



Facts About...

Naturally Occurring Asbestos Initiative

In July 2005, the U.S. Geological Survey (USGS) Open-File Report 2005-1189, *Reported Historic Asbestos Mines, Historic Asbestos Prospects, and Natural Asbestos Occurrences in the Eastern United States*, identified 331 sites east of the Mississippi River, of which 22 sites were identified in Maryland. MDE's Federal Superfund Division conducted the Naturally Occurring Asbestos (NOA) Initiative to further expand on the previous USGS historic literary research of naturally occurring asbestos to determine if further investigations at those sites under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) are warranted.

Those asbestos occurrences range in size from small veins to large ore bodies once mined for commercial and industrial uses. An asbestos site was included only when the literature source specifically mentioned asbestos or described the commonly regulated asbestos minerals as occurring in the asbestiform crystal morphology. Field and exposure evaluations were not conducted as part of that literary research.

Asbestos is most commonly defined as the asbestiform variety of several specific, naturally occurring, hydrated silicate minerals. The USGS Open-File Report 2005-1189 identified the asbestiform morphs; chrysotile (the asbestiform member with curly fibers of the serpentine host rock group), anthophyllite asbestos, actinolite asbestos, and tremolite asbestos morphs (the asbestiform member found in the amphibole host rock group with straight fibers) occurring in Maryland. The Occupational Safety and Health Administration (OSHA) defines asbestos as any of the aforementioned silicates with a length to width ratio of its fibers of 3:1 or greater, a diameter of less than 5 microns, and a length of greater than 5 microns. A fifth asbestiform morph, hornblende asbestos was also identified in the report, but the hornblende asbestos is not considered disease-causing asbestos.

Evaluation of current conditions at the reported NOA sites yielded the following information and conclusions:

- Exhaustion of available asbestos from past producers;
- Limited NOA cemented into host rock, if any, at the prospects and occurrence sites;
- Former quarries and pits now filled in with water or fill;
- Dense vegetation reducing inhalation exposure to fugitive dust at most sites;
- Location of NOA sites in remote areas with light anthropogenic activity; and
- Previous investigations concluded that asbestos from serpentine rock quarries are not a major source of airborne asbestos to surrounding areas.

Based on the above factors, MDE is recommending no further CERCLA investigation of the reported NOA sites in Maryland.

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