

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. Specifically, all air contaminant control devices shall be operated and maintained as specified in the application, associated plans and specifications.

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

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

You may appeal this permit or any of the listed Special Conditions as provided in RSMo 643.075. If you choose to appeal, the Air Pollution Control Program must receive your written declaration within 30 days of receipt of this permit.

If you choose not to appeal, this certificate, the project review, 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 Department of Natural Resources has established the Outreach and Assistance Center to help in completing future applications or fielding complaints about the permitting process. You are invited to contact them at 1-800-361-4827 or (573) 526-6627, or in writing addressed to Outreach and Assistance Center, P.O. Box 176, Jefferson City, MO 65102-0176.

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 Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102-0176, attention Construction Permit Unit.

Page No.	2
Permit No.	
Project No.	2006-09-071

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); by the Missouri Rules listed in Title 10, Division 10 of the Codes of State Regulations (specifically 10 CSR 10-6.060); by 10 CSR 10-6.060 paragraph (12)(A)10. "Conditions required by permitting authority"; by 10 CSR 10-6.010 "Ambient Air Quality Standards" and 10 CSR 10-6.060 subsections (5)(D) and (6)(A); and by control measures requested by the applicant, in their permit application, to reduce the amount of air pollutants being emitted, in accordance with 10 CSR 10-6.060 paragraph (6)(E)3. Furthermore, one or more of the Subparts of 40 CFR Part 60, New Source Performance Standards (NSPS), applies to this installation.

1. **Best Management Practices**
Jasper County Quarry shall control fugitive emissions from all of the haul roads and stockpiles at this site by performing *Best Management Practices*, which include the usage of paving, chemical dust suppressants, or documented watering. These practices are defined in Attachment AA.
2. **Usage of Wet Suppression Control System on Equipment**
 - A. Jasper County Quarry shall install and operate wet spray devices to restrict the emission of particulate matter. These wet spray devices must be used to control fugitive emissions whenever these units are in operation. The wet spray devices shall be installed on the following units:
 - 1) All Crushers
 - 2) All Screens
 - 3) All Conveyors
 - B. Watering may be suspended during periods of freezing conditions, when use of the wet spray devices may damage the equipment. During these conditions, the operator(s) shall adjust the production rate to control fugitive emissions from these units. The operator shall record a brief description of such events in a daily log.
3. **Annual Emission Limit of Particulate Matter Less Than Ten Microns in Diameter (PM₁₀)**
 - A. The operator(s) shall ensure that Jasper County Quarry's rock-crushing plant emits less than 36.81 tons of PM₁₀ into the atmosphere in any 12-month period.
 - B. To demonstrate compliance, the operator(s) shall maintain a daily record of material processed and PM₁₀. Attachment A, *Monthly PM₁₀ Emissions Tracking Record*, or other equivalent form(s), will be used for this purpose.
4. **Performance Testing for New Source Performance Standards (NSPS)**
 - A. For all equipment subject to the New Source Performance Standards Subpart "OOO" but have not yet been tested, Jasper County Quarry shall submit the enclosed testing plan to the Enforcement section of the Air Pollution Control Program. Jasper County Quarry shall contact the Enforcement section to obtain all requirements for testing, and the plan must be submitted to the Enforcement section at least 30 days prior to the proposed test date.
 - B. Testing must be performed no later than 60 days after achieving the maximum production rate of the equipment, and in any case no later than 180 days after startup of the equipment. The performance test results shall be submitted to the Enforcement section no later than 30 days after completion of any required testing.
5. **Prohibition Against Concurrent Operations Without Further Air Pollution Control Program Review**
The rock-crushing plant (097-0120) is prohibited from operating whenever any other plant(s) are located at this site.
6. **Restriction on Process Configuration of Primary Emission Point(s)**
The maximum hourly design rate of the plant is equal to the sum of the design rate(s) of the primary emission point(s). Jasper County Quarry has designated the following unit(s) as the primary emission point(s) of the rock-crushing plant: Primary Crusher (CR-1). Bypassing the primary emission point(s) for processing is prohibited.
7. **Restriction on Minimum Distance to Nearest Property Boundary**

Page No.	3
Permit No.	
Project No.	2006-09-071

SPECIAL CONDITIONS:

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

The primary emission point of the rock-crushing plant, which is the primary crusher (CR-1), shall be located at least 600 feet from the nearest property boundary whenever it is operating at this site.

8. **Restriction on the Use of Diesel Engine(s)/Generator(s)**
The rock-crushing plant shall not use any diesel engine(s)/generator(s). If the company decides that it would like to use diesel engine(s)/generator(s), a new permit review will be required.
9. **Record Keeping Requirement**
The operator(s) shall maintain all records required by this permit for not less than five (5) years and shall make them available to any Missouri Department of Natural Resources' personnel upon request.
10. **Reporting Requirement**
The operator(s) shall report to the Air Pollution Control Program Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten (10) days after any exceedances of the limitations imposed by this permit.
11. **Superseding Condition**
The conditions of this permit supersede all special conditions found in the previously issued construction permit(s) (0296-013, 0798-016, and 1298-017) from the Air Pollution Control Program.

TECHNICAL REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT

PROJECT DESCRIPTION

The permit for the stationary rock-crushing plant is being modified to increase production limit through the reevaluation of the plant's daily PM₁₀ ambient impact. Best Management Practices will be used to control fugitive emissions from haul roads and storage piles.

Rock, composed of non-metallic minerals, is drilled/blasted, loaded into a hopper, and transported to processing. Rock is processed through feeder(s), crusher(s), screen(s), and conveyor(s). Processing equipment is powered with electrical power. The emission points are listed in the attached spreadsheet summary. This installation is not on the List of Named Installations [10 CSR 10-6.020(3)(B), Table 2]. The installation is located in Jasper County, an attainment area for all criteria air pollutants.

Table 1. Other Permits Issued for Site 097-0120

Permit Number	Completed	Description
0296-013	2/05/1996	Section 5 permit issued.
0798-016	7/13/1998	Adding crusher and conveyor.
1298-017	12/29/1998	Adding new crusher.

EMISSIONS EVALUATION

Criteria air pollutants will be emitted from this operation. The main air pollutant of concern is PM₁₀. The potential emissions were calculated from the maximum hourly design rate (MHDR) of the equipment, appropriate emission factors, control device efficiencies, and the limiting operating hours at MHDR. The sources of the emission factors and control efficiencies are listed in the section "Permit Documents".

According to the previous permit issued (Permit #1298-017, Project #1998-10-082) in 1998, the rock-crushing plant has the potential to emit 21.81 tons per year (tpy) of PM₁₀. After reevaluating PM₁₀ emissions using updated equations, emission factors, and control measures not in use back in 1998, the potential to emit of the entire installation is expected to be 39.92 tpy. This is an increase of 18.11 tpy from the previous permit. In order to issue this permit as a section (5) permit instead of a section (6), this increase must be held to below the de minimis level of 15 tpy. A 15 ton increase from 21.81 tpy will be 36.81 tpy. Therefore, the rock-crushing plant will now be required to keep its PM₁₀ emissions below 36.81 tpy.

Table 2: Emissions Summary (tons per year)

Air Pollutant	Regulatory De Minimis Levels	Existing Potential Emissions	Existing Actual Emissions (2004 EIQ)	Potential Emissions of the Application	*New Installation Conditioned Potential	Emission Factor (lb/ton)
PM ₁₀	15.0	21.81	15.24	18.11	<36.81	0.03037
SO _x	40.0	N/A	N/A	N/A	N/A	N/A
NO _x	40.0	N/A	N/A	N/A	N/A	N/A
VOC	40.0	N/A	N/A	N/A	N/A	N/A
CO	100.0	N/A	N/A	N/A	N/A	N/A
HAPs	10.0/25.0	N/A	N/A	N/A	N/A	N/A

Note: N/A = Not Applicable

* Conditioned potential based on limit in permit conditions.

AMBIENT AIR QUALITY IMPACT ANALYSIS

Screening tools were used to evaluate the ambient air impact of the hourly emissions from this operation. The ambient impact was evaluated at a distance of 600 feet to the nearest property boundary. The ambient impact at this site shall not exceed the National Ambient Air Quality Standard (NAAQS) of 150 µg/m³ of PM₁₀ at or beyond the nearest property boundary in any single 24-hour period. For sources agreeing to use Best Management Practices (BMPs), as defined in Attachment AA, haul roads and stockpiles are not modeled with screening tools. Instead, they are addressed as a background level of 20 µg/m³ of PM₁₀. To ensure conformity with NAAQS, the remaining process emissions are limited to an impact of less than 130 µg/m³ of PM₁₀ at or beyond the nearest property boundary.

The installation can operate for twenty-four (24) hours without exceeding 130 µg/m³ of PM₁₀ at or beyond the nearest property boundary. The installation will not be required to track its daily PM₁₀ ambient impact with a record keeping sheet.

Table 3: Ambient Air Quality Impact Analysis of PM₁₀, 24-Hour Averaging Time

Operation	Ambient Impact Factor (µg/m ³ /ton)	Modeled Impact (µg/m ³)	*Background (µg/m ³)	NAAQS (µg/m ³)	Daily Production Limit (tons)
1. Solitary	0.0149	106.95	20.00	150.00	7,200

* Background PM₁₀ level of 20.00 µg/m³ from haul roads and stockpiles.

APPLICABLE REQUIREMENTS

The owner is subject to compliance with the following applicable requirements. The Missouri Air Conservation Laws and Regulations should be consulted for specific record keeping, monitoring, and reporting requirements.

- *Submission of Emission Data, Emission Fees and Process Information*, 10 CSR 10-6.110
- *Operating Permits*, 10 CSR 10-6.065
- An Operating Permit amendment/modification 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 10-3.090
- *Restriction of Emission of Particulate Matter From Industrial Processes*, 10 CSR 10-6.400
- 40 CFR Part 60 Subpart "OOO", *Standards of Performance for Nonmetallic Mineral Processing Plants*, of the New Source Performance Standards (NSPS).
- The National Emission Standards for Hazardous Air Pollutants (NESHAPs) and the currently promulgated Maximum Achievable Control Technology (MACT) regulations do not 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*, I recommend this permit be granted with special conditions.

Chia-Wei Young
Environmental Engineer

Date

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, designating Anchor Stone Company as the owner and operator of the installation.
- Environmental Protection Agency (EPA) AP-42, *Compilation of Air Pollutant Emission Factors; Volume I, Stationary Point and Area Sources, Fifth Edition*.
- *Fugitive Dust Control*, Orlemann, et al.1983, Noyes Data Corp.
- EPA Factor Information Retrieval (FIRE) Version 6.21.
- Spreadsheet calculations of potential-to-emit and ambient impact.
- Southwest Regional Office Site Survey.
- Best Management Practices.

Attachment AA: Best Management Practices (BMPs)- Construction Industry Fugitive Emissions

Construction Industry Sites covered by the Interim Relief Policy shall maintain Best Management Control Practices (BMPs) for fugitive emission areas at their installations when in operation. Options for BMPs are at least one of the following:

For Haul Roads:

1. Pavement of Road Surfaces –
 - A. The operator(s) may pave all or any portion of the haul roads with materials such as asphalt, concrete, and/or other material(s) after receiving approval from the program. The pavement will be applied in accordance with industry standards for such pavement so as to achieve “Control of Fugitive Emissions¹” while the plant is operating.
 - B. Maintenance and/or 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(s) shall periodically water, wash and/or otherwise clean all of the paved portions of the haul road(s) as necessary to achieve control of fugitive emissions from these areas while the plant is operating.

2. Usage of Chemical Dust Suppressants –
 - A. The operator(s) shall apply a chemical dust suppressant (such as magnesium chloride, calcium chloride, lignosulfonates, etc.) to all the unpaved portions of the haul roads. The suppressant will be applied in accordance with the manufacturer’s suggested application rate (if available) and re-applied as necessary to achieve control of fugitive emissions from these areas while the plant is operating.
 - B. The quantities of the chemical dust suppressant shall be applied, re-applied and/or maintained sufficient to achieve control of fugitive emissions from these areas while the plant is operating.
 - C. The operator(s) 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(s) shall keep these records with the plant for not less than five (5) years, and the operator(s) shall make these records available to Department of Natural Resources personnel upon request.

3. Usage of Documented Watering –
 - A. The operator(s) shall control the fugitive emissions from all the unpaved portions of the haul roads at the installation by consistently and correctly using the application of a water spray. Documented watering will be applied in accordance with a recommended application rate of 100 gallons per day per 1,000 square feet of unpaved/untreated surface area of haul roads as necessary to achieve control of fugitive emissions from these areas while the plant is operating. For example, the operator(s) shall calculate the total square feet of unpaved vehicle activity area requiring control on any particular day, divide that product by 1,000, and multiply the quotient by 100 gallons for that day.
 - B. The operator(s) shall maintain a log that documents daily water applications. This log shall include, but is not limited to, date and volumes (e.g., number of tanker applications and/or total gallons used) of water application. The log shall also record rationale for not applying water on day(s) the plant is in operation (e.g., meteorological situations, precipitation events, freezing, etc.)
 - C. Meteorological precipitation of any kind, (e.g. a quarter inch or more rainfall, sleet, snow, and/or freeze thaw conditions) which is sufficient in the amount or condition to achieve control of fugitive emissions from these areas while the plant is operating.
 - D. 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. The operator(s) shall record a brief description of such events in the same log as the documented watering.
 - E. The operator(s) shall record the date and the amount of water applied for each application on the above areas. The operator(s) shall keep these records with the plant for not less than five (5) years, and the operator(s) 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.)

For Vehicle Activity Areas around Open Storage Piles:

1. Pavement of Stockpile Vehicle Activity Surfaces –
 - A. The operator(s) may pave all or any portion of the vehicle activity areas around the storage piles with materials such as asphalt, concrete, and/or other material(s) after receiving approval from the program. The pavement will be applied in accordance with industry standards for such pavement so as to achieve control of fugitive emissions while the plant is operating.
 - B. Maintenance and/or 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(s) shall periodically water, wash and/or otherwise clean all of the paved portions of the vehicle activity areas around the storage piles as necessary to achieve control of fugitive emissions from these areas while the plant is operating.

2. Usage of Chemical Dust Suppressants –
 - A. The operator(s) shall apply a chemical dust suppressant (such as magnesium chloride, calcium chloride, lignosulfonates, etc.) to all the vehicle activity areas around the open storage piles. The suppressant will be applied in accordance with the manufacturer's suggested application rate (if available) and re-applied as necessary to achieve control of fugitive emissions from these areas while the plant is operating.
 - B. The quantities of the chemical dust suppressant shall be applied, re-applied and/or maintained sufficient to achieve control of fugitive emissions from these areas while the plant is operating.
 - C. The operator(s) 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(s) shall keep these records with the plant for not less than five (5) years, and the operator(s) shall make these records available to Department of Natural Resources personnel upon request.

3. Usage of Documented Watering –
 - A. The operator(s) shall control the fugitive emissions from all the vehicle activity areas around the storage piles at the installation by consistently and correctly using the application of a water spray. Documented watering will be applied in accordance with a recommended application rate of 100 gallons per day per 1,000 square feet of unpaved/untreated surface area of vehicle activity areas around the storage piles as necessary to achieve control of fugitive emissions from these areas while the plant is operating. (Refer to example for documented watering of haul roads.)
 - B. The operator(s) shall maintain a log that documents daily water applications. This log shall include, but is not limited to, date and volumes (e.g., number of tanker applications and/or total gallons used) of water application. The log shall also record rationale for not applying water on day(s) the plant is in operations (e.g., meteorological situations, precipitation events, freezing, etc.)
 - C. Meteorological precipitation of any kind, (e.g. a quarter inch or more rainfall, sleet, snow, and/or freeze thaw conditions) which is sufficient in the amount or condition to achieve control of fugitive emissions from these areas while the plant is operating.
 - D. 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. The operator(s) shall record a brief description of such events in the same log as the documented watering.
 - E. The operator(s) shall record the date and the amount of water applied for each application on the above areas. The operator(s) shall keep these records with the plant for not less than five (5) years, and the operator(s) shall make these records available to Department of Natural Resources personnel upon request.

Mr. Tom Snyder
President
Anchor Stone Company
2021 S. Lewis Avenue, Suite 470
Tulsa, OK 74104

RE: New Source Review Permit - Project Number: 2006-09-071

Dear Mr. Snyder:

Enclosed with this letter is your New Source Review permit. Please review your permit carefully and note the special conditions, if any, and the requirements in your permit.

Operation in accordance with the conditions and requirements in your permit and the New Source Review application submitted for project 2006-09-071 is necessary for continued compliance. The section of the permit entitled "Technical Review of Application for Authority to Construct" should not be separated from the main portion of your permit. The entire permit must be retained in your files. 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.

As part of the construction permit technical review, a file review was performed on your operating permit records. On April 21, 2003, this program received the Basic Operating Permit renewal application, project number 2003-04-116.

On May 10, 2004 this program received the revised Basic Operating Permit renewal application (project #2004-05-067) in which you requested an increase in the annual production limit to coincide with the replacement of the primary crusher. Unfortunately, this project was misclassified as a separate operating permit renewal, and the original renewal, project # 2003-04-116, was terminated. Because of the misclassification of the project, the request to increase the production limit was not noticed in the revised renewal application. On November 29, 2006 this program mistakenly sent an acceptance letter for this Basic Operating Permit renewal, project #2004-05-067.

An increase in production and replacement of equipment cannot be granted through the operating permit program. These changes must be pursued through the construction permit program.

To correct our error, we are re-classifying project #2004-05-067 as an amendment to the Basic Operating Permit renewal project #2003-04-116. The expiration date of your current operating permit is April 20, 2008. You may submit your renewal any time between 18 and 6 months prior to the expiration date. You must submit your Basic Operating Permit renewal application by October 20, 2007.

Mr. Tom Snyder
Page Two

If you have any questions, please contact me at (573) 751-4817, or write the Department of Natural Resources' Air Pollution Control Program, PO Box 176, Jefferson City, MO 65102. Thank you for your attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Kendall Hale, P.E.
New Source Review Unit Chief

KH: cwyk

Enclosures

c: Southwest Regional Office
PAMS File: 2006-09-071
Permit Number: