represent the potential of the new equipment with controls, assuming continuous operation (8760 hours per year).

Table 2: Emissions Summary (tpy)

Pollutant	Regulatory <i>De Minimis</i> Levels	Existing Potential Emissions	Existing Actual Emissions (2017 EIQ)	Unconditioned Potential Emissions of the Project	Conditioned Potential Emissions of the Project
PM	25.0	N/D	N/D	59.57	4.59
PM <sub>10</sub>	15.0	<50	12.75	21.02	1.54
PM <sub>2.5</sub>	10.0	N/D	1.88	2.66	0.16
SO <sub>x</sub>	40.0	N/A	0.00	0.00	0.00
NO <sub>x</sub>	40.0	N/A	0.00	0.00	0.00
VOC	40.0	N/A	0.00	0.00	0.00
CO	100.0	N/A	0.00	0.00	0.00
GHG (CO <sub>2</sub> e)	N/A	N/A	0.00	0.00	0.00
GHG (mass)	N/A	N/A	0.00	0.00	0.00
HAPs	10.0/25.0	N/A	0.00	0.00	0.00

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

#### PERMIT RULE APPLICABILITY

This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. The conditioned potential emissions of all pollutants except PM are below de minimis threshold levels. Potential emissions of PM are above de minimis level but below the major source level.

#### APPLICABLE REQUIREMENTS

Bailey Quarries, Inc. - Chesapeake 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

- An amendment to the most recent Basic Operating Permit is required for this installation within 30 days of commencement of operations.
- *Start-Up, Shutdown, and Malfunction Conditions*, 10 CSR 10-6.050

- *Submission of Emission Data, Emission Fees and Process Information, 10 CSR 10-6.110*
- *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" does not apply to this equipment as it the screen is pre-1983.
- None of the National Emission Standards for Hazardous Air Pollutants (NESHAP) 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

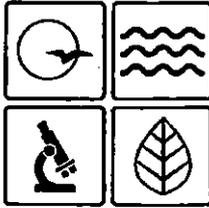
The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated May 4, 2018, received May 7, 2018, designating Bailey Quarries, Inc. as the owner and operator of the installation.

## APPENDIX A

### Abbreviations and Acronyms

<b>%</b> .....percent	<b>Mgal</b> .....1,000 gallons
<b>°F</b> .....degrees Fahrenheit	<b>MW</b> .....megawatt
<b>acfm</b> ..... actual cubic feet per minute	<b>MHDR</b> .....maximum hourly design rate
<b>BACT</b> .....Best Available Control Technology	<b>MMBtu</b> ....Million British thermal units
<b>BMPs</b> ..... Best Management Practices	<b>MMCF</b> ....million cubic feet
<b>Btu</b> .....British thermal unit	<b>MSDS</b> .....Material Safety Data Sheet
<b>CAM</b> ..... Compliance Assurance Monitoring	<b>NAAQS</b> ....National Ambient Air Quality Standards
<b>CAS</b> ..... Chemical Abstracts Service	<b>NESHAPs</b> National Emissions Standards for Hazardous Air Pollutants
<b>CEMS</b> .....Continuous Emission Monitor System	<b>NO<sub>x</sub></b> .....nitrogen oxides
<b>CFR</b> .....Code of Federal Regulations	<b>NSPS</b> .....New Source Performance Standards
<b>CO</b> .....carbon monoxide	<b>NSR</b> .....New Source Review
<b>CO<sub>2</sub></b> .....carbon dioxide	<b>PM</b> .....particulate matter
<b>CO<sub>2e</sub></b> .....carbon dioxide equivalent	<b>PM<sub>2.5</sub></b> .....particulate matter less than 2.5 microns in aerodynamic diameter
<b>COMS</b> ..... Continuous Opacity Monitoring System	<b>PM<sub>10</sub></b> .....particulate matter less than 10 microns in aerodynamic diameter
<b>CSR</b> ..... Code of State Regulations	<b>ppm</b> .....parts per million
<b>dscf</b> .....dry standard cubic feet	<b>PSD</b> .....Prevention of Significant Deterioration
<b>EIQ</b> .....Emission Inventory Questionnaire	<b>PTE</b> .....potential to emit
<b>EP</b> .....Emission Point	<b>RACT</b> .....Reasonable Available Control Technology
<b>EPA</b> .....Environmental Protection Agency	<b>RAL</b> .....Risk Assessment Level
<b>EU</b> .....Emission Unit	<b>SCC</b> .....Source Classification Code
<b>fps</b> .....feet per second	<b>scfm</b> .....standard cubic feet per minute
<b>ft</b> .....feet	<b>SDS</b> .....Safety Data Sheet
<b>GACT</b> ..... Generally Available Control Technology	<b>SIC</b> .....Standard Industrial Classification
<b>GHG</b> ..... Greenhouse Gas	<b>SIP</b> .....State Implementation Plan
<b>gpm</b> .....gallons per minute	<b>SMAL</b> .....Screening Model Action Levels
<b>gr</b> .....grains	<b>SO<sub>x</sub></b> .....sulfur oxides
<b>GWP</b> ..... Global Warming Potential	<b>SO<sub>2</sub></b> .....sulfur dioxide
<b>HAP</b> .....Hazardous Air Pollutant	<b>SSM</b> .....Startup, Shutdown & Malfunction
<b>hr</b> .....hour	<b>tph</b> .....tons per hour
<b>hp</b> .....horsepower	<b>tpy</b> .....tons per year
<b>lb</b> .....pound	<b>VMT</b> .....vehicle miles traveled
<b>lbs/hr</b> .....pounds per hour	<b>VOC</b> .....Volatile Organic Compound
<b>MACT</b> .....Maximum Achievable Control Technology	
<b>µg/m<sup>3</sup></b> .....micrograms per cubic meter	
<b>m/s</b> .....meters per second	



Missouri Department of dnr.mo.gov

# NATURAL RESOURCES

Michael L. Parson, Governor

Carol S. Comer, Director

**JUL 09 2018**

Mr. Jeremy Bailey  
Supervisor  
Bailey Quarries, Inc. - Chesapeake Quarry  
P.O. Box 430  
Republic, MO 65738

RE: New Source Review Permit - Project Number: 2018-05-018

Dear Mr. Bailey:

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 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.

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.oa.mo.gov/ahc](http://www.oa.mo.gov/ahc).



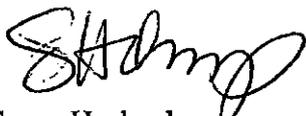
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Mr. Jeremy Bailey  
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If you have any questions regarding this permit, please do not hesitate to contact Jordan Hull, at the Department of Natural Resources' Air Pollution Control Program, P.O. Box 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:jhj

Enclosures

c: Southwest Regional Office  
PAMS File: 2018-05-018

Permit Number: 07 2 0 1 8 - 0 0 3

2018-05-018 Bailey Quarry

	Description:	MHDR (tons/hr):	lb/ton			tons/ year		
			PM EF	PM10 EF	PM2.5 EF	PM Emissions	PM10 Emissions	PM2.5 Emissions
EP-21	Threes deck screen-controlled	400	0.0022	0.00074	0.00005	3.8544	1.29648	0.0876
	uncontrolled	400	0.025	0.0087	0.000587	43.8	15.2424	1.028424
EP-13	conveyors- controlled	400	0.00014	0.000046	0.000013	0.73584	0.241776	0.068328
	uncontrolled	400	0.003	0.0011	0.00031	15.768	5.7816	1.62936

Project Summary	PM	PM10	PM2.5
controlled	4.59024	1.538256	0.155928
uncontrolled	59.568	21.024	2.657784

AP-42 Section 11.19.2 "Crushed Stone Processing and Pulverized Mineral Processing," August 2004.