APPENDIX 7.2 – SUSPECT MINERALS IDENTIFICATION AND MANAGEMENT GUIDE

Specialty Granules LLC

Issue Date: 11/1/2018 **Revised Date:**	**Page 1 of 6**	**Subject: Suspect Mineral Identification and Management Guide**
Distribution: LOM, EHS, Site Management		**Approved by: Kevin D. Moore, Mine Planning Manager**

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 The Map 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 Ione.

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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 trained geologist with relevant experience, and/or holding related professional certifications ("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 Quarry Map.

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 Ione – 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.

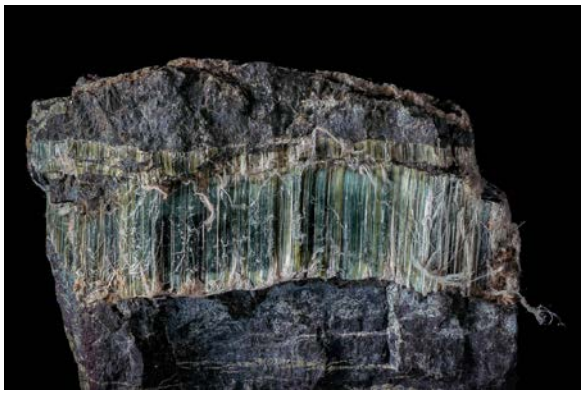
1.3.3 Training will be recorded on a form utilized by the Corporate EHS Department and signed by both the trainer and trainee. The original form will be submitted to the EHS Department who will log the training into the current training tracking system and file the hard copy with the employee training 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. Potentially 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 potentially suspect material, the Geologist shall conduct a visual analysis of the suspect material. If the material is considered to be suspect material of a type and nature that could contain protocol minerals, the suspect material handling protocol shall be followed. Note that a determination by the Geologist that protocol minerals may be present triggers special handling. However, this trigger is solely based upon a determination that the suspect material is not appropriate for production due to a risk of protocol minerals being present. A definite conclusion that protocol minerals are present is not necessary to trigger suspect material handling. In the event the Geologist determines that there are no indications that protocol minerals are present in the sample, lab testing shall be conducted to confirm the lack of protocol minerals. The delineated area shall not be used for production prior to confirmation of the lab testing is received.

Note: Active mining within a delineated affected area cannot resume until the “all-clear” is given by a qualified Geologist or the EHS Manager or his designee.

1.4.3 If the Geologist determines that the suspect material could be carbonaceous, he may direct the Plant personnel to test the suspect material with drops of HCL to verify it is a carbonate mineral.

1.4.4 If the sample is confirmed to be suspect material, the material shall be transferred to the designated disposition point in accordance with applicable plant permits. SGI staff working within the area of the suspect minerals shall comply with all applicable EHS protocols until the suspect minerals are covered at their final location.

1.4.5 Once the suspect material within the delineated area is removed from the quarry, active mining can resume once the Geologist gives the "all-clear".

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 (see appendix A) and is to be maintained on-site for review by the Geologist/EHS.

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 potentially suspect materials are identified by plant personnel

2.2.1 If potentially 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 the area. 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 Designated Site Personnel may collect a sample of suspect material and provide to the Geologist or the Geologist may examine the suspect material in place.

2.3.3 The SGI Respiratory Protection Program shall be followed at all time when handling suspect materials.

2.3.4 Sample collection protocol and approved container.

2.3.4.1 When handling suspect material, wear respirators approved by the SGI Respiratory Protection Program.

2.3.4.2 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.

2.3.4.3 Obtain representative small (hand-sized) samples of the suspect material and place in plastic bags provided and approved by the Geologist or Corporate EHS Department. 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.

2.3.4.4 Label the bag as "Suspect Material", with site name, date sample collected and a description of the location being sampled.

2.3.5 SGI safety standards regarding distance offsets from high walls and crest-of-face shall be followed during sample collection.

2.3.6 Sample routing

2.3.6.1 Charmian: Hold sample at plant. The Geologist to inspect sample on-site.

2.3.6.2 Other locations: Overnight sample to the SGI Technical Center in Hagerstown for inspection by the Geologist.

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.

2.4.2 Collected samples:

2.4.2.1 Samples shall be stored in the packaging specified in this procedure under Section 4.3.4.3. 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.

2.4.2.2 Sample material shall be disposed of in a manner similar to shot rock once the Geologist or EHS Department determines it is no longer required.

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 minerals.

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.

Appendix A: Quarry Blast Inspection

Plant Location:		Quarry:	

Inspection Date:	
Time:	
Weather:	

Blast Number:			Production
Quarry Level:			Development

WATER TRUCK AVAILABILITY

Yes		
No		Note Issues:

Muck Pile Depleted?

Yes		End of inspection for this blast. Turn in form.
No		Proceed with inspection.

Inspection: Wash down the face of the muck pile if required to see blasted rock surface.

Walk the accessible perimeter of the pile and note any occurrence of suspect materials (1).

Suspect Materials Noted?

Yes		*Notes:*

No	

OTHER NOTES, OBSERVATIONS:

Inspector

(1): Notes: SGI safety standards regarding distance off-sets from highballs and crest-of-face will be followed. Do not climb on the shot muck pile.