STATE OF MISSOURI **PERMIT BOOK**

DEPARTMENT OF NATURAL RESOURCES

MISSOURI AIR CONSERVATION COMMISSION

PERMIT TO CONSTRUCT

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

Permit Number: 082007-003 Project Number: 2007-04-047
PORT-0591

Owner: Norris Aggregate Products Company

Owner's Address: P.O. Box 190, Cameron, MO 64429

Installation Name: Norris Aggregates Product Company - Plant No. 83

Installation Address: 24049 Hwy Z, Dawn, MO 64637

Location Information: Livingston County, S34/35, T56N, R24W

Application for Authority to Construct was made for:

The reclassification of a stationary rock crushing plant to a generic portable plant. Generic equipment will be added to the existing equipment, and the portable plant will be evaluated for operation at 18 different sites. The portable rock crushing plant has a maximum hourly design rate of 600 tons per hour. Best Management Practices will be used to control emissions from haul roads and stockpiles. 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.

AUG - 6 2007
EFFECTIVE DATE

DIRECTOR OR DESIGNEE
DEPARTMENT OF NATURAL RESOURCES

MO 780-1204 (1-03)

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.

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-0591) Norris Aggregates Product Company (NAPCO) 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.

2. Relocation of Portable Rock Crushing Plant
   A. 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.

3. Generic Plant Designation and Maximum Combined Hourly Design Rate
   NAPCO PORT-0591 has been designated 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.

Table 1: Generic Equipment

Equipment Type	Maximum Combined Hourly Design Rate	Maximum Number of Units
Primary Units (Primary Crusher)	600 tons per hour	1
Crushers including primary crusher	2,600 tons per hour	3
Conveyors, Stackers and Bins	16,000 tons per hour	40
Screens	2,400 tons per hour	6
Wet Screen	600 tons per hour	1
Pugmill	600 tons per hour	1
Compression Ignition Internal Combustion Engines	2,200 horsepower	3

4. Generic Plant Equipment Identification Requirement
   A. Within fifteen (15) days of actual startup, NAPCO shall submit to the Air Pollution Control Program's Permitting Section, the Kansas City Regional Office and the Northeast Regional Office, the following information for PORT-0591:
      1.) A Master List of all equipment that will be permitted for use with PORT-0591. 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 PORT-0591. The core equipment

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

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. NAPCO shall indicate whether or not each piece of equipment is subject to Subpart OOO and provide the justification for this applicability determination.

4.) NAPCO shall notify the Air Pollution Control Program and the Regional Offices if the core equipment is changed or new equipment is added to the master equipment list.

B. NAPCO shall at all times maintain a list of the specific equipment currently being utilized with PORT-0591. NAPCO shall make this list of currently used equipment available to any Department of Natural Resources' personnel upon request.

5. Performance Testing for New Source Performance Standards (NSPS)

A. NAPCO shall submit a testing plan to the Enforcement section of the Air Pollution Control Program for all equipment applicable to NSPS Subpart OOO. NAPCO 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.

6. Record Keeping Requirement

NAPCO shall maintain all records required by this permit for not less than five (5) years and shall make them available to any Department of Natural Resources' personnel upon request.

7. Superseding Condition

The conditions of this permit supersede all special conditions found in the previously issued construction permit(s) (102004-013) from the Air Pollution Control Program.

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

This portable plant is permitted to operate at the following sites:

Table 2: Permitted Sites

Site Name	Physical Address	County, CSTR
Amazonia	9355 State Hwy F Amazonia, MO 64421	Andrew, S18/19, T59N, R35W
Barnard	36714 Jet Road Barnard, MO 64424	Nodaway, S9/10, T62N, R35W
Bethany	29365 Outer Road Bethany, MO 64424	Harrison, S1/2, T63N, R28W
Blue Mound	24049 Hwy Z Dawn, MO 64638	Livingston, S34/35, T56N, R24W
Braymer	6500 Oliver Road Cowgill, MO 64637	Caldwell, S24, T55N, R27W
Edinburg	Hwy 190 and Hwy 146 Trenton, MO 64683	Grundy, S15/16, T61N, R25W
Gallatin	21901 Hwy 13 Gallatin, MO 64640	Daviess, S32/33, T60N, R27W
Gooden	38139 230th Street Ravenwood, MO 64479	Nodaway, S31/36, T65N, R34W
Jefferies	East Bayport Road Blythdale, MO 64426	Harrison, S3/4, T66N, R26W
Maitland	34635 Holt 190 Maitland, MO 65566	Holt, S27/28, T62N, R37W
Mercer	RR1 Princeton, MO 64673	Mercer, S21/22, T66N, R23W
Mooresville	Hwy 36 and CR 407 Mooresville, MO 64664	Livingston, S17, T57N, R25W
New Point	23351 Hwy B Oregon, MO 64473	Holt, S27/28, T61N, R37W
Pattonsburg	Route 3 Pattonsburg, MO 64670	Daviess, S17, T61N, R28W
Princeton	RR1 Princeton, MO 64673	Mercer, S34/35, T64N R24W
Route C	16664 Route C Pattonsburg, MO 64670	Daviess, S30, T61N, R28W
Stet	46134 Hwy K Stet, MO 64680	Ray, S5/6, T53N, R24W
Trenton	38 NW Hwy 146 Trenton, MO 64683	Grundy, S24, T61N, R25W

1. Best Management Practices
   NAPCO shall control 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_{10})
   A. NAPCO Plant No. 83 portable rock crushing plant (PORT-0591) shall ensure, while operating at this site, that the ambient impact of PM_{10} at or beyond the nearest property boundary does not exceed 150 $\mu g/m^3$ in any 24-hour period, in accordance with the Federal NAAQS requirements (40 CFR 50.6).

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

B. The total daily ambient impact of PM_{10} 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. To demonstrate compliance during solitary operation and concurrent same-owner operation, NAPCO shall maintain a daily record of material processed. Attachment A, *Daily Ambient PM_{10} Impact Tracking Record for Solitary and Concurrent Same-Owner Operations*, or other equivalent form(s), will be used for this purpose.
D. To demonstrate compliance during concurrent separate-owner operation and concurrent same-and-separate-owner operation, NAPCO shall maintain a daily record of material processed. Attachment B, *Daily Ambient PM_{10} Impact Tracking Record for Concurrent Separate-Owner and Concurrent Same-and-Separate-Owner Operations*, 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_{10})
   A. NAPCO shall ensure that PORT-0591 emits less than 50 tons of PM_{10} into the atmosphere in any 12-month period.
   B. To demonstrate compliance, NAPCO shall maintain a monthly record of material processed and PM_{10}. Attachment C, *Monthly PM_{10} Emissions Tracking Record,* or other equivalent form(s), will be used for this purpose.

4. Annual Emission Limit of Nitrogen Oxides (NO_X)
   A. NAPCO shall ensure that PORT-0591 emits less than 40 tons of NO_X into the atmosphere in any 12-month period.
   B. To demonstrate compliance, NAPCO shall maintain a monthly record of material processed and NO_X. Attachment D, *Monthly NO_X Emissions Tracking Record,* or other equivalent form(s), will be used for this purpose.

5. Wet Suppression Control System Requirement
   A. NAPCO 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. NAPCO claimed carryover control for all conveyors. This type of control is given to equipment immediately following another equipment controlled by a spray bar. Therefore, all conveyors shall be directly controlled by a spray bar or be located immediately following equipment controlled by a spray bar.
   C. Watering may be suspended during periods of freezing conditions, when use of the wet spray devices may damage the equipment. During these conditions, NAPCO shall adjust the production rate to control fugitive emissions from these units. NAPCO shall record a brief description of such events in a daily log.

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). NAPCO has designated the primary crusher (EP-01.1) as the primary emission point of the portable rock crushing plant. Bypassing the primary emission point(s) 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 Compression Ignition Internal Combustion Engines (ICEs)
   A. NAPCO shall operate ICEs with output power greater than 600 horsepower.

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

B. NAPCO shall operate ICEs only for the purpose of powering crushing, classifying or conveying equipment.

9. Record Keeping Requirement
NAPCO shall maintain all records required by this permit for not less than five (5) years and shall make them available to any Department of Natural Resources' personnel upon request.

10. Reporting Requirement
NAPCO 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

Norris Aggregate Products Company (NAPCO) has applied for authority to expand the rock-crushing plant previously owned by Hunt Midwest Mining and operated at the Blue Mound quarry. This plant processes non-metallic minerals into varying sized of crushed aggregate. NAPCO has also requested that the rock-crushing plant be permitted as a generic portable plant. The following equipment is permitted to operate by permit 102004-013:

Table 3: Previously Permitted Equipment

Description	Maximum Hourly Design Rate	Number of Units
Crushers	1,260 tons/hr	3
Screens	1,640 tons/hr	4
Conveyors/Bins	11,000 tons/hr	22

The equipment listed in table 3 was not originally permitted as generic equipment. This permit supercedes the special conditions of permit 102004-013 and includes the equipment it permitted in the generic equipment list. In addition re-designating the previously permitted equipment, NAPCO will add the following generic equipment to the rock-crushing plant:

Table 4: New Equipment

Description	Maximum Hourly Design Rate	Number of Units
Primary Crusher	600 tons/hr	1
Secondary Crushers	740 tons/hr	2
Screens	760 tons/hr	3
Conveyors/Bins	5,000 tons/hr	18
Pug Mill	600 tons/hr	1
Wet Screen	600 tons/hr	1
Compression Ignition Internal Combustion Engines	2,200 hp	3

This new equipment increases the plant's maximum hourly design rate (MHDR) from 500 tons/hr to 600 tons/hr. Increasing the plant's MHDR increases activity on haul roads and stockpiles. The rock-crushing plant has been evaluated as a portable plant and will operate in multiple counties in the Northeast and Kansas City regions. All counties are attainment areas for all criteria air pollutants. The installation is not a named installation in 10 CSR 10-6.020(3)(B), Table 2.

The plant is permitted to operate under the following four scenarios:

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

Concurrent Same-Owner Operation:
Concurrent Same-Owner Operation is defined as operation when other plants owned by NAPCO are located on the property. During Concurrent Same-Owner Operation, NAPCO 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 NAPCO are located on the property. During Concurrent Separate-Owner Operation, the plant must add a background level to its recorded impact to address the impact for the non-owned plants.

Concurrent Same-and-Separate-Owner Operation:
Concurrent Same-and-Separate-Owner Operation is defined as operation when plants owned and not owned by NAPCO are located on the property. During Concurrent Same-and-Separate-Owner Operation, NAPCO 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.

Table 5: Construction Permits Issued for Installation 117-0021

Permit Number	Completed	Description
1297-024	12/23/1997	New rock-crushing plant
022001-003	2/6/2001	Move equipment on site
102004-013	10/27/2004	Add equipment

EMISSIONS EVALUATION

Criteria air pollutants will be emitted from this operation. The main air pollutant of concern is particulate matter less than ten (10) microns in aerodynamic diameter (PM_{10}). The potential emissions at the Blue Mound site represent the emissions from the new equipment and the increase in activity on the haul roads and stockpiles. The potential emissions at all other sites represent the emissions from all the equipment and activity on the haul roads and stockpiles. Emissions were calculated using the MHDR of the equipment and appropriate emission factors. 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_{10} and less than 40 tons of NO_X in any 12-month period. A composite emission factor was developed for PM_{10} and NO_X. These emission factors are incorporated into the monthly record keeping tables, Attachment C and Attachment D. NAPCO accepted these voluntary limits to avoid refined modeling for PM_{10} and screening for NO_X.

Table 6: Emissions Summary (tons per year)

Air Pollutant (Site Name)	Regulatory *De Minimis* Levels	*Existing Potential Emissions	Existing Actual Emissions (2005 EIQ)	Potential Emissions of the Application	**New Installation Conditioned Potential	Emission Factor (lb/ton)
SO_X (All Sites)	40.0	N/A	N/A	28.29	5.05	N/A
NO_X (All Sites)	40.0	N/A	N/A	224.08	< 40	438.39***
VOC (All Sites)	40.0	N/A	N/A	5.74	1.02	N/A
CO (All Sites)	100.0	N/A	N/A	59.52	10.62	N/A
HAPs (All Sites)	10.0/25.0	N/A	N/A	0.11	0.02	N/A
PM_{10} (Amazonia)	15.0	N/A	N/A	86.70	< 50	0.03299
PM_{10} (Barnard)	15.0	N/A	N/A	60.61	< 50	0.02306
PM_{10} (Bethany)	15.0	N/A	N/A	70.14	< 50	0.02669
PM_{10} (Blue Mound)	15.0	171.22	7.51	25.16	< 50	0.03459
PM_{10} (Braymer)	15.0	N/A	N/A	58.61	< 50	0.02230
PM_{10} (Edinburg)	15.0	N/A	N/A	65.71	< 50	0.02500
PM_{10} (Gallatin)	15.0	N/A	N/A	58.96	< 50	0.02243
PM_{10} (Gooden)	15.0	N/A	N/A	69.32	< 50	0.02638
PM_{10}	15.0	N/A	N/A	71.43	< 50	0.02718

(Jefferies)						
PM_{10} (Maitland)	15.0	N/A	N/A	102.45	< 50	0.03899
PM_{10} (Mercer)	15.0	N/A	N/A	69.04	< 50	0.02627
PM_{10} (Mooresville)	15.0	N/A	N/A	61.07	< 50	0.02324
PM_{10} (New Point)	15.0	N/A	N/A	64.92	< 50	0.02470
PM_{10} (Pattonsburg)	15.0	N/A	N/A	62.17	< 50	0.02366
PM_{10} (Princeton)	15.0	N/A	N/A	74.01	< 50	0.02816
PM_{10} (Route C)	15.0	N/A	N/A	86.69	< 50	0.03299
PM_{10} (Stet)	15.0	N/A	N/A	65.96	< 50	0.02510
PM_{10} (Trenton)	15.0	N/A	N/A	76.08	< 50	0.02895

Note: N/A = Not Applicable

* Existing potential emissions taken from permit # 102004-013

** PM_{10} and NO_X conditioned potential based on voluntary limit. Other pollutants proportionately reduced to NO_X conditioned potential.

*** NO_X emission factor units are lbs/1000 gal.

AMBIENT AIR QUALITY IMPACT ANALYSIS

Screening tools were used to evaluate the ambient air impact of the hourly PM_{10} emissions from this operation. The ambient impact was evaluated at the nearest property boundary, which is 600 feet from the primary crusher. The ambient impact at this site shall not exceed the National Ambient Air Quality Standard (NAAQS) of 150 µg/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.

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^3 of PM_{10}. To ensure conformity with NAAQS, the remaining process emissions are limited to an impact of less than 130 µg/m^3 of PM_{10} at or beyond the nearest property boundary.

Table 7: Ambient Air Quality Impact Analysis of PM_{10}, 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	0.01665	130.00	20.00	150.00	7,809
2. Concurrent, Same Owner	0.01665	130.00	20.00	150.00	**
3. Concurrent, Separate Owners	0.01393	96.46	53.54	150.00	6,922
4. Concurrent, Same-and-Separate Owners	0.01393	96.46	53.54	150.00	**

* Background PM_{10} level of 20.00 µg/m^3 from haul roads and stockpiles and 33.54 µg/m3 from the operation of other plants.

** NAPCO must balance production among concurrently operating plants, with the ambient impact factors for each, such that 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
- *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 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.*
- 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.
- Northeast Regional Office Site Survey.
- Kansas City Regional Office Site Survey.

Attachment A: Daily Ambient PM_{10} Impact Tracking Record for Solitary and Concurrent Same-Owner Operations
Norris Aggregates Product Company - Plant No. 83, PORT-0591 – Portable Rock Crushing Plant

Project Number: 2007-04-047

Site Name: _____

County, CSTR: _____, _____
Primary Unit Size: 600 tph
Distance to Nearest Property Boundary: 600 feet

This sheet covers the period from _____ to _____ (Month, Day, Year) *(Copy this sheet as needed.)*

Date	Norris Aggregates Product Company - Plant No. 83 PORT-0591 Project # 2007-04-047			Plant Name: Plant ID: Permit #:	Plant Name: Plant ID: Permit #:	Plant Name: Plant ID: Permit #:		
	Daily Production (tons)	Ambient Impact Factor ($\mu g/m^3$ ton)	[1]Daily PM_{10} Impact ($\mu g/m^3$)	[2]Daily PM_{10} Impact ($\mu g/m^3$)	[2]Daily PM_{10} Impact ($\mu g/m^3$)	[2]Daily PM_{10} Impact ($\mu g/m^3$)	[3]Back-ground PM_{10} Level ($\mu g/m^3$)	[4]TOTAL PM_{10} Level ($\mu g/m^3$)
Example	2,313	0.01665	38.51	N/A	N/A	N/A	20.00	58.51
		0.01665					20.00	
		0.01665					20.00	
		0.01665					20.00	
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		0.01665					20.00	
		0.01665					20.00	

Note 1: The Daily PM_{10} Impact ($\mu g/m^3$) for PORT-0591 is calculated by multiplying the Daily Production (tons) by the matching Ambient Impact Factor.
Note 2: The Daily PM_{10} Impact ($\mu g/m^3$) for Same-Owner plants must be obtained from their operators.
Note 3: Background PM_{10} Level ($\mu g/m^3$) is from Haul Roads and Stockpiles.
Note 4: The TOTAL PM_{10} Level ($\mu g/m^3$) is calculated by summing the Daily PM_{10} Ambient Impact(s) and the Background PM_{10} Level. A TOTAL PM_{10} Level of less than 150 $\mu g/m^3$ in any 24-hour period indicates compliance.

Attachment B: Daily Ambient PM_{10} Impact Tracking Record for Concurrent Separate-Owner and Concurrent Same-and-Separate-Owner Operations
Norris Aggregates Product Company - Plant No. 83, PORT-0591 – Portable Rock Crushing Plant

Project Number: 2007-04-047

Site Name: _____

County, CSTR: _____, _____
Primary Unit Size: 600 tph
Distance to Nearest Property Boundary: 600 feet

This sheet covers the period from _____ to _____ (Month, Day, Year) *(Copy this sheet as needed.)*

Date	Norris Aggregates Product Company - Plant No. 83 PORT-0591 Project # 2007-04-047			Plant Name: Plant ID: Permit #:	Plant Name: Plant ID: Permit #:	Plant Name: Plant ID: Permit #:		
	Daily Production (tons)	Ambient Impact Factor ($\mu g/m^3$ton)	[1]Daily PM_{10} Impact ($\mu g/m^3$)	[2]Daily PM_{10} Impact ($\mu g/m^3$)	[2]Daily PM_{10} Impact ($\mu g/m^3$)	[3]Daily PM_{10} Impact ($\mu g/m^3$)	[4]Back-ground PM_{10} Level ($\mu g/m^3$)	[5]TOTAL PM_{10} Level ($\mu g/m^3$)
Example	2,765	0.01393	38.52	N/A	N/A	33.54	20.00	92.06
		0.01393				33.54	20.00	
		0.01393				33.54	20.00	
		0.01393				33.54	20.00	
		0.01393				33.54	20.00	
		0.01393				33.54	20.00	
		0.01393				33.54	20.00	
		0.01393				33.54	20.00	
		0.01393				33.54	20.00	
		0.01393				33.54	20.00	
		0.01393				33.54	20.00	
		0.01393				33.54	20.00	
		0.01393				33.54	20.00	
		0.01393				33.54	20.00	
		0.01393				33.54	20.00	
		0.01393				33.54	20.00	
		0.01393				33.54	20.00	
		0.01393				33.54	20.00	

Note 1: The Daily PM_{10} Impact ($\mu g/m^3$) for PORT-0591 is calculated by multiplying the Daily Production (tons) by the matching Ambient Impact Factor.
Note 2: The Daily PM_{10} Impact ($\mu g/m^3$) for Same-Owner plants must be obtained from their operators.
Note 3: The Daily PM_{10} Impact ($\mu g/m^3$) for Separate-Owner plants must be added to the TOTAL PM_{10} Level
Note 4: Background PM_{10} Level ($\mu g/m^3$) is from Haul Roads and Stockpiles.
Note 5: The TOTAL PM_{10} Level ($\mu g/m^3$) is calculated by summing the Daily PM_{10} Ambient Impact(s) and the Background PM_{10} Level. A TOTAL PM_{10} Level of less than 150 $\mu g/m^3$ in any 24-hour period indicates compliance.

Attachment C: Monthly PM_{10} Emissions Tracking Record
Norris Aggregates Product Company - Plant No. 83, PORT-0591 – Portable Rock Crushing Plant

Project Number: 2007-04-047

County, CSTR: _____, _____
Primary Unit Size: 600 tph
Distance to Nearest Property Boundary: 600 feet

This sheet covers the period from _____ to _____ (Month, Day, Year)
(Copy this sheet as needed.)

Month	[1]Site Name	Monthly Production (tons)	[2]Composite PM_{10} Emission Factor (lbs/ton)	[3]Monthly PM_{10} Emissions (lbs)	[4]Monthly PM_{10} Emissions (tons)	[5]12-Month PM_{10} Emissions (tons/year)
Example	Amazonia	40,278	0.03299	1328.8	0.66	9.08

Note 1: Enter the appropriate site name as listed in table 6.
Note 2: Enter the corresponding emission factor for the site. Emission factors are located in table 6.
Note 3: The Monthly Emissions (lbs) are calculated by multiplying the Monthly Production (tons) by the Composite Emission Factor (lbs/ton).
Note 4: The Monthly Emissions (tons) are calculated by dividing the Monthly Emissions (lbs) by 2,000.
Note 5: The 12-Month Emissions (tons/year) are a rolling total calculated by adding the Month's Emissions (tons) to the Monthly Emissions (tons) of the previous eleven (11) months. A total of less than **50** tons in any consecutive 12-month period indicates compliance.

Attachment D: Monthly NO_X Emissions Tracking Record
Norris Aggregates Product Company - Plant No. 83, PORT-0591 – Portable Rock Crushing Plant

Project Number: 2007-04-047
Primary Unit Size: 600 tph
Distance to Nearest Property Boundary: 600 feet

This sheet covers the period from ____________________ to ____________________ (Month, Day, Year)
(Copy this sheet as needed.)

Month	Monthly Fuel Usage (1000 gallons)	Composite NO_X Emission Factor (lbs/1000 gal)	[1]Monthly PM_{10} Emissions (lbs)	[2]Monthly PM_{10} Emissions (tons)	[3]12-Month PM_{10} Emissions (tons/year)
Example	43.410	438.39	19,032	9.5160	22.461
		438.39			
		438.39			
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		438.39			

Note 1: The Monthly Emissions (lbs) are calculated by multiplying the Monthly Fuel Usage (1000 gal) by the Composite Emission Factor (lbs/1000 gal).
Note 2: The Monthly Emissions (tons) are calculated by dividing the Monthly Emissions (lbs) by 2,000.
Note 3: The 12-Month Emissions (tons/year) are a rolling total calculated by adding the Month's Emissions (tons) to the Monthly Emissions (tons) of the previous eleven (11) months. A total of less than **40** tons in any consecutive 12-month period indicates compliance.

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. NAPCO 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[1]" 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. NAPCO 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. NAPCO 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. NAPCO shall record the time, date and the amount of material applied for each application of the chemical dust suppressant agent on the above areas. NAPCO shall keep these records with the plant for not less than five (5) years, and NAPCO shall make these records available to Department of Natural Resources personnel upon request.

3. Usage of Documented Watering –
   - A. NAPCO 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, NAPCO 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. NAPCO 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. NAPCO shall record a brief description of such events in the same log as the documented watering.
   - E. NAPCO shall record the date and the amount of water applied for each application on the above areas. NAPCO shall keep these records with the plant for not less than five (5) years, and NAPCO 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. NAPCO 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. NAPCO 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. NAPCO 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. NAPCO shall record the time, date and the amount of material applied for each application of the chemical dust suppressant agent on the above areas. NAPCO shall keep these records with the plant for not less than five (5) years, and NAPCO shall make these records available to Department of Natural Resources personnel upon request.

3. Usage of Documented Watering –
   - A. NAPCO 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. NAPCO 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. NAPCO shall record a brief description of such events in the same log as the documented watering.
   - E. NAPCO shall record the date and the amount of water applied for each application on the above areas. NAPCO shall keep these records with the plant for not less than five (5) years, and NAPCO shall make these records available to Department of Natural Resources personnel upon request.

Mr. Jackie Sisk
Production Manager
Norris Aggregate Products Company
P.O. Box 190
Cameron, MO 64429

RE: New Source Review Permit - Project Number: 2007-04-047

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 and the New Source Review application, submitted for project 2007-04-047, 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 document 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 do not hesitate to contact Michael Mittermeyer at the department's Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102 or telephone (573) 751-4817. 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
Kansas City Regional Office
PAMS File: 2007-04-047
Permit Number: