STATE OF MISSOURI

PERMIT BOOK

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: 062015-005

Project Number: 2015-03-046
Installation ID: PORT-0715

Parent Company: Anchor Stone Company

Parent Company Address: 4124 S. Rockford Avenue, Suite 201, Tulsa, OK 74105

Installation Name: Chapman Quarry PORT-0715

Installation Address: Farm Road 2240 Road, Pierce City, MO 65723

Location Information: Lawrence County, S30 T26N R28W

Application for Authority to Construct was made for:
Installation of a new portable 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.

JUN 10 2015
EFFECTIVE DATE

Kyra L Moore
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 Department's Air Pollution Control Program of the anticipated date of start up of this (these) air contaminant sources(s). 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 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 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.

GENERAL 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."

1. Equipment Identification Requirement
   Chapman Quarry PORT-0715 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. These identification numbers must be submitted to the Air Pollution Control Program no later than 15 days after start-up of the portable rock crushing plant.

2. Relocation of Portable Rock Crushing Plant
   A. Chapman Quarry PORT-0715 shall not be operated at any location longer than 24 consecutive months.

   B. A complete "Portable Source Relocation Request" application must be submitted to the Air Pollution Control Program prior to any relocation of this portable rock crushing plant.
      1) If the portable rock crushing plant is moving to a site previously permitted, and if the circumstances at the site have not changed, then the application must be received by the Air Pollution Control Program at least seven days prior to the relocation.
      2) If the portable rock crushing plant is moving to a new site, or if circumstances at the site have changed (e.g. the site was only permitted for solitary operation and now another plant is located at the site), then the application must be received by the Air Pollution Control Program at least 21 days prior to the relocation. The application must include written notification of any concurrently operating plants.

3. Best Management Practices Requirement
   Chapman Quarry PORT-0715 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.

4. Record Keeping Requirement
   Chapman Quarry PORT-0715 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.

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

5. Reporting Requirement
Chapman Quarry PORT-0715 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.

SITE SPECIFIC 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."

PORT ID Number: PORT-0715
Site ID Number: 109-2561
Site Name: Anchor Stone Co.- Pierce City
Site Address: Farm Road 2240 Road, Pierce City, MO 65723
Site County: Lawrence County S30 T26N R28W

1. Best Management Practices Requirement
   Chapman Quarry PORT-0715 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. Wet Suppression Control System Requirement
   A. Chapman Quarry PORT-0715 shall install and operate wet spray devices on the crushers and the screens.

   B. Watering may be suspended during periods of freezing condition, when use of the wet spray devices may damage the equipment. During these conditions, Chapman Quarry PORT-0715 shall adjust the production rate to control emissions from these units. Chapman Quarry PORT-0715 shall record a brief description of such events.

3. Minimum Distance to Property Boundary Requirement
   The primary emission point, crusher (EP-3) shall be located at least 250 feet from the nearest property boundary.

4. Concurrent Operation Restriction
   Chapman Quarry PORT-0715 is prohibited from operating whenever other plants are located at the site.

5. Primary Equipment Requirement
   Chapman Quarry PORT-0715 shall process all rock through the primary crusher. Bypassing the primary crusher is prohibited.

6. Record Keeping Requirement
   Chapman Quarry PORT-0715 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.

SITE SPECIFIC SPECIAL CONDITIONS:
The permittee is authorized to construct and operate subject to the following special conditions:

7. Reporting Requirement
Chapman Quarry PORT-0715 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.

Attachment AA: Best Management Practices

REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT AND OPERATE
SECTION (6) REVIEW
Project Number: 2015-03-046
Installation ID Number: PORT-0715
Permit Number:

Chapman Quarry PORT-0715
Farm Road 2240 Road
Pierce City, MO 65723

Complete: April 6th, 2015

Parent Company:
Anchor Stone Company
4124 S. Rockford Avenue, Suite 201
Tulsa, OK 74105

Lawrence County, S30 T26N R28W

PROJECT DESCRIPTION

Chapman Quarry is proposing a new portable (PORT-0715) limestone Quarry operation that will be initially located at Farm Road 2240 Road near Pierce City, Missouri in Lawrence County. Limestone will be mined using mobile mining equipment and crushed on-site using a portable crusher plant to produce aggregate base material. The portable crushing plant will be powered by a Caterpillar Model C13 diesel engine and consist of a KPI-JCI Model FT4250 Close Circuit Track Mounted Impact Crusher S/N 412921-412924 with a 4'x12'; 2 deck screen and a 30"x60' conveyor. Aggregate base material will be stockpiled on-site adjacent to the crusher plant and loaded into over-the-road haul trucks by front-end loader for off-site delivery. The primary crusher will be located 250 feet from the property line. The MHDR of the plant will be 175 tons per hour. The rock will cycle through the plant several times to produce the desired material for highway construction use. Total storage pile will be 0.18 acre. Average haul road length from the pit to crusher will be 300 feet and haul road length away from the aggregate stockpile will be 708 feet. Chapman Quarry has proposed using wet spray devices on the crusher and screen.

The plant will be powered by a 440 horsepower diesel engine, however it meets the definition of nonroad engine as defined in 40 CFR 89.2 (1)(i). Therefore, the emissions of the engine were not included in the project emissions.

Attachment AA: Best Management Practices

Table 1: Equipment List (Site ID: 109-2561)

Emission Unit Ref #	Equipment Description	MHDR (tph)	New (N) or Existing (E)?
EP-1	Loading from Pit	175	N
EP-2	Hopper	175	N
EP-3	Crusher	175	N
EP-4	Screening Unit	175	N
EP-5	Conveyor	175	N
EP-6	Stockpile	175	N
EP-7	Haul Road	175	N

The applicant is using one of the methods described in Attachment AA, “Best Management Practices,” to control emissions from haul roads and vehicular activity areas.

This installation is located in Lawrence County, an attainment area for all criteria pollutants.

This installation is not on the List of Named Installations [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 Chapman Quarry PORT-0715 from the Air Pollution Control Program.

TABLES

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, are not site specific and should not vary from site to site. The existing actual emissions were taken from the previous years EIQ. The potential emissions of the application represent the emissions of all equipment and activities assuming continuous operation (8760 hours per year). Conditioned potential emissions account for a voluntary annual PM_{10} de minimis limit

Attachment AA: Best Management Practices

Table 2: Emissions Summary (tons per year)

Air Pollutant	De Minimis Level/SMAL	Potential Emissions of Process Equipment (tons/yr)	Existing Actual Emissions (N/A EIQ)	[a]Potential Emissions of the Application
PM	25.0	3.04	N/A	155.52
PM_{10}	15.0	1.12	N/A	48.40
$PM_{2.5}$	10.0	0.10	N/A	7.42
SO_X	40.0	N/D	N/A	N/D
NO_X	40.0	N/D	N/A	N/D
VOC	40.0	N/D	N/A	N/D
CO	100.0	N/D	N/A	N/D
Total HAPs	25.0	N/D	N/A	N/D

N/A = Not Applicable; N/D = Not Determined
[a]Includes site specific haul road and storage pile emissions

Table 3 summarizes the ambient air quality impact analysis. The maximum modeled impact is the impact of each pollutant when the plant is operating continuously. The 24-hour limited impacts and daily limit are based on compliance with the NAAQS for PM_{10}, however no limits are required.

Table 3: Ambient Air Quality Impact Analysis

Pollutant	NAAQS/ RAL ($\mu g/m^3$)	Averaging Time	[a]Maximum Modeled Impact ($\mu g/m^3$)	Limited Impact ($\mu g/m^3$)	Background ($\mu g/m^3$)	[b]Daily Limit (tons/day)
[c]PM_{10} (solitary)	150.0	24-hour	43.18	N/A	20.0	N/A

[a]Modeled impact at maximum capacity with controls
[b]Indirect limit based on compliance with NAAQS.
[c]Solitary operation

EMISSIONS CALCULATIONS

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 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 equipment is controlled by water spray devices.

The engine emissions were not evaluated for this review as the diesel engines at this site are classified as nonroad engines. 40 CFR 63 Subpart ZZZZ, “National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines” and 40 CFR 60 Subpart IIII, “Standards of Performance for Stationary Compression Ignition Internal Combustion Engines” do not apply. If at any time the engine does not comply as a non-road engine, then a determination must be made to ensure compliance with MACT ZZZZ. NSPS IIII may also apply.

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 for PM and PM_{10} and a 40% control efficiency for $PM_{2.5}$ were applied to the emission 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. 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."

AMBIENT AIR QUALITY IMPACT ANALYSIS

An ambient air quality impact analysis (AAQIA) was performed to determine the impact of the pollutants listed in Table 3. The Air Pollution Control Program requires an AAQIA of PM_{10} for all asphalt, concrete and rock-crushing plants regardless of the level of PM_{10} 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.

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 $\mu g/m^3$ of PM_{10} in accordance with the Air Pollution Control Program's BMPs interim policy.

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 PM are above de minimis levels, but below major source levels.

APPLICABLE REQUIREMENTS

Chapman Quarry PORT-0715 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.
- Portable plants are exempt from obtaining an Operating Permit.
- *Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin*, 10 CSR

Attachment AA: Best Management Practices

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 (6), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*, I recommend this permit be granted with special conditions.

_____ _____

Chad Stephenson Date
New Source Review Unit

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated March 3rd, 2015, received March 12th, 2015, designating Anchor Stone Company 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
ºF .....degrees Fahrenheit
acfm.....actual cubic feet per minute
BACT.....Best Available Control Technology
BMPs.....Best Management Practices
Btu.....British thermal unit
CAM.....Compliance Assurance Monitoring
CAS .....Chemical Abstracts Service
CEMS.....Continuous Emission Monitor System
CFR.....Code of Federal Regulations
CO.....carbon monoxide
CO_2 .....carbon dioxide
CO_2e .....carbon dioxide equivalent
COMS .....Continuous Opacity Monitoring System
CSR .....Code of State Regulations
dscf.....dry standard cubic feet
EIQ.....Emission Inventory Questionnaire
EP .....Emission Point
EPA.....Environmental Protection Agency
EU.....Emission Unit
fps.....feet per second
ft .....feet
GACT.....Generally Available Control Technology
GHG.....Greenhouse Gas
gpm .....gallons per minute
gr .....grains
GWP .....Global Warming Potential
HAP .....Hazardous Air Pollutant
hr .....hour
hp.....horsepower
lb.....pound
lbs/hr .....pounds per hour
MACT.....Maximum Achievable Control Technology
$\mu g/m^3$ .....micrograms per cubic meter
m/s.....meters per second
Mgal.....1,000 gallons
MW.....megawatt
MHDR .....maximum hourly design rate
MMBtu.... Million British thermal units
MMCF..... million cubic feet
MSDS ..... Material Safety Data Sheet
NAAQS... National Ambient Air Quality Standards
NESHAPs..National Emissions Standards for Hazardous Air Pollutants
NO_x ..... nitrogen oxides
NSPS..... New Source Performance Standards
NSR ..... New Source Review
PM ..... particulate matter
$PM_{2.5}$..... particulate matter less than 2.5 microns in aerodynamic diameter
PM_{10}..... particulate matter less than 10 microns in aerodynamic diameter
ppm ..... parts per million
PSD Prevention of Significant Deterioration
PTE..... potential to emit
RACT..... Reasonable Available Control Technology
RAL ..... Risk Assessment Level
SCC ..... Source Classification Code
scfm ..... standard cubic feet per minute
SDS ..... Safety Data Sheet
SIC..... Standard Industrial Classification
SIP..... State Implementation Plan
SMAL ..... Screening Model Action Levels
SO_x ..... sulfur oxides
SO_2 ..... sulfur dioxide
tph ..... tons per hour
tpy ..... tons per year
VMT ..... vehicle miles traveled
VOC..... Volatile Organic Compound

Mr. Tom Snyder
President
Chapman Quarry PORT-0715
4124 S. Rockford Avenue, Suite 201
Tulsa, OK 74105

RE: New Source Review - Project Number: 2015-03-046; Installation Number: PORT-0715

Dear Mr. Snyder:

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 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, Truman State Office Building, Jefferson City, Missouri 65102, website: www.oa.mo.gov/ahc.

If you have any questions regarding please do not hesitate to contact Chad Stephenson, at the department's Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102 or at (573) 751-4817.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Susan Heckenkamp
New Source Review Unit Chief

SH:csl

Enclosures

c: Southwest Regional Office
PAMS File: 2015-03-046
Permit Number: