

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: 012012-012

Project Number: 2011-09-004  
Installation Number: 093-0007

Parent Company: Specialty Granules Inc.

Parent Company Address: 13424 Pennsylvania Ave., Suite 303, Hagerstown, MD 21742

Installation Name: Specialty Granules Inc.

Installation Address: 1 Hillcrest Drive, Annapolis, MO 63620

Location Information: Iron County, S22, T31N, R3E

Application for Authority to Construct was made for:


The installation of a new truck loadout facility at an existing roofing shingle granules manufacturing plant. This review was conducted in accordance with Section (5), 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.

JAN 19 2012

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 Departments' Air Pollution Control Program of the anticipated date of start up of these air contaminant sources. 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 these air contaminant sources.

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 sources(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.	2011-09-004

**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."*

Specialty Granules Inc.  
Iron County, S22, T31N, R3E

1. Control Requirement – Suppressant Application
  - A. Specialty Granules Inc. shall control emissions from all of the equipment in this permit by applying [REDACTED] on the aggregates as specified in the permit application.
  - B. The suppressants shall be applied at a minimum rate of [REDACTED] and [REDACTED]
  - C. Specialty Granules Inc. shall demonstrate compliance with Special Condition 1.A. and 1.B. by keeping records of the monthly amount of suppressants used and the monthly amount of aggregates coated. Attachment A or equivalent forms, such as electronic forms, approved by the Air Pollution Control Program shall be used for this purpose.
2. Record Keeping and Reporting Requirements
  - A. Specialty Granules 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. These records shall include Material Safety Data Sheets (MSDS) for all materials used
  - B. Specialty Granules Inc. shall report to the Air Pollution Control Program's Compliance/Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after the end of the month during which any record required by this permit show an exceedance of a limitation imposed by this permit.

REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT AND OPERATE  
SECTION (5) REVIEW

Project Number: 2011-09-004  
Installation ID Number: 093-0007  
Permit Number:

Specialty Granules Inc.  
1 Hillcrest Drive  
Annapolis, MO 63620

Complete: Sept. 8, 2011

Parent Company:  
Specialty Granules Inc.  
13424 Pennsylvania Ave., Suite 303  
Hagerstown, MD 21742

Iron County, S22, T31N, R3E

REVIEW SUMMARY

- Specialty Granules Inc. has applied for authority to construct a new truck loadout facility.
- Hazardous Air Pollutant (HAP) emissions are not expected from the proposed equipment.
- None of the New Source Performance Standards (NSPS) apply to the proposed equipment.
- None of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) apply to this installation. None of the currently promulgated Maximum Achievable Control Technology (MACT) regulations apply to the proposed equipment.
- [REDACTED] suppressants are being applied at the coloring plant to control the particulate matter less than two-and-a-half microns in diameter (PM<sub>2.5</sub>), particulate matter less than ten microns in diameter (PM<sub>10</sub>) and particulate matter (PM) emissions from the equipment in this permit.
- This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of all pollutants are below *de minimis* levels.
- This installation is located in Iron 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.

- Ambient air quality modeling was not performed since potential emissions of the application are below *de minimis* levels.
- Emissions testing are not required for the equipment as a condition of this permit.
- A modification to the facility's Basic Operating Permit is required for this installation within 30 days of equipment startup.
- Approval of this permit is recommended with special conditions.

### INSTALLATION DESCRIPTION

Specialty Granules Inc. (formerly ISP Minerals, Inc.) is an existing manufacturer of roofing shingle granules located in Iron County. The facility quarries Rhyolite and processes the rock through crushing and screening operations to form raw roofing granules. The granules are then processed in a coloring plant. The installation was originally classified as a major source for PM<sub>10</sub> for construction permits. However, the facility has since installed fabric filters that reduced the PM<sub>10</sub> emissions to minor source levels. The facility has been issued a Basic State Operating Permit.

The following permits have been issued to Specialty Granules Inc. from the Air Pollution Control Program.

**Table 1: Permit History**

Permit Number	Description
0680-006	Rotary rock dryer for the secondary crusher, 20 MMBtu/hr burner, two conveyors
0680-007	Four underground storage tanks
0680-008	Rock storage and conveyors
0680-009	Rock storage and conveyors
0680-010	Conveyor
0680-011	Hopper and conveyor
0680-012	Two 500 ton storage bins and conveyors
0680-013	One 1000 tons storage bin and conveyor
1187-005	Incinerator
1290-002	Modification to process
0792-034	Tertiary crusher, screens, elevators, conveyors and storage bins
0393-006	Conveyor and screens
0394-015	Conveyor and slurry tank
0395-016	Outside storage stockpile
0395-017	Two screens
0298-002A	Four conveyors, two elevators and two screens for the recovery system
122009-007	Replacement of preheater kilns in the coloring plant
122009-007A	Correction to the potential emissions calculations
012011-014	Four screens and four conveyors for the mill building
082011-004	A rock dryer, crusher, screen and associated material handling equipment

## PROJECT DESCRIPTION

The maximum hourly design rates, the type of suppressants and the rate of suppressants used by Specialty Granules Inc. have not been included in this permit because the facility has requested that they be kept confidential due to the proprietary nature of the information. This information is contained in the confidential permit and project folder (2011-09-017) and is available to employees of the Missouri Department of Natural Resources and the United States Environmental Protection Agency (USEPA) for review.

The facility proposes to add a new truck loadout facility with a maximum hourly design rate of [REDACTED] tons per hour (tph). The equipment includes five conveyors, two bucket elevators, eight storage silos, two cleanout hoppers, a truck loadout hopper, and a screen. The addition of the new loadout facility allows for increased flexibility and safety in the plant but does not increase loadout capacity. Currently, the material being loaded into both trucks and rail cars is pulled from the finished production storage bins onto a common conveyor belt system. The conveyor belt system is designed such that either [REDACTED] tph can be loaded into rail cars or [REDACTED] tph can be loaded into rail cars and [REDACTED] tph can be loaded into trucks. The current and new truck loadout are both bottlenecked by the [REDACTED] tph conveyor system and cannot loadout more than [REDACTED] tph combined.

Subpart OOO, *Standards of Performance for Nonmetallic Mineral Processing Plants*, of the NSPS does not apply to the proposed equipment even though there is a rock crushing plant at the site. In 2002, the EPA issued a letter determining that a conveyor transferring clay between a rock crushing plant and a brick manufacturing plant is not subject to Subpart OOO because the clay transported by the conveyor is used in the manufacturing of brick rather than being crushed or ground. The letter further stated that "Although other manufacturing operations may be connected to a nonmetallic mineral processing plant by means of a conveying system, those other manufacturing operations which may use a crushed or ground nonmetallic mineral are not necessarily considered part of a nonmetallic mineral production line." For this installation, the new truck loadout facility is located at the end of the rock coloring process and should not be considered part of the rock crushing line.

## EMISSIONS/CONTROLS EVALUATION

The emission factors used in this analysis were obtained from EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition, Chapter 19.11.2, *Crushed Stone Processing and Pulverized Mineral Processing* (8/04). The aggregates are currently coated with [REDACTED] in the coloring plant at the end of the manufacturing process to not only control emissions but also to prevent binding and bridging of the granules. Therefore, the controlled emission factors were used. Since the addition of the new loadout facility will not increase the hauling capacity of the plant, there will be no emissions from additional hauling activities.

Potential emissions of the application represent the potential of the new equipment, assuming continuous operation (8760 hours per year.) The following table provides an emissions summary for this project.

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

Pollutant	Regulatory <i>De Minimis</i> Levels	Existing Potential Emissions	Existing Actual Emissions (2010 EIQ)	Potential Emissions of the Application	New Installation Conditioned Potential
PM <sub>2.5</sub>	10.0	N/D	0.48	0.19	N/A
PM <sub>10</sub>	15.0	133.94	36.83	1.16	N/A
PM	25.0	N/D	N/D	3.43	N/A
SO <sub>x</sub>	40.0	2.46	0.17	N/A	N/A
NO <sub>x</sub>	40.0	83.91	16.47	N/A	N/A
VOC	40.0	6.85	0.88	N/A	N/A
CO	100.0	76.38	3.29	N/A	N/A
HAPs	10.0/25.0	N/D	0.50	N/A	N/A
CO <sub>2e</sub>	100,000	<100,000	N/D	N/A	N/A

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

### PERMIT RULE APPLICABILITY

This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of all pollutants are below *de minimis* levels.

### APPLICABLE REQUIREMENTS

Specialty Granules 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.

### GENERAL REQUIREMENTS

- *Submission of Emission Data, Emission Fees and Process Information*, 10 CSR 10-6.110
- *Operating Permits*, 10 CSR 10-6.065
- *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 10-6.165

### STAFF RECOMMENDATION

On the basis of this review conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*, I recommend this permit be granted with special conditions.

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Chia-Wei Young  
Environmental Engineer

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Date

#### PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated August 30, 2011, received August 30, 2011, designating Specialty Granules Inc. as the owner and operator of the installation.
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.
- Southeast Regional Office Site Survey, dated September 13, 2011.





Mr. Garry Pogue  
EH & S Coordinator  
Specialty Granules Inc.  
1 Hillcrest Drive  
Annapolis, MO 63620

RE: New Source Review Permit - Project Number: 2011-09-004

Dear Mr. Pogue:

Enclosed with this letter is your permit to construct. Please study it carefully. Also, note the special conditions, if any, 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 amended 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 Chia-Wei Young, 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:cyl

Enclosures

c: Southeast Regional Office  
PAMS File: 2011-09-004

Permit Number: