



Vermiculite

Regulatory Guidance for Spokane County

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Introduction

This document is intended to provide a summary of requirements and protocols applicable to vermiculite insulation. Spokane Clean Air, the Washington State Department of Labor & Industries (L&I) and the Graham Road Recycling and Disposal Facility all have rules regarding the handling, removal and disposal of vermiculite insulation.

Background

Vermiculite is a naturally occurring mineral similar to shiny flakes of mica when in its natural form. When heated to a high temperature, vermiculite flakes expand as much as 8-30 times their original size. The expanded vermiculite is a light-weight and fire-resistant material that has been used in numerous ways, including insulating attics and walls in homes and businesses. Over 70% of all vermiculite sold in the U.S. from 1919 to 1990 came from a mine near Libby, Montana and was often sold under the brand name Zonolite. The Libby mine contained a large deposit of asbestos, therefore much of the vermiculite from the mine was contaminated with asbestos.

Vermiculite is very friable and the asbestos fibers within it, even at low concentrations, have a high likelihood of becoming airborne and creating a health hazard. Most regulatory agencies recommend vermiculite be handled and disposed of as Asbestos Containing Material (ACM) regardless of sample results.

Handling & Removal

Suspect materials, including vermiculite that are not tested and therefore presumed to contain asbestos, must be handled, removed, and disposed of as ACM per Spokane Clean Air Regulation I, Article IX.

Under L & I rules, engineering controls and respiratory protection requirements exist for projects involving materials that contain *any* amount of asbestos, including vermiculite containing less than one percent asbestos. Engineering controls and respiratory protection may be down-graded based on a negative exposure assessment performed pursuant to WAC 296-62-07709(3)(b). When handling materials containing any amount of asbestos, "Housekeeping" requirements outlined in WAC 296-62-07723, remain in effect regardless of negative exposure assessment results.

Disposal

Vermiculite assumed to contain asbestos and vermiculite containing more than one percent asbestos must be disposed of as asbestos-containing waste material (ACWM) per Spokane Clean Air Regulation I, Article IX.

Under L&I rules, when disposing of materials containing *any* amount of asbestos, even trace amounts, the materials must be sealed in impermeable bags, or other closed, impermeable containers. Warning labels are also required per WAC-296-62-07721(6).

Per the policies and procedures of Waste Management and Graham Road Recycling and Disposal Facility dated June 8, 2009, *all vermiculite* must be disposed of as asbestos using the same standards that apply to any other asbestos-containing waste (i.e. adequately wet, double bagged in marked bags, etc.).

Conclusion

Vermiculite is very friable and the asbestos fibers within it, even at low concentrations, have a high likelihood of becoming airborne and creating a health hazard. Most regulatory agencies recommend vermiculite be handled and disposed of as ACM regardless of sample results.

On-line Resources

<http://www.epa.gov/asbestos/pubs/verm.html>

http://www.epa.gov/asbestos/pubs/vermiculite_message_to_the_public.pdf

http://www.epa.gov/asbestos/pubs/verm_questions.html

If you have questions regarding this guidance document, call Spokane Clean Air, 477-4727.