



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: 052013-004

Project Number: 2013-02-063
Installation ID: PORT-0696

Parent Company: Surmeier & Surmeier, Inc.

Parent Company Address: 339 S. 6th Street, Mascoutah, IL 62258

Installation Name: Surmeier & Surmeier, Inc

Installation Address: County Rd. 304 & Rock Levee Rd., Scott City, MO 63780

Location Information: Scott County, S31 T30N R14E

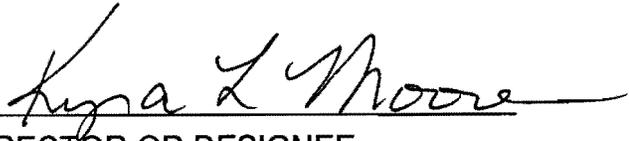
Application for Authority to Construct was made for: a new portable rock-crushing and screening plant. This review was conducted in accordance with Section (6), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*.

Standard Conditions (on reverse) are applicable to this permit.

Standard Conditions (on reverse) and Special Conditions are applicable to this permit.

MAY 29 2013

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. In the event that there is a discrepancy between the permit application and this permit, the conditions of this permit shall take precedence. Specifically, all air contaminant control devices shall be operated and maintained as specified in the application, associated plans and specifications.

You must notify the Department's Air Pollution Control Program of the anticipated date of start up of this (these) air contaminant source(s). The information must be made available within 30 days of actual startup. 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 to the Administrative Hearing Commission (AHC), P.O. Box 1557, Jefferson City, MO 65102, as provided in RSMo 643.075.6 and 621.250.3. If you choose to appeal, you must file a petition with the AHC within 30 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 AHC.

If you choose not to appeal, this certificate, the project review and 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 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 Missouri Department of Natural Resources, Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102-0176, attention: Construction Permit Unit.

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Project No.	2013-02-063

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) 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."

1. Equipment Identification Requirement

Surmeier & Surmeier, Inc. shall maintain easily read permanent markings on each component of the plant. These markings shall be the equipment's serial number or a company assigned identification number that uniquely identifies the individual component. These identification numbers must be submitted to the Air Pollution Control Program no later than 15 days after start-up of the portable rock crushing plant.

2. Relocation of Portable Rock Crushing Plant

A. Surmeier & Surmeier, Inc. shall not be operated at any location longer than 24 consecutive months except if the Site Specific Special Conditions of this portable plant, PORT-0696, contain a nonroad engine requirement limiting the portable plant at the site specific location to 12 consecutive months.

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 the circumstances at the site have not changed, then the application must be received by the Air Pollution Control Program at least seven days prior to the relocation.

2) If the portable rock crushing plant is moving to a new site, or if circumstances at the site have changed (e.g. the site was only permitted for solitary operation and now another plant is located at the site), then the application must be received by the Air Pollution Control Program at least 21 days prior to the relocation. The application must include written notification of any concurrently operating plants.

3. Record Keeping Requirement

Surmeier & Surmeier, Inc. shall maintain all records required by this permit for not less than five years and shall make them available to any Missouri Department of Natural Resources' personnel upon request.

4. Reporting Requirement

Surmeier & Surmeier, Inc. shall report to the Air Pollution Control Program Enforcement Section P.O. Box 176, Jefferson City, MO 65102, no later than ten days after any exceedances of the limitations imposed by this permit.

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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-0696

Site ID Number: 201-0129

Site Name: Seminole Ag Lime, Inc.

Site Address: County Rd. 304 & Rock Levee Rd., Scott City, MO 63780

Site County: Scott S31 T30N R14E

1. Ambient Air Impact Limitation
 - A. Surmeier & Surmeier, Inc. shall not cause an exceedance of the National Ambient Air Quality Standard (NAAQS) for particulate matter less than ten microns in aerodynamic diameter (PM₁₀) of 150.0 µg/m³ 24-hour average in ambient air.
 - B. Surmeier & Surmeier, Inc. shall demonstrate compliance with Special Condition 1.A using Attachment A or other equivalent form that has been approved by the Air Pollution Control Program, including an electronic form.
2. Wet Suppression Control System Requirement
 - A. Surmeier & Surmeier, Inc. shall install and operate wet spray devices on all crushers and screens.
 - B. Watering may be suspended during periods of freezing condition, when use of the wet spray devices may damage the equipment. During these conditions, Surmeier & Surmeier, Inc. shall adjust the production rate to control emissions from these units. Surmeier & Surmeier, Inc. shall record a brief description of such events.
3. Minimum Distance to Property Boundary Requirement

The primary emission point, which is either primary crusher EU-03 or primary crusher EU-08, shall be located at least 400 feet from the nearest property boundary.
4. Primary Equipment Requirement

Surmeier & Surmeier, Inc. shall process all rock through the primary crusher (EU-03 or EU-08). Bypassing the primary crusher is prohibited.
5. Equipment Usage Requirement

Surmeier & Surmeier, Inc. may operate either the Eagle Model 1200 crusher (EU-03) or the Eagle Model 1400 crusher (EU-08), but shall not operate both crushers at one time.

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SITE SPECIFIC SPECIAL CONDITIONS:

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

6. **Operational Requirement**
Surmeier & Surmeier, Inc. shall operate at this site only when Seminole Ag Lime, Inc. is also operating at this site.

7. **Record Keeping Requirement**
Surmeier & Surmeier, Inc. shall maintain all records required by this permit for not less than five years and shall make them available to any Missouri Department of Natural Resources' personnel upon request.

8. **Reporting Requirement**
Surmeier & Surmeier, Inc. shall report to the Air Pollution Control Program Enforcement Section P.O. Box 176, Jefferson City, MO 65102, no later than ten days after any exceedances of the limitations imposed by this permit.

REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT AND OPERATE
SECTION (6) REVIEW

Project Number: 2013-02-063

Installation ID Number: PORT-0696

Permit Number:

Surmeier & Surmeier, Inc.
County Rd. 304 & Rock Levee Rd.
Scott City, MO 63780

Complete: April 29, 2013

Parent Company:
Surmeier & Surmeier, Inc.
339 S. 6th Street
Mascoutah, IL 62258

Scott County, S31 T30N R14E

PROJECT DESCRIPTION

Surmeier & Surmeier, Inc. is installing a new portable rock-crushing and screening plant (PORT-0696) at a quarry owned by Seminole Ag Lime, Inc. (FIPS/Plant 201-0126). Under this permit, Surmeier & Surmeier, Inc. has responsibility for the rock crushing, screening and conveying; the load in of rock to the storage piles; and wind erosion on the storage piles at this site. Under their permit, Seminole Ag Lime, Inc. has responsibility for the wet drilling and blasting of the rock; the unloading of fragmented rock into the grizzly feeder; the maintenance of haul roads and vehicular activity areas, using best management practices; and the load out of finished rock from the storage piles at their site. Since solitary operation of the portable plant is not possible, that scenario was not considered in this review.

The crushing and screening will occur in two phases. In Phase 1, the crushed rock will be conveyed directly onto a storage pile. This storage pile will be used for "lay down" material, that is, material to spread over the muddy site to prepare it for Phase 2. During this phase, the crusher will be moved to various locations on the property. In Phase 2, a screen will be added, the crusher and screen will be kept in one location, and the crushed rock will be conveyed from the crusher to the screen and then from the screen to three storage piles. These storage piles will hold the finished product until it is loaded onto trucks and taken off the property.

A table showing the emission units in PORT-0696 follows.

Table 1: Installation Equipment

Emission Unit	Description (Source Classification Code)
EU-01	Eagle Model 1200 crusher engine, 450 hp (20200102)
EU-02	Eagle Model 1200 crusher grizzly feeder (30502031)
EU-03	Eagle Model 1200 primary crusher, MHDR 250 tph (30502001)
EU-04	Phase 1 conveyor: 80-foot, from crusher to storage pile (30502006)
EU-05	Phase 1 storage pile of crushed limestone for "lay down" material, maximum area 0.18 acre (30502007)
EU-06	Eagle Model 1400 crusher engine, 510 hp, MHDR of 0.01152 MMBtu/hr, serial number 30323 (20200102)
EU-07	Eagle Model 1400 crusher grizzly feeder (30502031)
EU-08	Eagle Model 1400 primary crusher, MHDR 350 tph (30502001)
EU-09	50-foot conveyor, Phase 2, from crusher to screen (30502006)
EU-10	Triple-deck, 8-foot by 20-foot screen (30502002)
EU-11, 12, -13, and -14	Phase 2 conveyors: one 60-foot, from screen back to crusher; and three 80-foot, from screen to each of the three storage piles (30502006)
EU-15	Three Phase 2 storage piles of finished product, each with a maximum area of 0.18 acre, total area 0.54 acres (30502007)

Surmeier and Surmeier, Inc. will be using one of two portable crushers, either an Eagle 1200 or an Eagle 1400. Only one of the two crushers will be in use at any one time. The larger crusher was used in all calculations.

The crushers and screens are equipped with wet spray devices. There are no other controls on processes or equipment owned by Surmeier & Surmeier, Inc.

Hazardous air pollutants (HAPs) will be emitted from the engines in insignificant amounts.

Equipment and processes owned by Seminole Ag Lime, Inc. were not included in this review.

This installation is located in Scott County, an attainment area for all criteria pollutants.

This installation is not on the List of Named Installations found in 10 CSR 10-6.020(3)(B), Table 2. The installation's major source level is 250 tons per year and fugitive emissions are not counted toward major source applicability.

Since this is a new portable plant, no permits for it have been issued from the Air Pollution Control Program.

TABLES

The table below summarizes the emissions of this project. Since this is a new installation, there are no existing actual emissions. The potential emissions of the application represent the emissions of all equipment and activities assuming continuous operation (8,760 hours per year). The conditioned potential emissions are based on a NAAQS limit of 50 µg/m³.

Table 2: Emissions Summary (tons per year)

Air Pollutant	De Minimis Level/SMAL	Existing Potential Emissions	Existing Actual Emissions	Potential Emissions of the Application	Conditioned Potential Emissions
PM	25.0	N/A	N/A	46.70	28.78
PM ₁₀	15.0	N/A	N/A	22.65	13.96
PM _{2.5}	10.0	N/A	N/A	5.21	3.21
SO _x	40.0	N/A	N/A	2.00	1.24
NO _x	40.0	N/A	N/A	30.48	18.79
VOC	40.0	N/A	N/A	2.49	1.53
CO	100.0	N/A	N/A	6.57	4.05
Total HAPs	25.0	N/A	N/A	0.03	0.02

N/A = Not Applicable

SMAL = Screening Model Action Level

Table 3: Ambient Air Quality Impact Analysis

Pollutant	¹ NAAQS (µg/m ³)	Averaging Time	² Maximum Modeled Impact (µg/m ³)	Limited Impact (µg/m ³)	³ Background (µg/m ³)	⁴ Daily Limit (tons/day)
⁵ PM ₁₀ (separate)	150.0	24-hour	91.02	50.00	100.00	4,629

¹National Ambient Air Quality Standards (NAAQS)

²Modeled impact at maximum capacity with controls

³Includes other plant(s) not owned by Surmeier & Surmeier, Inc. at 80.00 µg/m³ and background of 20 µg/m³ for haul roads and vehicular activity with BMPs

⁴Indirect limit based on compliance with NAAQS limit of 50 µg/m³

⁵Operation with other plant that is under separate ownership

EMISSIONS CALCULATIONS

Emissions for the project were calculated using emission factors found in the United States Environmental Protection Agency (EPA) document AP-42 *Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources*, Fifth Edition (AP-42).

Emissions from the rock-crushing equipment were calculated using emission factors from AP-42 Section 11.19.2 "Crushed Stone Processing and Pulverized Mineral Processing," August 2004. The controlled emission factors were used because the equipment is controlled by water spray devices.

Emissions from the diesel engines were calculated using emission factors from AP-42 Section 3.3 Gasoline and Diesel Industrial Engines,” October 1996.

Emissions from load-in of storage piles were calculated using the predictive equation from AP-42 Section 13.2.4. The moisture content of the aggregate is 0.7% by weight. Emissions from wind erosion of storage piles were calculated using an equation found in the Air Pollution Control Program’s Emissions Inventory Questionnaire Form 2.8 “Storage Pile Worksheet.”

AMBIENT AIR QUALITY IMPACT ANALYSIS

The entire plant’s throughput is limited to 350 tons/hour, because that is the maximum hourly design rate of the larger of the two primary units (EU-08 and EU-10), and only one of these two units may operate at a time. All Phase 2 conveyors leaving the screen were treated as one unit, because their combined total throughput cannot exceed 350 tons/hour. All Phase 2 storage piles were treated as one unit for the same reason.

To be conservative, the larger Eagle Model 1400 crusher was used in all calculations.

An ambient air quality impact analysis (AAQIA) was performed to determine the impact of the pollutants listed in Table 2. The Air Pollution Control Program requires an AAQIA of PM₁₀ for all asphalt, concrete and rock-crushing plants regardless of the level of PM₁₀ emissions if a permit is required. An AAQIA is required for other pollutants if their emissions exceed their respective de minimis or screening model action level (SMAL). The AAQIA was performed using the Air Pollution Control Program’s generic nomographs and when appropriate the EPA modeling software AERSCREEN. For each pollutant that was modeled, the maximum concentration that occurs at or beyond the site boundary was compared to the National Ambient Air Quality Standard (NAAQS) or Risk Assessment Level (RAL) for the pollutant. If during continuous operation the modeled concentration of a pollutant is greater than the applicable NAAQS or RAL, the plant’s production is limited to ensure compliance with the standard.

Emissions from haul roads, vehicular activity, and storage pile loadout at this site were not included in the AAQIA because these are the responsibility of Seminole Ag Lime, Inc., not Surmeier & Surmeier, Inc.

OPERATING SCENARIO

Surmeier & Surmeier, Inc. is permitted to operate this equipment at this site, which is owned by Seminole Ag Lime, Inc., as long as the NAAQS is not exceeded. Solitary and same ownership scenarios are not permitted. The following scenario explains how Surmeier & Surmeier, Inc. shall demonstrate compliance with the NAAQS.

- When operating at this site, Surmeier & Surmeier, Inc. must calculate the daily impact of this plant and limit its total impact below 50 µg/m³ using Attachment A.

- Surmeier & Surmeier, Inc. is not permitted to operate this plant at another site unless a “Portable Source Relocation Request” application is submitted.
- Surmeier & Surmeier, Inc. is not permitted to operate at this site unless Seminole Ag Lime, Inc. is also operating at this site.
- When Surmeier & Surmeier, Inc. is operating at this site, Seminole Ag Lime, Inc. must demonstrate compliance with the NAAQS as specified in their permit for the site.

PERMIT RULE APPLICABILITY

This review was conducted in accordance with Section (6) of Missouri State Rule 10 CSR 10 6.060, Construction Permits Required. Potential emissions of PM and PM10 are above the de minimis level, but below the 100 tons per year threshold that is allowed for portable plants according to 10 CSR 10-6.060 (4)(A).

APPLICABLE REQUIREMENTS

Surmeier & Surmeier, Inc. shall comply with the following applicable requirements. The Missouri Air Conservation Laws and Regulations should be consulted for specific record keeping, monitoring, and reporting requirements. Compliance with these emission standards, based on information submitted in the application, has been verified at the time this application was approved. For a complete list of applicable requirements for your installation, please consult your operating permit.

GENERAL REQUIREMENTS

- *Submission of Emission Data, Emission Fees and Process Information*, 10 CSR 10-6.110.
- No Operating Permit is required for this installation.
- *Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin*, 10 CSR 10-6.170
- *Restriction of Emission of Odors*, 10 CSR 10-6.165

SPECIFIC REQUIREMENTS

- New Source Performance Standards (NSPS) apply to the installation. 40 CFR 60 Subpart OOO, "Standards of Performance for Nonmetallic Mineral Processing Plants" applies to the equipment. 40 CFR 60 Subpart IIII, "Standards of Performance for Stationary Compression Ignition Internal Combustion Engines" applies to the equipment.

- None of the National Emission Standards for Hazardous Air Pollutants (NESHAPS) apply to the proposed equipment.
- National Emission Standards for Hazardous Air Pollutants for Source Categories (MACTS) 40 CFR 63 Subpart ZZZZ, "National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines" applies 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.

Cheryl Steffan
New Source Review Unit

Date

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated February 21, 2013, received February 25, 2013, designating Surmeier & Surmeier, Inc. as the owner and operator of the installation.
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.

Mr. Greg Crowe
Director of Marketing
Surmeier & Surmeier, Inc.
339 S. 6th Street
Mascoutah, IL 62258

RE: New Source Review Permit - Project Number: 2013-02-063

Dear Mr. Crowe:

Enclosed with this letter is your permit to construct. Please study it carefully. Also, note the special conditions on the accompanying pages. The document entitled, "Review of Application for Authority to Construct," is part of the permit and should be kept with this permit in your files. Operation in accordance with these conditions, your new source review permit application and with your operating permit is necessary for continued compliance. 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 Cheryl Steffan, 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

Susan Heckenkamp
New Source Review Unit Chief

SH:csl

Enclosures

c: Southeast Regional Office
PAMS File: 2013-02-063

Permit Number: