



Missouri Department of dnr.mo.gov
NATURAL RESOURCES
 Eric R. Greitens, Governor Carol S. Comer, Director

MAR 3 0 2017

Mr. Harold Bono
 Secretary/Treasurer
 Magruder Limestone Co., Inc. PORT-0727
 255 Watson Road
 Troy, MO 63379

RE: New Source Review Permit Amendment - Permit Number: 012016-009A
 Project Number: 2017-02-071

Dear Mr. Bono:

On February 28, 2017, the Air Pollution Control Program received an amendment request to update Permit 012016-009 by adding an IROCK Model TC40 cone crusher (Serial #IR42MXC10016), a 274 hp Caterpillar Model C7.1 diesel engine, a Caterpillar Model C4.4 129 hp diesel engine, an IROCK MODEL TS522TD 3-deck 5' x 22' screen (Serial #IR07M523104) and several associated conveyors to the existing plant. The MHDR of the new equipment is 400 tons/hour. The haul road and storage pile emissions did not increase.

The following Table 1 is an updated list of all the equipment for PORT-0727:

Table 1: Equipment List

Equipment #	New or Existing Equipment	Description	MHDR
EP-01	Existing	Engine 1 2015 Caterpillar Model C-13 ACERT (Nonroad)	520 hp
EP-02	Existing	Engine 2 2015 Caterpillar Model C4.4 (Nonroad)	140 hp
EP-03	Existing	Storage Piles	1 acre
EP-04	Existing	Grizzly Feeder	400 tph
EP-05	Existing	Primary Crusher	400 tph
EP-06	Existing	6 Conveyors (4 Screen Discharge Conveyors, 1 screen feed conveyor, 1 primary crusher discharge conveyor)	1,200 tph
EP-07	Existing	Screen	400 tph
EP-08	Existing	Loading Into Grizzly	400 tph
EP-09	Existing	Haul Roads	4,400 feet (total)
EP-10	New	Secondary Cone Crusher Feed Conveyor	400 tph
EP-11	New	Secondary Cone Crusher IROCK Model TC40	400 tph
EP-12	New	Secondary Cone Crusher Discharge Conveyor	400 tph
EP-13	New	Screen Feed Conveyor	400 tph
EP-14	New	Screen IROCK Model TS522TD	400 tph
EP-15	New	Screen Discharge Conveyors	400 tph
EP-16	New	Oversize Conveyor	400 tph
EP-17	New	Engine 3 2017 Caterpillar Model C7.1 (Nonroad)	274 hp
EP-18	New	Engine 4 2017 Caterpillar Model C4.4 (Nonroad)	129 hp

The entire facility's potential to emit was recalculated at each site to include the new crusher, screen, and conveyors. In permit 012016-009 all engine emissions were included. The engines (EP-01, EP-02, EP17 and EP-18) that power the portable plant are nonroad engines. The portable plant is track mounted and the engines serve a dual purpose by propelling the portable plant and supplying power to the crusher, screen, and conveyors. Therefore they meet the definition of a nonroad engine as stated in 40 CFR 89.2 *Nonroad Engine* (1)(i) and emissions from the engines were not evaluated. The potential emissions of the application represent the emissions of all equipment and activities assuming continuous operation (8760 hours per year). The conditioned potential emissions include emissions from sources that will limit their production to ensure compliance with the annual emission limit for PM₁₀. The following tables summarize the emission for PORT-0727 at each site:

Table 2: Emissions Summary at Troy Quarry (tons per year)

Air Pollutant	De Minimis Level	^a Potential Emissions of Process Equipment	Existing Actual Emissions	^b Potential Emissions of the Application	Conditioned Potential Emissions
PM	25.0	14.12	N/A	192.95	45.59
PM ₁₀	15.0	5.21	N/A	63.48	<15.0
PM _{2.5}	10.0	0.46	N/A	14.01	3.31
SO _x	40.0	N/A	N/A	N/A	N/A
NO _x	40.0	N/A	N/A	N/A	N/A
VOC	40.0	N/A	N/A	N/A	N/A
CO	100.0	N/A	N/A	N/A	N/A
Total HAPs	25.0	N/A	N/A	N/A	N/A

N/A = Not Applicable

^aPotential Emissions of Process Equipment exclude haul road and storage pile emissions

^bIncludes site specific haul road and storage pile emissions

Table 3: Emissions Summary at Foley Quarry (tons per year)

Air Pollutant	De Minimis Level	^a Potential Emissions of Process Equipment	Existing Actual Emissions	^b Potential Emissions of the Application	Conditioned Potential Emissions
PM	25.0	14.12	N/A	84.87	40.31
PM ₁₀	15.0	5.21	N/A	31.58	< 15.0
PM _{2.5}	10.0	0.46	N/A	5.72	2.72
SO _x	40.0	N/A	N/A	N/A	N/A
NO _x	40.0	N/A	N/A	N/A	N/A
VOC	40.0	N/A	N/A	N/A	N/A
CO	100.0	N/A	N/A	N/A	N/A
Total HAPs	25.0	N/A	N/A	N/A	N/A

N/A = Not Applicable

^aPotential Emissions of Process Equipment exclude haul road and storage pile emissions

^bIncludes site specific haul road and storage pile emissions

Table 4: Emissions Summary at Silex Quarry (tons per year)

Air Pollutant	De Minimis Level	^a Potential Emissions of Process Equipment	Existing Actual Emissions	^b Potential Emissions of the Application	Conditioned Potential Emissions
PM	25.0	14.12	N/A	241.58	46.56
PM ₁₀	15.0	5.21	N/A	77.83	< 15.0
PM _{2.5}	10.0	0.46	N/A	17.74	3.42
SO _x	40.0	N/A	N/A	N/A	N/A
NO _x	40.0	N/A	N/A	N/A	N/A
VOC	40.0	N/A	N/A	N/A	N/A
CO	100.0	N/A	N/A	N/A	N/A
Total HAPs	25.0	N/A	N/A	N/A	N/A

N/A = Not Applicable

^aPotential Emissions of Process Equipment exclude haul road and storage pile emissions

^bIncludes site specific haul road and storage pile emissions

Table 5: Emissions Summary at Ashley Quarry (tons per year)

Air Pollutant	De Minimis Level	^a Potential Emissions of Process Equipment	Existing Actual Emissions	^b Potential Emissions of the Application	Conditioned Potential Emissions
PM	25.0	14.12	N/A	295.62	47.28
PM ₁₀	15.0	5.21	N/A	93.78	< 15.0
PM _{2.5}	10.0	0.46	N/A	21.89	3.50
SO _x	40.0	N/A	N/A	N/A	N/A
NO _x	40.0	N/A	N/A	N/A	N/A
VOC	40.0	N/A	N/A	N/A	N/A
CO	100.0	N/A	N/A	N/A	N/A
Total HAPs	25.0	N/A	N/A	N/A	N/A

N/A = Not Applicable

^aPotential Emissions of Process Equipment exclude haul road and storage pile emissions

^bIncludes site specific haul road and storage pile emissions

Table 6: Emissions Summary at Frankford Quarry (tons per year)

Air Pollutant	De Minimis Level	^a Potential Emissions of Process Equipment	Existing Actual Emissions	^b Potential Emissions of the Application	Conditioned Potential Emissions
PM	25.0	14.12	N/A	149.72	44.28
PM ₁₀	15.0	5.21	N/A	50.72	< 15.0
PM _{2.5}	10.0	0.46	N/A	10.69	3.16
SO _x	40.0	N/A	N/A	N/A	N/A
NO _x	40.0	N/A	N/A	N/A	N/A
VOC	40.0	N/A	N/A	N/A	N/A
CO	100.0	N/A	N/A	N/A	N/A
Total HAPs	25.0	N/A	N/A	N/A	N/A

N/A = Not Applicable

^aPotential Emissions of Process Equipment exclude haul road and storage pile emissions

^bIncludes site specific haul road and storage pile emissions

Table 7: Emissions Summary at Shelbina Quarry (tons per year)

Air Pollutant	De Minimis Level	^a Potential Emissions of Process Equipment	Existing Actual Emissions	^b Potential Emissions of the Application	Conditioned Potential Emissions
PM	25.0	14.12	N/A	112.43	42.47
PM ₁₀	15.0	5.21	N/A	39.71	< 15.0
PM _{2.5}	10.0	0.46	N/A	7.83	2.96
SO _x	40.0	N/A	N/A	N/A	N/A
NO _x	40.0	N/A	N/A	N/A	N/A
VOC	40.0	N/A	N/A	N/A	N/A
CO	100.0	N/A	N/A	N/A	N/A
Total HAPs	25.0	N/A	N/A	N/A	N/A

N/A = Not Applicable

^aPotential Emissions of Process Equipment exclude haul road and storage pile emissions

^bIncludes site specific haul road and storage pile emissions

Table 8: Emissions Summary at Lake Ozark/Prewitt Quarry (tons per year)

Air Pollutant	De Minimis Level	^a Potential Emissions of Process Equipment	Existing Actual Emissions	^b Potential Emissions of the Application	Conditioned Potential Emissions
PM	25.0	14.12	N/A	198.35	45.72
PM ₁₀	15.0	5.21	N/A	65.07	< 15.0
PM _{2.5}	10.0	0.46	N/A	14.42	3.33
SO _x	40.0	N/A	N/A	N/A	N/A
NO _x	40.0	N/A	N/A	N/A	N/A
VOC	40.0	N/A	N/A	N/A	N/A
CO	100.0	N/A	N/A	N/A	N/A
Total HAPs	25.0	N/A	N/A	N/A	N/A

N/A = Not Applicable

^aPotential Emissions of Process Equipment exclude haul road and storage pile emissions

^bIncludes site specific haul road and storage pile emissions

Table 9: Emissions Summary at Sunrise Beach Quarry (tons per year)

Air Pollutant	De Minimis Level	^a Potential Emissions of Process Equipment	Existing Actual Emissions	^b Potential Emissions of the Application	Conditioned Potential Emissions
PM	25.0	14.12	N/A	149.18	44.26
PM ₁₀	15.0	5.21	N/A	50.56	< 15.0
PM _{2.5}	10.0	0.46	N/A	10.65	3.16
SO _x	40.0	N/A	N/A	N/A	N/A
NO _x	40.0	N/A	N/A	N/A	N/A
VOC	40.0	N/A	N/A	N/A	N/A
CO	100.0	N/A	N/A	N/A	N/A
Total HAPs	25.0	N/A	N/A	N/A	N/A

N/A = Not Applicable

^aPotential Emissions of Process Equipment exclude haul road and storage pile emissions

^bIncludes site specific haul road and storage pile emissions

Table 10: Emissions Summary at Bowling Green Quarry (tons per year)

Air Pollutant	De Minimis Level	^a Potential Emissions of Process Equipment	Existing Actual Emissions	^b Potential Emissions of the Application	Conditioned Potential Emissions
PM	25.0	14.12	N/A	84.87	40.31
PM ₁₀	15.0	5.21	N/A	31.58	< 15.0
PM _{2.5}	10.0	0.46	N/A	5.72	2.72
SO _x	40.0	N/A	N/A	N/A	N/A
NO _x	40.0	N/A	N/A	N/A	N/A
VOC	40.0	N/A	N/A	N/A	N/A
CO	100.0	N/A	N/A	N/A	N/A
Total HAPs	25.0	N/A	N/A	N/A	N/A

N/A = Not Applicable

^aPotential Emissions of Process Equipment exclude haul road and storage pile emissions

^bIncludes site specific haul road and storage pile emissions

Table 11: Emissions Summary at Lake Ozark Quarry (tons per year)

Air Pollutant	De Minimis Level	^a Potential Emissions of Process Equipment	Existing Actual Emissions	^b Potential Emissions of the Application	Conditioned Potential Emissions
PM	25.0	14.12	N/A	128.10	43.34
PM ₁₀	15.0	5.21	N/A	44.34	< 15.0
PM _{2.5}	10.0	0.46	N/A	9.03	3.06
SO _x	40.0	N/A	N/A	N/A	N/A
NO _x	40.0	N/A	N/A	N/A	N/A
VOC	40.0	N/A	N/A	N/A	N/A
CO	100.0	N/A	N/A	N/A	N/A
Total HAPs	25.0	N/A	N/A	N/A	N/A

N/A = Not Applicable

^aPotential Emissions of Process Equipment exclude haul road and storage pile emissions

^bIncludes site specific haul road and storage pile emissions

The ambient impact from Permit #012016-009 is being converted to daily production limits. This change reflects the Air Pollution Control Program's updated construction industry policy "Ceasing the Use of Nomographs" dated May 1, 2016.

Magruder Limestone Co., Inc. PORT-0727 is permitted to operate with other plants located at the site as long as the following scenarios are maintained. These scenarios are also summarized in the table below.

- When operating by itself, referred to as solitary operation, Magruder Limestone Co., Inc. PORT-0727 may produce up to 9,220 tons per day.
- When operating with another plant, referred to as concurrent operation, Magruder Limestone Co., Inc. PORT-0727 is limited to produce up to 5,674 tons per day.

Mr. Harold Bono

Page Seven

Table 12: Summary of Daily Production Limits

Type of Operation	Daily Production Limit
^a Solitary	9,220
^b Concurrent	5,674

^a Operation without other plants

^b Operation with other plants

If you were adversely affected by this permit decision, you may be entitled to pursue an appeal before the administrative hearing commission pursuant to Sections 621.250 and 643.075.6 RSMo. To appeal, you must file a petition with the administrative hearing commission within thirty days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed; if it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the administrative hearing commission, whose contact information is: Administrative Hearing Commission, United States Post Office Building, 131 West High Street, Third Floor, P.O. Box 1557, Jefferson City, Missouri 65102, phone: 573-751-2422, fax: 573-751-5018, website: www.aa.mo.gov/ahc.

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

Sincerely,

AIR POLLUTION CONTROL PROGRAM



Kendall B. Hale
Permits Section Chief

KBH:csj

Enclosures

c: St. Louis Regional Office
PAMS File: 2017-02-071

Page No.	8
Permit No.	012016-009A
Project No.	2017-02-071

SITE SPECIFIC SPECIAL CONDITIONS:

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

The special conditions listed in this permit were included based on the authority granted the Missouri Air Pollution Control Program by the Missouri Air Conservation Law (specifically 643.075) and by the Missouri Rules listed in Title 10, Division 10 of the Code of State Regulations (specifically 10 CSR 10-6.060). For specific details regarding conditions, see 10 CSR 10-6.060 paragraph (12)(A)10. "Conditions required by permitting authority."

PORT ID Number: PORT-0727

Site ID Number: 113-0031
Site Name: Troy Quarry
Site Address: 255 Watson Road, Troy, MO 63379
Site County: Lincoln County, S2, T50N, R1W

Site ID Number: 113-0075
Site Name: Foley Quarry
Site Address: 399 Old Highway 79, Foley, MO 63347
Site County: Lincoln County, S2 T50N R2E

Site ID Number: 113-0060
Site Name: Silex Quarry
Site Address: 330 Highway E, Silex, MO 63377
Site County: Lincoln County, S2 & 11 T50N R1W

Site ID Number: 163-0022
Site Name: Ashley Quarry
Site Address: 13614 Pike 496, Bowling Green, MO 63334
Site County: Pike County, S27 & 28 T52N R3W

Site ID Number: 163-0005
Site Name: Frankford Quarry
Site Address: 6589 Old Highway 61, Frankford, MO 63441
Site County: Pike County, S35 & 36 T55N R4W

Site ID Number: 205-0029
Site Name: Shelbina Quarry
Site Address: 5799 Shelby 334, Shelbyville, MO 63469
Site County: Shelby County, S9 T57N R10W

Page No.	9
Permit No.	012016-009A
Project No.	2017-02-071

SITE SPECIFIC SPECIAL CONDITIONS:

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

The special conditions listed in this permit were included based on the authority granted the Missouri Air Pollution Control Program by the Missouri Air Conservation Law (specifically 643.075) and by the Missouri Rules listed in Title 10, Division 10 of the Code of State Regulations (specifically 10 CSR 10-6.060). For specific details regarding conditions, see 10 CSR 10-6.060 paragraph (12)(A)10. "Conditions required by permitting authority."

PORT ID Number: PORT-0727

Site ID Number: 113-0031
Site Name: Troy Quarry
Site Address: 255 Watson Road, Troy, MO 63379
Site County: Lincoln County, S2, T50N, R1W

Site ID Number: 113-0075
Site Name: Foley Quarry
Site Address: 399 Old Highway 79, Foley, MO 63347
Site County: Lincoln County, S2 T50N R2E

Site ID Number: 113-0060
Site Name: Silex Quarry
Site Address: 330 Highway E, Silex, MO 63377
Site County: Lincoln County, S2 & 11 T50N R1W

Site ID Number: 163-0022
Site Name: Ashley Quarry
Site Address: 13614 Pike 496, Bowling Green, MO 63334
Site County: Pike County, S27 & 28 T52N R3W

Site ID Number: 163-0005
Site Name: Frankford Quarry
Site Address: 6589 Old Highway 61, Frankford, MO 63441
Site County: Pike County, S35 & 36 T55N R4W

Site ID Number: 205-0029
Site Name: Shelbina Quarry
Site Address: 5799 Shelby 334, Shelbyville, MO 63469
Site County: Shelby County, S9 T57N R10W

Page No.	10
Permit No.	012016-009A
Project No.	2017-02-071

SITE SPECIFIC SPECIAL CONDITIONS:

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

Site ID Number: 131-0045
 Site Name: Lake Ozark/Prewitt Quarry
 Site Address: Jct. Hwy 54 & Hwy 242 Lake Ozark, MO 65049
 Site County: Miller County, S32 T40N R15W

Site ID Number: 029-0050
 Site Name: Sunrise Quarry
 Site Address: 12729 North State Highway 5, Sunrise Beach, MO 65079
 Site County: Camden County, S9 T39N R17W

Site ID Number: 163-0043
 Site Name: Bowling Green Quarry
 Site Address: 11190 Highway 54, Bowling Green, MO 63334
 Site County: Pike County, S20 T53N R3W

Site ID Number: 131-0038
 Site Name: Lake Ozark Quarry
 Site Address: 120 Wood River Road, Lake Ozark, MO 65049
 Site County: Miller S33 T40N R15W

1. **Superseding Condition**
 The conditions of this permit supersede all Site Specific Special Conditions found in the previously issued construction permit, Permit Number 012016-009 issued by the Air Pollution Control Program.

2. **Daily Production Limit For Rock-Crushing Plant**
 - A. Magruder Limestone Co., Inc. PORT-0727's rock-crushing plant shall limit its daily production based on Table 1 using Attachment A, or another equivalent form, that has been approved by the Air Pollution Control Program, including electronic forms.

Table 12: Summary of Daily Production Limits

Type of Operation	Daily Production Limit
^a Solitary	9,220
^b Concurrent	5,674

^a Operation without other plants

^b Operation with other plants

SITE SPECIFIC SPECIAL CONDITIONS:

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

3. Annual Emission Limit

- A. Magruder Limestone Co., Inc. PORT-0727 shall emit less than 15.0 tons of PM₁₀ in any 12-month period from this portable plant at each of the following sites: Troy, Silex, Ashley, Frankford, Lake Ozark/Prewitt and Sunrise Beach Quarry, Bowling Green, Shelbina, Foley.
- B. Magruder Limestone Co., Inc. PORT-0727 shall demonstrate compliance with Special Condition 3.A using a separate Attachment B, or another equivalent form that has been approved by the Air Pollution Control Program, including an electronic form, for each site. Magruder Limestone Co., Inc. PORT-0727 shall use the PM₁₀ emission factor for the corresponding site as listed in the table below.

Table 13: PM₁₀ Emission Factors for Record Keeping

Site Name	PM ₁₀ emission factors
Troy Quarry	0.0362 lb/ton
Silex Quarry	0.0444 lb/ton
Ashley Quarry	0.0535 lb/ton
Frankford Quarry	0.0289 lb/ton
Lake Ozark/Prewitt Quarry	0.0371 lb/ton
Sunrise Beach Quarry	0.0289 lb/ton
Bowling Green	0.0180 lb/ton
Shelbina	0.0227 lb/ton
Foley Quarry	0.0180 lb/ton
Lake Ozark	0.0253 lb/ton

4. Moisture Content Testing Requirement

- A. Magruder Limestone Co., Inc. PORT-0727 shall verify that the moisture content of the processed rock at each site listed in this permit is greater than or equal to 1.5 percent by weight.
- B. Testing shall be conducted according to the method prescribed by the American Society for Testing Materials (ASTM) D-2216, C-566 or another method approved by the Director.
- C. The initial test shall be conducted no later than 45 days after the start of operation. A second test shall be performed the calendar year following the initial test during the months of July or August.

Page No.	12
Permit No.	012016-009A
Project No.	2017-02-071

SITE SPECIFIC SPECIAL CONDITIONS:

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

- D. The test samples shall be taken from rock that has been processed by the plant or from each source of aggregate (e.g. quarry).
 - E. The written analytical report shall include the raw data and moisture content of each sample, the test date and the original signature of the individual performing the test. The report shall be filed on-site or at the Magruder Limestone Co., Inc. PORT-0727 main office within 30 days of completion of the required test.
 - F. If the moisture content of either of the two tests is less than the moisture content in Special Condition 4.A, another test may be performed within 15 days of the noncompliant test. If the results of that test is less than the moisture content in Special Condition 4.A, Magruder Limestone Co., Inc. PORT-0727 shall either:
 - 1) Apply for a new permit to account for the revised information, or
 - 2) Submit a plan for the installation of wet spray devices to the Compliance/Enforcement Section of the Air Pollution Control Program within 10 days of the second noncompliant test. The wet spray devices shall be installed and operational within 40 days of the second noncompliant test.
 - G. In lieu of testing, Magruder Limestone Co., Inc. PORT-0727 may obtain test results that demonstrate compliance with the moisture content in Special Condition 4.A from the supplier of the aggregate.
5. **Minimum Distance to Property Boundary Requirement**
The primary crusher (EP-5) shall be located at least 500 feet from the nearest property boundary at each site listed in this permit.
6. **Primary Equipment Requirement**
Magruder Limestone Co., Inc. PORT-0727 shall process all rock processed by PORT-0727 through the primary crusher (EP-5). Bypassing the primary crusher is prohibited.
7. **Concurrent Operation Requirement**
Magruder Limestone Co., Inc. PORT-0727 cannot operate with any other plants that have ambient impact limits based on the Air Pollution Control Program's nomographs. When other plants locate to the site, please refer to the special conditions of that plant's permit

Page No.	13
Permit No.	012016-009A
Project No.	2017-02-071

SITE SPECIFIC SPECIAL CONDITIONS:

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

8. **Record Keeping Requirement**
Magruder Limestone Co., Inc. PORT-0727 shall maintain all records required by this permit for not less than five years and make them available to any Missouri Department of Natural Resources' personnel upon request.

9. **Reporting Requirement**
Magruder Limestone Co., Inc. PORT-0727 shall report to the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than 10 days after any exceedances of the limitations imposed by this permit

