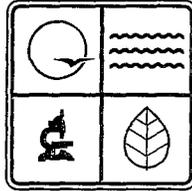


STATE OF MISSOURI  
DEPARTMENT OF NATURAL RESOURCES  
MISSOURI AIR CONSERVATION COMMISSION



**PERMIT BOOK**

**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: **012007-002** Project Number: **2006-06-045**  
**PORT-0076**  
Owner: **Norris Asphalt Paving Company**  
Owner's Address: **PO BOX 695, Ottumwa, IA 52501**  
Installation Name: **Norris Aggregate Products - PLANT NO. 70**  
Installation Address: **16664 Rt C, Pattonsburg, MO 64670**  
Location Information: **Daviess County, S30, T61N, R28W**

Application for Authority to Construct was made for:

The modification of an existing portable rock crushing plant. The portable rock crushing plant has a maximum hourly design rate (MHDR) of 600 tons per hour (tph). The plant uses Best Management Practices. 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.

**JAN - 3 2007**

EFFECTIVE DATE

  
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.

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| Permit No.  |             |
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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. Generic Plant Designation and Maximum Combined Hourly Design Rate  
Norris Aggregate Products PORT-0076 has been designated to be a Generic Plant Operation. The combined Maximum Hourly Design Rate (MHDR) for the primary unit(s) and each of the following generic equipment types shall not exceed the maximum installation capacities listed below at any time the installation is in operation.

| Equipment Type                    | Maximum Combined Hourly Design Rate | Maximum Number of Units |
|-----------------------------------|-------------------------------------|-------------------------|
| Primary Unit(s) (Primary Crusher) | 600 tons per hour                   | 1                       |
| Secondary Crusher(s)              | 2,000 tons per hour                 | 5                       |
| Conveyor(s), Bin(s)               | 16,000 tons per hour                | 40                      |
| Screen(s)                         | 2,400 tons per hour                 | 6                       |
| Wet Screen(s)                     | 600 tons per hour                   | 1                       |
| Pug Mill(s)                       | 600 tons per hour                   | 1                       |
| Diesel Engine(s)                  | 2200 Total HP                       | 3                       |

2. Generic Plant Equipment Identification Requirement
  - A. Within fifteen (15) days of actual startup, Norris Aggregate Products PORT-0076 shall submit to the Air Pollution Control Program's Permitting Section, and the Northeast and Kansas City Regional Offices, the following information for the generic plant (PORT-0076):
    - 1.) A Master List of all equipment that will be permitted for use with the generic plant (PORT-0076). This master list shall include the following information for each piece of equipment. The manufacturer's name, the model number, the serial number, the actual MHDR, the date of manufacture, any company-assigned equipment number, and any other additional information such as sizes and/or dimensions that is necessary to uniquely identify all of the equipment.
    - 2.) A list of the core equipment that will always be utilized with the generic plant (PORT-0076). The core equipment associated with the generic plant shall include at least one (1) primary unit. Core equipment items are rate-controlling components of the process flow (e.g., primary crusher and/or primary screen). The maximum hourly design rate of the generic plant is defined to be the sum of the MHDR(s) of the core equipment. Any arrangement of the generic plant's equipment must be such that the core equipment is not bypassed in the process flow.
    - 3.) A determination on the applicability of 40 CFR Part 60, Subpart "OOO", *Standards of Performance for Nonmetallic Mineral Processing Plants*, for each piece of equipment Norris Aggregates Product Co. PORT-0076 shall indicate whether or not each piece of equipment is subject to Subpart "OOO" and provide the justification for this applicability determination.
    - 4.) Norris Aggregate Products PORT-0076 shall submit notification to the Air Pollution Control Program and the Regional Office if the core equipment is changed and/or if new equipment is added to the supplemental equipment list.
  - B. To assure that each piece of equipment is properly identified as being a part of this generic portable rock crushing plant (PORT-0076), Norris Aggregate Products PORT-0076 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 and the Regional Office no later than fifteen (15) days after start-up of the generic plant.
  - C. Norris Aggregate Products PORT-0076 shall at all times maintain a list of the specific equipment

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**GENERAL SPECIAL CONDITIONS:**

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

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currently being utilized with the generic portable rock crushing plant (PORT-0076). The installation shall make this list of currently used equipment available to any Missouri Department of Natural Resources' personnel upon request.

3. Relocation of Portable Rock Crushing Plant
  - A. If this portable rock crushing plant moves from the initial site reviewed in this permit (Route C Quarry, PORT-0076), then the portable rock crushing plant shall not be operated at any site location longer than 24 consecutive months without an intervening relocation.
  - 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 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.
4. Operating Permit Applicability

If this portable rock crushing plant does not move from the initial site (Route C Quarry, PORT-0076) within 24 consecutive months, then Norris Aggregate Products - PLANT NO. 70 shall submit an operating permit application. The Air Pollution Control Program must receive this application no later than 30 days after the exceedance of the 24 months.
5. 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.
6. Superseding Condition

The conditions of this permit supersede all special conditions found in the previously issued construction permits (0497-009, 0594-028, and 0585-010) from the Air Pollution Control Program.
7. Performance Testing for New Source Performance Standards (NSPS)
  - A. Norris Aggregate Products - PLANT NO. 70 shall submit the enclosed testing plan to the Enforcement section of the Air Pollution Control Program for all equipment applicable to NSPS Subpart "OOO". Norris Aggregate Products - PLANT NO. 70 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 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.

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**SITE-SPECIFIC SPECIAL CONDITIONS:**

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

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These special conditions apply to the following sites:

- Site ID No.: 003-0012  
Site Name: Amazonia Quarry  
Site Address: 9355 Hwy F, Amazonia, MO 64421  
Site County: Andrew County, S18/19, T59N, R35W
- Site ID No.: 147-0029  
Site Name: Barnard Quarry  
Site Address: 36714 Jet Road, Barnard, MO 64424  
Site County: Nodaway County, S9/10, T62N, R35W
- Site ID No.: 081-0017  
Site Name: Bethany Quarry  
Site Address: 29365 Outer Rd., Bethany, MO 64424  
Site County: C O U N T Y County, SXX, TXX, RXX
- Site ID No.: 025-0017  
Site Name: Braymer Quarry  
Site Address: 6500 Oliver Rd, Cowgill, MO 64637  
Site County: Caldwell County, S24, T55N, R27W
- Site ID No.: 003-0002  
Site Name: Breit Quarry  
Site Address: 6500 Oliver Rd, Cowgill, MO 64637  
Site County: Andrew County, S27/28/33/34, T59N, R35W
- Site ID No.: 079-0030  
Site Name: Edinburg Quarry  
Site Address: Hwy 190 & Hwy 146, Trenton, MO 64640  
Site County: Grundy County, S15/16, T61N, R25W
- Site ID No.: 061-0003  
Site Name: Gallatin Quarry  
Site Address: 21901 Hwy 13, Gallatin, MO 64640  
Site County: Daviess County, S32/33, T60N, R27W
- Site ID No.: 147-0017  
Site Name: Gooden Quarry  
Site Address: 38139 230<sup>th</sup> St., Ravenwood, MO 64479  
Site County: Nodaway County, S31/36, T65N, R34W
- Site ID No.: 175-0047  
Site Name: Huntsville Quarry  
Site Address: East Bayport Rd., Blythdale, MO 64426  
Site County: Harrison County, S9/16/17, T53N, R15W
- Site ID No.: 081-0018  
Site Name: Jefferies Quarry  
Site Address: East Bayport Rd., Blythdale, MO 64426  
Site County: Harrison County, S3/4, T66N, R26W
- Site ID No.: 087-0002

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**SITE-SPECIFIC SPECIAL CONDITIONS:**

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

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Site Name: Maitland Quarry  
 Site Address: 34635 Holt 190, Maitland, MO 64466  
 Site County: Holt County, S27/28, T62N, R37W

Site ID No.: 129-P005  
 Site Name: Mercer Quarry  
 Site Address: RR 1, Princeton, MO 64673  
 Site County: Mercer County, S21/22, T66N, R23W

Site ID No.: 087-P015  
 Site Name: New Point Quarry  
 Site Address: 23351 Hwy B, Oregon, MO 64473  
 Site County: Holt County, S27/28, T61N, R37W

Site ID No.: 061-0029  
 Site Name: Pattonsburg Quarry  
 Site Address: Route 3, Pattonsburg, MO 64670  
 Site County: Daviess County, S17, T61N, R28W

Site ID No.: 129-0003  
 Site Name: Princeton Quarry  
 Site Address: RR1, Princeton, MO 64673  
 Site County: Mercer County, S34/35, T64N, R24W

Site ID No.: 061-0016  
 Site Name: Route C Quarry  
 Site Address: 16664 Rt C, Pattonsburg, MO 64670  
 Site County: Daviess County, S30, T61N, R28W

Site ID No.: 079-0016  
 Site Name: Trenton Quarry  
 Site Address: 38 NW Hwy 146, Trenton, MO 64683  
 Site County: Grundy County, S24, T61N, R25W

1. Best Management Practices  
 Norris Aggregate Products - PLANT NO. 70 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. National Ambient Air Quality Standards (NAAQS) Limitation for Particulate Matter Less Than Ten Microns in Diameter (PM<sub>10</sub>)
  - A. The operator(s) for Norris Aggregate Products – PLANT NO. 70 shall ensure, while operating at this site, that the ambient impact of PM<sub>10</sub> at or beyond the nearest property boundary does not exceed 150 µg/m<sup>3</sup> in any 24-hour period, in accordance with the Federal NAAQS requirements (40 CFR 50.6).
  - B. The total daily ambient impact of PM<sub>10</sub> at this site shall include the combined impact of the rock crushing plant and any ambient background concentration from installations or equipment located on the same site as the rock crushing plant.
  - C. During Solitary Operation and Concurrent Same-Owner Operation, the operator(s) shall maintain a daily record of material processed. Attachment A, *Daily Ambient PM<sub>10</sub> Impact Tracking Record for Solitary and Concurrent Same-Owner Operation*, or other equivalent form(s), will be used for this purpose.
  - D. During Concurrent Separate-Owner Operation and Concurrent Same-Owner AND Separate Owner

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| Project No. | 2006-06-045 |

**SITE-SPECIFIC SPECIAL CONDITIONS:**

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

Operation, the operator(s) shall maintain a daily record of material processed. Attachment B, *Daily Ambient PM<sub>10</sub> Impact Tracking Record for Concurrent Separate-Owner and Concurrent Same-Owner AND Separate-Owner Operation*, or other equivalent form(s), will be used for this purpose.

3. Annual Emission Limit of Particulate Matter Less Than Ten Microns in Diameter (PM<sub>10</sub>)
  - A. The operator(s) shall ensure that Norris Aggregate Products - PLANT NO. 70 emits less than 50 tons of PM<sub>10</sub> into the atmosphere in any 12-month period.
  - B. To demonstrate compliance, the operator(s) shall maintain a daily record of material processed and PM<sub>10</sub>. Attachment B, *Monthly PM<sub>10</sub> Emissions Tracking Record*, or other equivalent form(s), will be used for this purpose.
  
4. Annual Emission Limit of Nitrogen Oxides (NO<sub>x</sub>)
  - A. The operator(s) shall ensure that Norris Aggregate Products - PLANT NO. 70 emits less than 40 tons of NO<sub>x</sub> into the atmosphere in any 12-month period.
  - B. To demonstrate compliance, the operator(s) shall maintain a daily record of material processed and PM<sub>10</sub>. Attachment C, *Monthly NO<sub>x</sub> Emissions Tracking Record*, or other equivalent form(s), will be used for this purpose.
  
5. Usage of Wet Suppression Control System on Equipment
  - A. Norris Aggregate Products - PLANT NO. 70 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.) The primary crusher (EP-01.1)
    - 2.) The secondary crushers (5) (EP-01.2)
    - 3.) The screens (6) (EP-02)
  - B. Each conveyor must precede a unit operating a wet spray device. If no device is present, a wet spray device must be installed on the conveyor.
  - C. 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.
  
6. Restriction on Process Configuration of Primary Emission Point
 

The maximum hourly design rate of the plant is equal to the sum of the design rate of the primary emission point. Norris Aggregate Products - PLANT NO. 70 has designated the following unit as the primary emission point of the portable rock crushing plant: primary crusher (EP-01.1). Bypassing the primary emission point for processing is prohibited.
  
7. Restriction on Minimum Distance to Nearest Property Boundary
 

The primary emission point of the portable rock crushing plant, which is the primary crusher (EP-01.1), 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)
  - A. The portable rock-crushing plant, PORT-0076, shall not operate its diesel engine(s) for any purpose other than warming up before production (not to exceed two hours) and powering equipment during production.
  - B. The portable rock-crushing plant, PORT-0076, shall only operate diesel engine(s) with horsepower greater than 600. If the company decides that it would like to use diesel engines with horsepower less than 600, 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

|             |             |
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**SITE-SPECIFIC SPECIAL CONDITIONS:**

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

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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.

# TECHNICAL REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT

## **PROJECT DESCRIPTION**

Rock, composed of non-metallic minerals, is drilled/blasted, loaded into haul trucks, and transported to processing. Rock is processed through feeder(s), crusher(s), screen(s), conveyor(s), and bin(s). Processing equipment is powered with diesel engine(s). 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 Daviess County, an attainment area for all criteria air pollutants.

**Table 1. Other Permits Issued for Site PORT-0076**

| <b>Permit Number</b> | <b>Completed</b> | <b>Description</b>               |
|----------------------|------------------|----------------------------------|
| 0585-010             | 03/29/1993       | Portable rock-crushing plant     |
| 0594-028             | 05/21/1993       | Increase annual production limit |
| 0497-009             | 04/08/1997       | Increase throughput              |

## **EMISSIONS EVALUATION**

Criteria air pollutants will be emitted from this operation. The main air pollutant of concern is PM<sub>10</sub>. 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". 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 PM<sub>10</sub> and less than 40 tons of NO<sub>x</sub> in any 12-month period. A composite PM<sub>10</sub> emission factor and a composite NO<sub>x</sub> emission factor were developed for the portable rock crushing plant. The composite emission factors are incorporated into the monthly record keeping tables, Attachment B and Attachment C. If the conditioned potential emissions of PM<sub>10</sub> were 50 tons per year or greater, then the owner would be required to submit dispersion modeling results.

According to EPA document AP-42, *Compilation of Air Pollutant Emission Factors, Volume I, Stationary Point and Area Sources, Fifth Edition*, the emission factors for calculating criteria pollutant emissions from diesel engines are different depending on the sizes of the diesel engines. Diesel engines with horsepower less than 600 are considered industrial diesel engines and have their own set of emission factors. Diesel engines with horsepower greater than 600 are considered large, stationary diesel engines and have their own set of emission factors. Norris Aggregate Products anticipates using only large, stationary diesel engines and the emission factors for large, stationary diesel engines were used to evaluate emissions. Therefore, Norris Aggregate Products can only use diesel engines with horsepower greater than 600. If the company decides that it would like to use diesel engines with horsepower less than 600, a new permit review will be required.

**Table 2: Emissions Summary (tons per year)**

| Pollutants       | Sites       | Regulatory De Minimis Levels | Existing Actual Emissions (2003 EIQ) | Potential Emissions of the Application | *New Installation Conditioned Potential | Emission Factor (lb/ton) |
|------------------|-------------|------------------------------|--------------------------------------|--|---|--------------------------|
| SOx              | All         | 40.0                         | 1.03                                 | 28.29                                  | 5.05                                    | N/A                      |
| NOx              | All         | 40.0                         | 15.70                                | 224.08                                 | < 40                                    | 51.16**                  |
| VOC              | All         | 40.0                         | 1.28                                 | 5.74                                   | 1.02                                    | N/A                      |
| CO               | All         | 100.0                        | 3.38                                 | 59.52                                  | 10.62                                   | N/A                      |
| HAPs             | All         | 10.0/25.0                    | N/A                                  | 0.11                                   | 0.02                                    | N/A                      |
| PM <sub>10</sub> | Amazonia    | 15.0                         | 0.44                                 | 130.13                                 | < 50                                    | 0.04952                  |
| PM <sub>10</sub> | Barnard     | 15.0                         | 0.44                                 | 126.63                                 | < 50                                    | 0.04024                  |
| PM <sub>10</sub> | Bethany     | 15.0                         | 0.44                                 | 115.83                                 | < 50                                    | 0.04407                  |
| PM <sub>10</sub> | Braymor     | 15.0                         | 0.44                                 | 102.32                                 | < 50                                    | 0.03894                  |
| PM <sub>10</sub> | Breit       | 15.0                         | 0.44                                 | 155.09                                 | < 50                                    | 0.05901                  |
| PM <sub>10</sub> | Edinburg    | 15.0                         | 0.44                                 | 109.01                                 | < 50                                    | 0.04148                  |
| PM <sub>10</sub> | Huntsville  | 15.0                         | 0.44                                 | 121.18                                 | < 50                                    | 0.04611                  |
| PM <sub>10</sub> | Gallatin    | 15.0                         | 0.44                                 | 104.08                                 | < 50                                    | 0.03960                  |
| PM <sub>10</sub> | Gooden      | 15.0                         | 0.44                                 | 113.41                                 | < 50                                    | 0.04315                  |
| PM <sub>10</sub> | Jefferies   | 15.0                         | 0.44                                 | 116.41                                 | < 50                                    | 0.04430                  |
| PM <sub>10</sub> | Maitland    | 15.0                         | 0.44                                 | 147.48                                 | < 50                                    | 0.05612                  |
| PM <sub>10</sub> | Mercer      | 15.0                         | 0.44                                 | 112.34                                 | < 50                                    | 0.04275                  |
| PM <sub>10</sub> | New Point   | 15.0                         | 0.44                                 | 108.44                                 | < 50                                    | 0.04126                  |
| PM <sub>10</sub> | Pattonsburg | 15.0                         | 0.44                                 | 106.03                                 | < 50                                    | 0.04035                  |
| PM <sub>10</sub> | Princeton   | 15.0                         | 0.44                                 | 119.59                                 | < 50                                    | 0.04551                  |
| PM <sub>10</sub> | Route C     | 15.0                         | 0.44                                 | 127.92                                 | < 50                                    | 0.04867                  |
| PM <sub>10</sub> | Trenton     | 15.0                         | 0.44                                 | 119.14                                 | < 50                                    | 0.04533                  |

Note: N/A = Not Applicable

\* PM<sub>10</sub> and NOx conditioned potential from limit in permit conditions. Conditioned potentials of SOx, VOC, CO, and HAPs proportionally reduced according to NOx conditioned potential.

\*\*Emission Factor units are pounds per hour.

## **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/m<sup>3</sup> of PM<sub>10</sub> 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. An ambient background level of PM<sub>10</sub> from the operation(s) of other permitted installations is included in Attachment A-2.

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/m<sup>3</sup> of PM<sub>10</sub>. To ensure conformity with NAAQS, the remaining process emissions are limited to an impact of less than 130 µg/m<sup>3</sup> of PM<sub>10</sub> at or beyond the nearest property boundary.

**Table 3: Ambient Air Quality Impact Analysis of PM<sub>10</sub>, 24-Hour Averaging Time**

| Operation                                    | Ambient Impact Factor (µg/m <sup>3</sup> /ton) | Modeled Impact (µg/m <sup>3</sup> ) | *Background (µg/m <sup>3</sup> ) | NAAQS (µg/m <sup>3</sup> ) | Daily Production Limit (tons) |
|--|--|-------------------------------------|----------------------------------|----------------------------|-------------------------------|
| 1. Solitary                                  | 0.01655  | 130.00                              | 20.00                            | 150.00                     | 7,854                         |
| 2. Concurrent, Same-Owner                    | 0.01655  | 130.00                              | 20.00                            | 150.00                     | **                            |
| 3. Concurrent, Separate-Owner                | 0.01395  | 96.46                               | 53.54                            | 150.00                     | 6,912                         |
| 4. Concurrent, Same-Owner AND Separate-Owner | 0.01395  | 96.46                               | 53.54                            | 150.00                     | **                            |

\* Background PM<sub>10</sub> level of 20.00 µg/m<sup>3</sup> from haul roads and stockpiles and 53.54 µg/m<sup>3</sup> from the operation of other permitted installations.

\*\* Operators must balance production so that the NAAQS is not exceeded.

This plant is permitted for four operating scenarios:

**Solitary Operation:**

Solitary Operation is defined as operation when no other installations are present on the property. During Solitary Operation, the operators must record the daily production to insure that the National Ambient Air Quality Standard (NAAQS) is not exceeded.

**Concurrent Same-Owner Operation:**

Concurrent Same-Owner Operation is defined as operation when other plants owned by Norris Aggregate Product Company are located on the property. During Concurrent Same-Owner Operation, Norris Aggregate Product Company may balance and record the daily production from all plants such that the NAAQS is not exceeded.

**Concurrent Separate-Owner Operation:**

Concurrent Separate-Owner Operation is defined as operation when other plants not owned by Norris Aggregate Product Company are located on the property. During Concurrent Separate-Owner Operation, Norris Aggregate Product Company PLANT NO. 70 must add a background level to its recorded impact to address the impact for the non-owned plants.

**Concurrent Same-Owner AND Separate-Owner Operation:**

Concurrent Same-Owner AND Separate-Owner Operation is defined as operation when plants owned and not owned by Norris Aggregate Product Company are located on the property. During Concurrent Same-Owner AND Concurrent Separate-Owner Operation, Norris Aggregate Product Company may balance the daily production from all owned plants and add a background from the non-owned plants to insure that the NAAQS is not exceeded.

**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
- No Operating Permit is required for this portable rock crushing plant. If this portable rock crushing plant remains at the initial site reviewed in this permit longer than 24 consecutive months, then the owner shall submit an Operating Permit Application. The Air Pollution Control Program must receive this application no later than 30 days after the exceedance of 24 months.
- *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.

\_\_\_\_\_  
Michael Mittermeyer  
Environmental Engineer

\_\_\_\_\_  
Date

**PERMIT DOCUMENTS**

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, designating Norris Aggregate Products` 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. book, Orlemann, et al.1983, *Fugitive Dust Control*.
- EPA Factor Information Retrieval (FIRE) Version 6.21.
- Spreadsheet calculations of potential-to-emit and ambient impact.
- Southwest, Southeast, Northeast, Kansas City or St. Louis 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 Emissions<sup>1</sup>” 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.

<sup>1</sup> 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. Jackie Sisk  
Environmental Engineer  
Norris Aggregate Products  
PO Box 695  
Ottumwa, IA 52501

RE: New Source Review Permit - Project Number: 2006-06-045

Dear Mr. Sisk:

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, the New Source Review application submitted for project 2006-06-045, and your amended operating permit, if required, is necessary for continued compliance. Please review your amended operating permit, as it will contain all applicable requirements for your portable rock crushing plant, including any 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 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.

If you have any questions, please contact me at (573) 751-4817, or write to 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 B. Hale  
New Source Review Unit Chief

KBH: mmk

Enclosures

c: Northeast Regional Office  
PAMS File: 2006-06-045  
Permit Number: