



## Specialty Granules LLC

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<b>Distribution:</b> LOM, EHS, Site Management	<b>Approved by: Kevin D. Moore, Director, Mine Planning and Capital</b>	

### **PURPOSE**

This Mineral Identification and Management Guide (hereinafter “Guide”) memorializes protocols and procedures implemented by Specialty Granules LLC (“SGI”) to assess whether “protocol minerals” as defined below are present on a quarry site and to avoid the processing of such materials in a manner that may release undesirable mineral fibers.

Some igneous and metamorphic rock materials have the potential to contain, as minor constituents, asbestiform minerals. Six of these asbestiform minerals are currently regulated as potentially containing asbestos fiber by USEPA, MSHA, and OSHA. The mineralogical properties of asbestos fiber and regulated mineral fibers covered by this Guide are hereinafter referred to as “protocol minerals”. Materials suspected of containing protocol minerals are referred to as “suspect material.”

This document is solely a Guide and is not intended and shall not give rise to new legal obligations or standards. The procedures established in this Guide may be varied in light of operational demands or restrictions. This Guide shall not alter any applicable environmental, health or safety standards. All such standards shall be followed.

### **SCOPE**

This Guide is applicable to all Specialty Granules LLC operations and outlines responsibilities of the Operations, Mine Planning, and Environmental, Health and Safety departments with regard to inspecting and handling of suspect material, sampling protocol, and internal notifications.

### **POLICY**

#### **1. MINE PLANNING DEPARTMENT RESPONSIBILITIES**

##### **1.1 INITIAL FIELD MAPPING AND DESCRIPTION OF PRIMARY STRUCTURAL/ALTERATION FEATURES**

- 1.1.1 The Mine Planning Department will generate quarry maps with the location and orientation of all production and development blasts.
- 1.1.2 These maps will identify locations and descriptions of suspect zones/structures of interest (“Suspect Zones/Structures”). Such Suspect Zones/Structures may be identified on the basis of (1) analysis of core samples taken prior to mining; (2) historical geologic information; and (3) field observations.
- 1.1.3 Active Operations: Annapolis, Charmian, Kremlin, and Lone.
- 1.1.4 Map Base: Current quarry operations map.

- 1.1.5 Map Distribution: Geologist/Mine Planning Manager, Corporate EHS Manager, Site Manager, Granule Manager, Site EHS Representative and Quarry Supervisor (or equivalent positions).

## **1.2 PERIODIC ON-SITE GEOLOGIC INSPECTIONS**

- 1.2.1 A person with a degree in geology and experience with meta-volcanic rock formations, and/or holding related professional certifications (i.e. a Pennsylvania Registered Professional Geologist) (“Geologist”) shall inspect the active working faces on the operating levels of each active SGI quarry.
- 1.2.2 Suspect Zones/Structures and their orientation shall be described and located on the maps developed pursuant to Section 1.1.
- 1.2.3 SGI safety standards regarding distance off-sets from high walls and crest-of-face will be followed during the inspections.
- 1.2.4 Inspection Frequency Target (subject to modification):
  - 1.2.4.1 Annapolis – Annually
  - 1.2.4.2 Charmian – Quarterly
  - 1.2.4.3 Lone – Annually
  - 1.2.4.4 Kremlin – Annually

## **1.3 TRAINING OF DESIGNATED SITE PERSONNEL ON RECOGNITION OF SUSPECT MATERIALS**

- 1.3.1 Each quarry shall identify and designate specific personnel to be responsible for recognition of suspect materials (“Designated Site Personnel”). A current list of personnel serving as Designated Site Personnel shall be displayed at the facility.
- 1.3.2 The Geologist and/or Corporate EHS Manager shall provide training on the recognition of suspect materials to the Designated Site Personnel. If there is a change in Designated Site Personnel, new Designated Site Personnel will be trained before commencement of their responsibilities under this Guide by the Geologist and/or the Corporate EHS Manager. Refresher training for all Designated Site Personnel will be completed on an annual basis.
- 1.3.3 Training will be recorded on a form utilized by the Corporate EHS Department and signed by both the trainer and trainee. The original form will be submitted to the EHS Department who will log the training into the current training tracking system and file the hard copy with the employee training records.
- 1.3.4 It is the responsibility of plant management to notify both the Mine Planning and Corporate EHS Departments of changes in Designated Site Personnel at that location.

## **1.4 SUSPECT MATERIAL IDENTIFICATION/CONFIRMATION**

- 1.4.1 Routine Inspections. As described in 2.1 below, Designated Site Personnel shall conduct routine inspections, including inspecting the shot rock pile (muck perimeter) after every blast and once/week thereafter during operations, until the shot rock pile is depleted. Suspect material will be identified based on criteria defined by the Geologist, including the following: any minerals identified in the rock that appear to be present in bundles of long, thin, flexible fibers. These minerals may appear in several different

forms in the quarry, including bundles of parallel fibers, radiating fibers, matted masses of individual fibers, or in a needle-like formation. The photos below depict the forms of suspect material most likely to be found in the quarries.



- 1.4.2 Method to identify/confirm suspect material: If Designated Site Personnel identify suspect material, they will follow the reporting protocol described in Section 2.2 and either:
  - 1.4.2.1 Arrange for disposal of the material according to Section 2.4; or
  - 1.4.2.2 With the involvement and oversight of a Geologist, determine by visual inspection and laboratory testing that the material does not contain protocol minerals.

**Note:** Active mining within a delineated affected area where suspect material has been identified must cease and cannot resume until the “all-clear” is given by the Geologist or the Corporate EHS Manager.
- 1.4.3 If the Geologist determines, based on a visual inspection, that suspect material could be carbonaceous, he or she may direct Plant personnel to test the suspect material with drops of HCL to verify if it is a carbonate mineral. If this testing indicates that the material is a carbonate mineral, lab testing need not be conducted to confirm the lack of protocol minerals.
- 1.4.4 SGI staff working within the area of suspect materials shall comply with all applicable EHS protocols until the materials are either (a) disposed and covered at their final location or (b) determined to not contain protocol minerals pursuant to the above-described procedures.

## **2. Plant Responsibilities**

### **2.1 Routine on-site inspections**

- 2.1.1 A Designated Site Personnel member shall inspect the shot rock pile (muck perimeter) after every blast and once/week thereafter during operations, until the shot rock pile is depleted.
- 2.1.2 The inspection must be documented on the designated report form (or equivalent) (see appendix A) and is to be maintained on-site for review by the Geologist/Corporate EHS Manager.
- 2.1.3 SGI safety standards regarding distance off-sets from high walls and crest-of-face will be followed during the inspections.
- 2.1.4 Plant personnel shall notify the SGI Geologist when blasting occurs within the area of any mapped Suspect Zones/Structures.
- 2.1.5 Using a hand-held GPS unit or other method, coordinates of the blast shall be obtained and provided to Mine Planning for mapping.

### **2.2 Reporting protocol when suspect materials are identified by plant personnel**

- 2.2.1 If suspect material is identified, the contact chain will be as follows (unless varied on a site-to-site basis):
  - 2.2.1.1 Initial person observing suspect material will notify a member of the Designated Site Personnel.
  - 2.2.1.2 A member of the Designated Site Personnel will notify each of the following:
    - Granule Manager and site EHS Coordinator
    - Site Manager
    - SGI Geologist, Mine Planning, and Corporate EHS.

### **2.3 Action protocol when suspect materials are identified by plant personnel**

- 2.3.1 Isolate and cease operations in the affected area as delineated by the Designated Site Personnel and/or Geologist. If the suspect material is located within an active mining area, relocate the mobile equipment fleet and isolate the area. Traffic cones or other means shall be placed to restrict access to the designated area.
- 2.3.2 Follow the procedures in Section 1.4.2 to either dispose of the material pursuant to Section 2.4 or confirm that the material does not contain protocol minerals.
- 2.3.3 To the extent the Geologist is called on to perform a visual inspection of suspect material pursuant to Section 1.4.2, Designated Site Personnel may collect a sample of the material and provide to the Geologist or the Geologist may examine the material in place.
- 2.3.4 The SGI Respiratory Protection Program shall be followed at all times when handling suspect materials.
- 2.3.5 Sample collection protocol and approved container.
  - 2.3.5.1 When handling suspect material, wear respirators approved by the SGI Respiratory Protection Program.
  - 2.3.5.2 Wet the material to be handled prior to any disturbance. It is recommended that a spray bottle containing tap water be utilized for this task. Other equally effective means of wetting the material is also acceptable.

- 2.3.5.3 Obtain representative small (hand-sized) samples of the material and place in plastic bags provided and approved by the Geologist or Corporate EHS Manager. The sample bag will be a minimum of 6 mil plastic with a zipper for closure. After closing the bag, fold once and use duct tape to seal fold. When shipping material, double bag prior to placing in the shipping container.
- 2.3.5.4 Label the bag as "Suspect Material", with site name, date sample collected and a description of the location being sampled.
- 2.3.6 Collected samples:
  - 2.3.6.1 The bagged samples should then be placed and stored in a five (5) gallon plastic bucket to be stored in an area designated by the Geologist.
  - 2.3.6.2 Sample material shall be disposed of in a manner similar to shot rock once the Geologist or Corporate EHS Manager determines it is no longer required.
  - 2.3.6.3 Sample routing
    - Charmian: Hold sample at plant. The Geologist to inspect sample on-site.
    - Other locations: Overnight sample to the SGI Technical Center in Hagerstown for inspection by the Geologist.
- 2.3.7 SGI safety standards regarding distance offsets from high walls and crest-of-face shall be followed during sample collection.

## **2.4 Disposition of suspect materials**

- 2.4.1 Shot rock:

Following all required protocols as defined by this policy:

  - 2.4.1.1 The Geologist shall delineate the area of shot rock which is to be disposed of.
  - 2.4.1.2 The material to be moved shall be wetted prior to disturbance.
  - 2.4.1.3 Plant personnel, using heavy equipment such as a front end loader and haul truck shall dispose of the material in an area designated by the Geologist and within requirements of plant permits.
  - 2.4.1.4 Global Positioning System (GPS) coordinates will be obtained for the location of disposal of suspect material and provided to Mine Planning for recording on the master mine map. The Geologist may request additional information to adequately record the disposal location on the map.
  - 2.4.1.5 The suspect material shall be covered with other materials (i.e. overburden/cap rock) in the area of disposition.

## **3. EH&S Department Activity**

### **3.1 Interface with Geology Department**

- 3.1.1 The Geologist will inform the Corporate EHS Manager and Legal of the completion of the routine quarry reviews or of any notifications received from the plants as to the observation of suspect materials.

### **3.2 Training of site EH&S personnel in Industrial Hygiene sampling methodology**

- 3.2.1 Personnel completing the air sampling shall have completed at a minimum, the NSSGA/MSHA Dust and Noise Workshop or its equivalent.

- 3.2.2 Additional training may be provided by the Corporate EHS Manager or a selected consultant.

### **3.3 Monitoring**

- 3.3.1 The EHS department will be responsible for conducting any necessary monitoring during the handling of the suspect materials.
- 3.3.2 The EHS department will retain records relating to the material handling in accordance with the EHS program policies.

### **RESPONSIBILITY**

It shall be the responsibility of the Corporate EHS department and Site Managers to ensure that training, procedures, and records retention are being completed in accordance with this Guide.

### **COMPANY'S RIGHT TO MODIFY OR CHANGE POLICIES**

The Company reserves the right to modify, revoke, suspend, terminate or change this policy in whole or in part, at any time, with or without notice.