ACCURACY IN DEFINITIONS AND REGULATIONS

For Elongate Mineral Particles (EMPs)

NSSGA A GRAVEL ASSOCIATION



The aggregates industry employs approximately **100,000 men & women**



The average quarry job salary is **\$75.129**



Each quarry job creates **4.87 additional jobs** throughout the economy



The National Stone, Sand & Gravel Association (NSSGA) is the leading voice for the aggregates industry in the United States. Our members—companies that quarry stone, sand and gravel, manufacture equipment or provide services—are responsible for the essential raw materials found in every home, building, road, bridge and public works project.





WHAT ARE ELONGATE MINERAL PARTICLES?

EMPs encompass a large variety of tiny particles derived from rocks and soils in the natural environment. EMPs are classified by mineral type, particle dimensions, durability, and other characteristics—but misclassification is common and often leads to ineffective regulatory efforts. NSSGA champions efforts to distinguish harmful EMPs (such as asbestos) from ordinary rock and soil dust that is common in most environments.

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IMPORTANCE OF CLEAR & ACCURATE DEFINITIONS

It is critical to the industry and users of aggregates that accurate and clear definitions differentiate asbestiform minerals from common rock. Below are our recommendations:

- EPA should precisely define asbestos based on its chemical makeup, physical and morphological properties, appropriate methods and criteria for identification, and other relevant factors.
 - 1. This definition should be consistent with Congress's longstanding definition of asbestos in Title II of TSCA.
 - 2. The definition should exclude common rock fragments, some of which can have identical chemical composition as asbestos and thus may be mistakenly identified as asbestos when improper analytical methods are applied.
 - 3. These rock particles, sometimes called "cleavage fragments," are not asbestos and have not been shown to present the health hazards associated with asbestos exposure. Therefore, they should be excluded from the asbestos risk evaluation.
- EPA should interpret the term "conditions of use," or construe its obligation to review the conditions of use for selected substances, to exclude rocks, sand and gravel that may contain or come in contact with trace amounts of naturally occurring asbestos.



NSSGA strongly supports science-based workplace health and safety regulations. For example:

- NSSGA has long supported the regulation of *currently non-regulated* asbestiform richterite, asbestiform winchite, erionite (an asbestiform zeolite), and other potentially harmful EMPs.
- NSSGA developed and shared a *Minerals Identification & Management Guide*, which offers a reference point to those mining or disturbing areas where incidental amounts of natural occurrences of asbestos (NOA) may be present.
- NSSGA sponsored the 2017 Monticello Conference, an international gathering of scientists who study the geology, mineralogy, and health effects of various EMPs.



NSSGA represents more than **90 percent** of the crushed stone and **70 percent** of the sand and gravel produced annually across the country.

USGS MAP: WHERE EMPs OCCUR



Above: EMPs including NOA can be found in most states but are more common in surface deposits of igneous rock (dark green), metamorphic rock (light green) and ultramafic rock (purple). Vastly more common are the *non-asbestos* EMPs found in rocks and soil nationwide. Map resolution is limited at this scale.

ASBESTOS VS. NON-ASBESTOS EMPs

Below: The six commercial varieties of asbestos ("Asbestos" column) are shown paired with their nonasbestiform mineral analogs ("Rock" column). Within each pair, the minerals are chemically identical but have vastly different crystal structures. The non-asbestos EMPS are common rock forming minerals and have not been shown to cause asbestos-like health effects.

