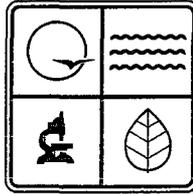


STATE OF MISSOURI

DEPARTMENT OF NATURAL RESOURCES

MISSOURI AIR CONSERVATION COMMISSION



PERMIT TO CONSTRUCT

Under the authority of RSMo 643 and the Federal Clean Air Act the applicant is authorized to construct the air contaminant source(s) described below, in accordance with the laws, rules and conditions as set forth herein.

Permit Number: **05 2007 - 008** Project Number: **2007-03-081**
 Owner: **Skyline Construction, Inc.** **PORT-0593**
 Owner's Address: **P.O. Box 127, Decorah, IA 52101**
 Installation Name: **Skyline Construction, Inc. at Kelly Limestone**
 Installation Address: **Highway 156 West, Newark, MO 63458**
 Location Information: **Knox County, S26, T60N, R10W**

Application for Authority to Construct was made for:

The installation of a new, portable, 500-ton-per-hour rock crushing plant. Rock is processed through two crushers, a screen, conveyors, and bins. 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 (listed as attachments starting on page 2) are applicable to this permit.

MAY 18 2007

EFFECTIVE DATE

James Kawencuk
 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. 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.

2007-03-081
PORT-0593

Skyline Construction, Inc.

P.O. Box 127, Decorah, IA 52101

Skyline Construction, Inc. at Kelly Limestone

Highway 156 West, Newark, MO 63458

Knox County, S26, T60N, R10W

The installation of a new, portable, 500-ton-per-hour rock crushing plant. Rock is processed through two crushers, a screen, conveyors, and bins. This review was conducted in accordance with Section (6), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*.

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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); 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. **Portable Equipment Identification Requirement**
To assure that each component is properly identified as being a part of this portable rock crushing plant, (PORT-0593) Skyline Construction, Inc. at Kelly Limestone shall provide and maintain suitable, 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. This portable rock crushing plant shall relocate from the initial site reviewed in this permit (Kelly Limestone, Site ID No: 103-0003) within 24 months of the issuance date of this permit.
 - B. A complete "Portable Source Relocation Request" application must be submitted to the Air Pollution Control Program prior to all relocations of this portable rock crushing plant.
 - 1.) If the portable rock crushing plant is moving to a site previously permitted, and if there are no other new plants at the site, then the application must be received by the Air Pollution Control Program at least seven (7) days prior to the relocation.
 - 2.) If the portable rock crushing plant is moving to a new site, or if there are other plants or equipment at the site that have not been evaluated for concurrent operation, then the application must be received by the Air Pollution Control Program at least twenty-one (21) days prior to the relocation. The application must include written notification of any concurrently operating plants.
3. **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.

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SITE-SPECIFIC SPECIAL CONDITIONS:

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

Site ID No.: 103-0003
Site Name: Kelly Limestone
Site Address: Highway 156 West, Newark, MO 63458
Site County: Knox County, S26, T60N, R10W

1. National Ambient Air Quality Standards (NAAQS) Limitation for Particulate Matter Less Than Ten Microns in Diameter (PM₁₀)
 - A. The operator(s) for Skyline Construction's portable rock crushing plant (PORT-0593) shall ensure, while operating at this site, that the ambient impact of PM₁₀ at or beyond the nearest property boundary does not exceed 150 µg/m³ in any 24-hour period, in accordance with the Federal NAAQS requirements (40 CFR 50.6).
 - B. The total daily ambient impact of PM₁₀ at this site shall include the combined impact of the portable rock crushing plant and any ambient background concentration from installations or equipment located on the same site as the portable rock crushing plant.
 - C. The only other plant permitted to locate or operate at this quarry is Kelly Limestone (103-0003).
 - D. To demonstrate compliance, the operator(s) shall maintain a daily record of material processed. Attachment A, *Daily Ambient PM₁₀ Impact Tracking Record*, or other equivalent form(s), will be used for this purpose.
2. Annual Emission Limit of Particulate Matter Less Than Ten Microns in Diameter (PM₁₀)
 - A. The operator(s) shall ensure that Skyline Construction's portable rock crushing plant emits less than 50 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 B, *Monthly PM₁₀ Emissions Tracking Record*, or other equivalent form(s), will be used for this purpose.
3. Usage of Documented Watering on Haul Road(s) and Vehicular Activity Area(s)
 - A. The operator(s) of Skyline Construction shall control the fugitive emissions from the specified unpaved portions of the haul roads and vehicular activity area(s) around the storage pile(s) 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 the haul roads and vehicular activity area(s) as necessary to achieve control of fugitive emissions from these areas while the plant is operating. For example, the operator shall calculate the total sq. ft. of unpaved vehicle activity area requiring control on any particular day, divide that product by 1000, and multiply the quotient by 100 gallons for that day. Documented watering is to be used on all haul roads and vehicle activity areas.
 - B. The operator(s) shall maintain a log that documents daily water applications. This log shall include, but is not limited to, date and volume of water applied (e.g., number of tanker applications and/or total gallons used). The log shall also record rationale for not applying water applications on days of 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) that is sufficient in amount or condition to achieve control of particulate matter from these areas while the plant is operating, may be substituted for documented water application until such time as conditions warrant applying documented watering.
 - 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 shall record a brief description of such events in the same log as the documented watering.
4. Performance Testing for New Source Performance Standards (NSPS)
 - A. Skyline Construction shall submit the enclosed testing plan to the Enforcement section of the Air Pollution Control Program for all equipment applicable to NSPS Subpart "OOO". Skyline Construction 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.

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SITE-SPECIFIC SPECIAL CONDITIONS:

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

- B. Testing must be performed no later than 60 days after achieving the maximum production rate of the process, and in any case no later than 180 days after initial startup. The performance test results shall be submitted to the Enforcement section no later than 30 days after completion of any required testing.

- 5. **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). Skyline Construction has designated the primary crusher as the primary emission point. Bypassing the primary emission point(s) for processing is prohibited.

- 6. **Restriction on Minimum Distance to Nearest Property Boundary**
The primary emission point of the portable rock crushing plant, which is the primary crusher, shall be located at least 643 feet from the nearest property boundary whenever it is operating at this site.

- 7. **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.

- 8. **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.

TECHNICAL REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT

PROJECT DESCRIPTION

Rock is drilled and blasted, loaded by means of front-end loaders, transported to the primary crusher, and processed on the three lines of the plant with MHDRs of 75, 145, and 280 tons per hour for a plant-wide total MHDR of 500 tph. Each line utilizes a 60-ton load out bin and conveyor to load the crushed rock into trucks that transport the three different crushed rock products to three separate stock piles. Processing equipment is powered with diesel engine(s). This installation is not on the List of Named Installations [10 CSR 10-6.020(3)(B), Table 2]. The installation is located in Knox County, an attainment area for all criteria air pollutants.

No stockpiles for un-crushed rock were used in this analysis because the rock is transported to crushing as it is blasted with negligible accumulation in the blasting area. No haul roads for this un-crushed rock were used in the analysis because the loaders bring the rock directly to the plant without the use of haul trucks or roads.

Skyline Construction applied for a construction permit to operate a portable rock crushing plant at Kelly Limestone quarry. Skyline Construction's portable plant will be used in the place of some of Kelly Limestone's equipment while it is being repaired. No permit amendment to allow this colocation is required from Kelly Limestone. The ambient impact of Kelly Limestone's installation was evaluated in their construction permit (permit 0795-021, project 24800003007) at 10.79 µg/m³, operating 24 hours per day. This ambient impact was considered background for the evaluation herein. If any violations should occur, both Kelly Limestone and Skyline Construction will be held responsible. Additionally, since Kelly Limestone is not required to perform record keeping for ambient impact in its current construction permit, only Skyline Construction, not Kelly Limestone, is required to keep production records while Skyline is at the Kelly Limestone quarry.

Only concurrent operation with Kelly Limestone (site and installation ID103-0003) is permitted. Once Kelly Limestone's equipment comes back into service, Skyline Construction will be no longer be permitted to operate at Kelly Limestone's quarry without further review.

Table 1. Other Permits Issued for PORT-0593

Permit Number	Completed	Description
No Permits-new plant		

EMISSIONS EVALUATION

The potential emissions were calculated from the maximum hourly design rate (MHDR) of the equipment, various 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". Based on the conditioned potential emissions, the operation is considered a minor source under 10 CSR 10-6.060 section (6).

The portable rock crushing plant has an annual emission limit of less than 50 tons of PM₁₀ in any 12-month period. A composite PM₁₀ emission factor was developed for the portable rock crushing plant. The composite emission factor is incorporated into the monthly record keeping table, Attachment B. If the conditioned potential emissions of PM₁₀ were 50 tons per year or greater, then the owner would be required to submit dispersion modeling results.

Table 2: Emissions Summary (tons per year)

Air Pollutant	Regulatory De Minimis Levels	Existing Potential Emissions	Existing Actual Emissions (EIQ)	Potential Emissions of the Application	*New Installation Conditioned Potential	Emission Factor (lb/ton)
PM ₁₀	15.0	N/A	N/A	507.41	<50.0	0.2317
SO _x	40.0	N/A	N/A	17.31	1.71	N/A
NO _x	40.0	N/A	N/A	137.10	13.51	N/A
VOC	40.0	N/A	N/A	3.51	0.35	N/A
CO	100.0	N/A	N/A	36.42	3.59	N/A
HAPs	10.0/25.0	N/A	N/A	0.07	0.01	N/A

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

* Conditioned potential based on PM₁₀ limit. Other pollutants proportionately reduced.

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 643 feet to the nearest property boundary, with a background concentration of 10.79 $\mu\text{g}/\text{m}^3$ from Kelly Limestone. The ambient impact at this site shall not exceed the National Ambient Air Quality Standard (NAAQS) of 150 $\mu\text{g}/\text{m}^3$ of PM_{10} at or beyond the nearest property boundary in any single 24-hour period. The screening tools were used to develop an ambient impact factor for the portable rock crushing plant. This ambient impact factor is incorporated into the daily record keeping table, Attachment A.

Table 3: Ambient Air Quality Impact Analysis of PM_{10} , 24-Hour Averaging Time

Operation	Ambient Impact Factor ($\mu\text{g}/\text{m}^3/\text{ton}$)	Modeled Impact ($\mu\text{g}/\text{m}^3$)	*Background ($\mu\text{g}/\text{m}^3$)	NAAQS ($\mu\text{g}/\text{m}^3$)	Daily Production Limit (tons)
Concurrent, Separate Owners	0.0372	139.21	10.79	150.00	4,531

* Background PM_{10} level of from Kelly Limestone (103-0003, permit 0795-021, project 24800003007).

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 application is required for this installation within 30 days of equipment startup.
- *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
- *Restriction of Emission of Sulfur Compounds*, 10 CSR 10-6.260
- 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 (6), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*, I recommend this permit be granted with special conditions.

Jeannie Kozak
Environmental Engineer

Date

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, designating Skyline Construction, Inc. 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*.
- Noyes Data Corp., Orlemann, et al.1983, *Fugitive Dust Control*.
- EPA Factor Information Retrieval (FIRE) Version 6.21.
- Spreadsheet calculations of potential-to-emit and ambient impact.
- Northeast Regional Office Site Survey.

Mr. Greg Bruening
President
Skyline Construction, Inc.
P.O. Box 725
Kirksville, MO 63501

RE: New Source Review Permit - Project Number: 2007-03-081

Dear Mr. Bruening:

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

Operation in accordance with your permit, with the New Source Review application submitted for this project, and with your future operating permit is necessary for continued compliance. Please also review your future operating permit, as it will contain all applicable requirements for your portable rock crushing plant, including special conditions from your New Source Review permit.

The section of the permit entitled "Technical Review of Application for Authority to Construct" should not be separated from 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.

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

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Kendall B. Hale
New Source Review Unit Chief

KH:jkl

Enclosures

c: Northeast Regional Office
PAMS File: 2007-03-081
Permit Number: