

POLREP 05

WRG4 Vermiculite Assessment

WR Grace/Zonolite Co. Ellwood City Facility

12th and Factory Street

Ellwood City, Lawrence County, PA 16117

Latitude: 40° 51'34.44" N; Longitude: 80° 18'0.03"W (revised)

Event: Removal Assessment

Attn: EPA Region III RRC and 3HS32 Section Chief

I. SITUATION (as of February 2007)

- A. Based on findings of asbestos-contaminated vermiculite at a WR Grace mine in Libby, Montana, an EPA agency-wide evaluation of past and operating vermiculite facilities in the United States which received ore from the Libby mine was initiated in 1999. The WR Grace/Zonolite Co. Ellwood City facility was reported to have received vermiculite ore from the Libby mine and operated as a expanding facility from 1954 to 1969.
- B. The Site is currently used by a trucking company for short term storage.
- C. A windshield assessment of the Site was conducted on April 3, 2000.
- D. A preliminary assessment was conducted at the Site in October of 2000. Two (2) bulk samples were collected and analytical results identified 2 % tremolite asbestos in one (1) of the bulk samples and non-detect in the second bulk sample.
- E. EPA conducted a second sampling event on May 22, 2002 based on the presence of tremolite in the samples collected at the facility and the reported volume of vermiculite ore previously processed at the facility. TEM and PLM analysis were conducted on the soil samples. Air samples were also conducted at the recommendation of ATSDR.
- F. Additional information collected during a public meeting hosted by ATSDR determined that further delineation of the vermiculite ore on the property's hillside was necessary.

II. ACTIVITIES

- A. During the week of August 15 to August 18, 2006, START collected 48 soil samples from 26 locations on the hillside behind the former vermiculite expansion facility, the Moose Lodge and the Ellwood City Borough Electrical Shop.
- B. Soil samples were collected from the surface at all 26 locations. Soil borings were collected using a Geoprobe® unit at 17 of the 26 locations. Due to access limitations of the Geoprobe® unit on portions of the hillside, samples were collected at the remaining 9 locations by hand using a slambar-driven split core sampler.
- C. Soil samples included 26 surface (0 to 12 inch) samples, 18 samples collected at various depths and 4 duplicate samples. All samples were analyzed using Polarized Light Microscopy (PLM) NIOSH Method 9002.
- D. Soil boring logs showed visible mica ore and fibers down to a depth of 6 ft in six of the borings and to a depth of 10-12 ft in four of the borings.
- E. PLM analytical results for the soil samples reported 24 of the samples as non-detect.

Sample locations with non-detect results were primarily in the surface soils in front of the former vermiculite facility and in samples collected behind the Ellwood City Borough Electrical Shop.

- F. Sample results for 13 of the samples reported tremolite asbestos at levels < 0.25 %. These sample locations were primarily at locations behind the Moose Lodge including surface samples collected along the perimeter of the parking lot and on the hillside.
- G. Sample results for 7 of the samples reported tremolite asbestos at levels between 0.25 % to < 1.0 %. These sample locations were primarily in subsurface samples collected on the hillside behind the Moose Lodge and the former vermiculite facility.
- H. Sample results for 4 of the samples reported tremolite asbestos at levels between 1.0 % and 1.75 %. These sample locations were primarily in both surface and subsurface samples collected on the hillside behind the Moose Lodge and the former vermiculite facility.
- I. During the assessment, the field crew documented vehicle track marks from all terrain vehicles and other signs of trespassing including graffiti, campfires and beer bottles behind both the Moose Lodge and former vermiculite facility.
- J. Analytical results were provided to ATSDR for a public health opinion on the soil sampling analytical results.
- K. ATSDR provided a Record of Activity (AROA) which outlined concerns regarding that there is no established regulatory or health based standards to guide the determination of acceptable asbestos concentrations in surface or subsurface soils. ATSDR also reported that studies have shown that disturbing soil containing < 1 % amphibole asbestos can suspend fibers at levels of health concern.
- L. ATSDR's conclusion is that the Site could pose a public health hazard if buried/covered asbestos contaminated waste rock were aggressively disturbed and asbestos fibers released to the air and recommended the removal and/or containment of asbestos contaminated soil.

III. FUTURE ACTIONS

- A. OSC will prepare an Action Memorandum identifying the need to take a removal action.
- B. OSC will contact EPA Region 8 to determine status of settlement negotiations with W.R. Grace and enforcement options.

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