Mr. Travis Abernathy
Environmental Coordinator
Specialty Granules, LLC
1 Hillcrest Drive
Annapolis, MO 63620


Installation ID Number: 093-0007
Expiration Date: July 15, 2021
Temporary Permit Number: 082019-003

Dear Mr. Abernathy:

The Missouri Department of Natural Resources' Air Pollution Control Program has completed a review of your request to modify the existing undersized material handling process at Specialty Granules, LLC, located in Annapolis, Missouri. The Air Pollution Control Program is hereby granting your request to conduct this temporary operation at this location, in accordance with Missouri State Rule 10 CSR 10-6.060 (10).

Specialty Granules, LLC operates a roofing shingle granule manufacturing facility in Iron County. Rhyolite is quarried onsite, and the aggregate is processed through various crushing and screening processes to form raw roofing granules. The granules are then processed in a coloring plant. Specialty Granules LLC is considered a minor source for PM, PM10, PM2.5, and NOx and a de minimis source for all other criteria pollutants.

Specialty Granules, LLC is proposing to modify the way in which undersized material is handled in order to better utilize the undersized material, which is otherwise lost during processing and/or treated as waste. Currently, all undersized material is collected through a dust collection system and transported by water in a slurry system to a collection point at the West Peak Quarry. From there, the material is separated through a clarifier and cyclone system. The material is then stockpiled and covered with soil and vegetation.

Instead of indefinitely stockpiling the undersized material, Specialty Granules, LLC will haul it from the stockpile area and run it through the dryer granule recovery system (described in Construction Permit No. 082011-004), with the addition of an enclosed screw conveyor and oiling system for dust control. The dried and sized material would then bypass the mill.
(described in Construction Permit No. 122018-003) and go directly into a hopper that unloads into a truck. From the truck, the material would be transferred into a railcar via a trans-load conveyor. They are requesting a temporary permit as they are expecting to run the equipment for a little over a year as a more permanent process is designed.

The existing rotary kiln rock dryer will remain unaffected, as the undersized material will not be placed in the primary feed stockpile, and it will not run through any of the crushing or screening circuits. The undersized material will also bypass the coloring plant (described in Construction Permit No. 122009-007). Therefore, the throughputs of the crushing and screening operations, the dryer, the mill, and the coloring plant will not be changing as a result of this project. The only existing equipment that will be affected is the recovery system.

Potential emissions from the modification of the undersized material handling process will include particulates emitted during the transfer of material from the stockpile to the dry granule recovery system (screw conveyor), truck loading (hopper transfer), and railcar loading (trans-load conveyor). The limiting factor will be the maximum design rate of the recovery system, which is 40 tons per hour. Because the recovery system is already permitted at its maximum design rate, routing the undersized material through it will not cause an increase in potential throughput or potential emissions. Although an oiling system will be used to control dust emissions, no control efficiency was applied to the emission calculations.

Emissions from conveying and truck loading were calculated using the uncontrolled emission factors taken from AP-42 Section 11.19.2 Crushed Stone and Pulverized Mineral Processing (August 2004). PM$_{10}$ and PM$_{2.5}$ fractions were taken from Category 4 of AP-42 Appendix B.2 Generalized Particle Size Distributions (September 1996) when applicable. Emissions from the haul road between the recovery system and the trans-load conveyor were calculated using the predictive equation taken from AP-42 Section 13.2.2 Unpaved Roads (November 2006). Table 1 provides a summary of project emissions.

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Emission Rate (lb/hr)</th>
<th>Potential Emissions (ton/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM</td>
<td>6.50</td>
<td>28.49</td>
</tr>
<tr>
<td>PM$_{10}$</td>
<td>1.87</td>
<td>8.20</td>
</tr>
<tr>
<td>PM$_{2.5}$</td>
<td>0.25</td>
<td>1.10</td>
</tr>
</tbody>
</table>

As shown in the table, potential emissions of all applicable pollutants are below 100 tons per year, as specified in 10 CSR 10-6.060 (10)(A)2. As long as Specialty Granules, LLC ceases operation of the modified process on or before the expiration date of this permit, the project qualifies as a temporary operation.

You are still obligated to meet all applicable air pollution control rules, Department of Natural Resources’ rules, and any other applicable federal, state, or local agency regulations.
Specifically, you should avoid violating 10 CSR 10-6.220, *Restriction of Emission of Visible Air Contaminants*, 10 CSR 10-6.165 *Restriction of Emission of Odors*, and 10 CSR 10-6.170 *Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin*. Please be aware that 40 CFR 60 Subpart OOO *Standards of Performance for Nonmetallic Mineral Processing Plants* applies to the equipment in this project.

A copy of this letter should be kept onsite and be made available to Department of Natural Resources' personnel upon request. If you have any questions regarding this determination, please contact Ryan Schott at the department’s Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102 or by telephone at (573) 751-4817. Thank you for your time and attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

[Signature]

Darcy A. Bybee
Director

DAB:rs

C: PAMS File: 2019-06-006
Southeast Regional Office