

**United States Environmental Protection Agency**  
**Region III**  
**POLLUTION REPORT**

**Date:** Friday, November 6, 2009

**From:** Deborah Lindsey

**Subject:** Ravine - Startup of Removal Action  
WRG4 Vermiculite Site  
1210 Factory Street, Ellwood City, PA  
Latitude: 40.8595660  
Longitude: -80.3000080

<b>POLREP No.:</b>	21	<b>Site #:</b>	E358
<b>Reporting Period:</b>	10/08/09 - 10/23/09	<b>D.O. #:</b>	0703-03-009
<b>Start Date:</b>	7/16/2008	<b>Response Authority:</b>	CERCLA
<b>Mob Date:</b>	4/17/2008	<b>Response Type:</b>	Time-Critical
<b>Demob Date:</b>		<b>NPL Status:</b>	Non NPL
<b>Completion Date:</b>		<b>Incident Category:</b>	Removal Action
<b>CERCLIS ID #:</b>	PAN000305592	<b>Contract #</b>	EP-S3-07-03
<b>RCRIS ID #:</b>			

#### Site Description

EPA's investigations at the WRG4 Vermiculite Site, a former vermiculite facility located in Ellwood City, Pennsylvania, confirmed that the facility received vermiculite ore from the Libby, MT mine and operated as an exfoliating facility from approximately 1954 to 1969. EPA further determined that large amounts of vermiculite, in both the expanded and unexpanded form, were present in both the surface and subsurface soils of the former vermiculite facility and adjacent properties. EPA initiated a cleanup in 2008 at the former vermiculite facility and adjacent properties to mitigate the potential threats posed by fibrous amphibole asbestos.

As the cleanup progressed at the former vermiculite facility and adjacent properties, a resident expressed concern regarding the potential for asbestos contamination to be located within a ravine that is adjacent to the WRG4 Vermiculite Site. The ravine is currently used by ATVs and dirt bikes for recreational purposes as well as by trespassers as evidenced by signs of campfires, trash and beer bottles. The ravine area is an undeveloped piece of property with an address description as Ellwood-Koppel Road located in Ellwood City, Wayne Township, Lawrence County, Pennsylvania. The property is triangular in shape and is described as a ravine since it has steep hillsides leading down to a hollow. The northern side of the ravine is approximately 75 feet to the bottom of the ravine with a 1.5:1 slope and borders an active railroad line operated by the Buffalo & Pittsburgh Railroad and owned by CSX Transportation. The southeast side of the ravine is approximately 60 feet to the bottom of the ravine with a 2:1 slope and borders an abandoned railroad spur once known as the Ellwood City Branch line owned and operated by the Pittsburgh & Lake Erie Railroad. The ravine area of the Site is located to the west and downgradient from the former vermiculite exfoliation facility and adjacent properties where the cleanup of asbestos-contaminated soil has been completed.

EPA conducted a visually assessment of the ravine and collected approximately 57 soil samples from within the ravine. Analytical results of the soil samples showed that a third of the samples had actinolite asbestos fibers ranging from 0.25% to 3.25%. Actinolite is one of the forms of asbestos associated with the Libby vermiculite. Based on the analytical results, the asbestos contamination appears to be scattered intermittently throughout the ravine over an area estimated at 0.4 acres. The contamination appears to be centered on the southwest slope adjacent to the former railroad spur and follows some of the ATV trails on the northern slope. It also does not appear that the surface water drainage in the ravine is spreading the contamination in a westerly direction.

The analytical data from the ravine area was evaluated against the ATSDR health consultation conducted for the adjacent properties at the WRG4 Vermiculite Site. The previous ATSDR consultation stated that studies have shown that disturbing soil containing less than (<) 1% amphibole asbestos can suspend fibers at levels of health concern and that it is extremely difficult to predict airborne concentrations based on asbestos concentrations in the soil. The ATSDR's health consultation for the WRG4 Vermiculite Site also concluded that the asbestos contamination could pose a public health hazard if buried/covered asbestos

contaminated waste rock were aggressively disturbed and asbestos fiber released to the air and recommended removal and/or containment of asbestos containing materials on-site.

Since the levels of asbestos contamination in the soils located within the ravine area of the Site are equal to or greater than the levels found on the other portions of the Site, the OSC determined that a continued removal action is warranted to mitigate the potential threats posed by fibrous amphibole asbestos-contaminated soils located within the ravine.

A Special Bulletin A was signed on September 29, 2009, to address asbestos contamination discovered in a ravine adjacent to the WRG4 Vermiculite Site.

### **Current Activities**

A Special Bulletin A was signed on September 29, 2009, to address asbestos contamination discovered in a ravine adjacent to the WRG4 Vermiculite Site. The removal action for the WRG4 Vermiculite Ravine Site commenced on October 8, 2009, when the ERRS contractor, Kemron Environmental Services, Inc. (Kemron) arrived onsite.

For the period of October 8 through October 16

ERRS mobilized to the Site to begin excavation of asbestos-contaminated soils from within a ravine. ERRS began work with repairs to the decon pad in preparation for deconning equipment and concrete debris. Additional gravel was added to the decon pad since previous operations from the WRG4 Vermiculite Site left a layer of mud in the decon area. ERRS moved all concrete debris which had been previously decontaminated and which had originated from the slopes of the WRG4 Vermiculite Site from the top of the ravine side to the gabion side of the former railroad spur. ERRS moved any potentially contaminated concrete debris and larger size rocks to the decon pad and pressure washed materials to remove any asbestos contamination that may have been present. Cleaned debris continued to be staged over by the gabion wall on clean soil. ERRS did not work a full day on October 9 due to rain and muddy conditions.

During the week of October 12, 2009, START delineated the areas of excavation and ERRS began clearing and grubbing the ravine area in preparation for excavation. Clearing and grubbing included removing all vegetation, trees that had fallen down, dead trees or smaller type trees within the work area. Trees and debris were being staged in smaller piles within the ravine until disposal roll-offs were delivered on-site. Large tree trunks were staged in the ravine out of the work area. ERRS constructed a containment system at the outfall point of the 18 inch culvert drainage pipe leading into the ravine. A 200 gallon rubber tub was placed under the culvert drain pipe outlet to catch any water flowing through the drain pipe. A four inch flexible slotted plastic pipe was connected to the rubber tub and extended approximately 100 feet into the bottom of the ravine. The slotted pipe allowed the water to flow slowly over the length of the pipe, and helped to minimize any major erosion problems during heavy storms. A heavy rain on October 15, 2009, prevented ERRS from working a full day. The muddy conditions due to the heavy rain also prevented ERRS from working a full day on October 16, 2009.

The ERRS RM began contacting disposal facilities and requesting bids for the disposal of asbestos-contaminated soil and tree debris.

START arrived onsite and prepared/submitted a Health and Safety Plan and draft Sampling and Analysis Plan. START utilized the Trimble ProXH GPS to locate and mark the outer boundaries of the grids to be excavated within the ravine. While working with the OSC to finalize the Air Sampling and Analysis Plan, START conducted air monitoring utilizing DataRam 4000 particulate monitors at two onsite locations.

For the week of October 17 through October 23

ERRS continued to conduct clearing and grubbing operations in the ravine area during the reporting period. The roll-offs for tree debris were delivered on or about October 19 and prepared for loading of tree debris. ERRS setup a soil staging area (approx. 100 ft by 50 ft) in the parking lot of the former vermiculite facility. The staging area consisted of plastic sheets weighted down on all sides with leftover filterxx soil socks. Excavated soils in staging area will be covered with plastic until disposal is coordinated.

ERRS began the excavation of contaminated soils starting at the top of ravine along the former railroad spur road. ERRS excavated an area approx. 80 feet from north to south and 4 to 8 ft wide with an average depth of 2 feet. Visual examination of material showed vermiculite material mixed with a dark slag material. After completing excavation at the top of the ravine, ERRS began to excavate the east bank of the ravine and encountered an area of heavily contaminated soils. The area is approx. 50 feet in length

and 12 to 20 feet in width. It appears that dump trucks may have backed up to this area and dumped a significant volume of vermiculite contaminated material. A test pit was excavated which indicated that the depth was approx. 18 to 24 inches.

Approximately 24 loads of contaminated soil were moved to the soil staging area during the week of excavation. ERRS continued to wet down work areas, access road and support zones for dust suppression in addition to wetting down soils during excavation and during unloading at the soil staging area. Equipment is being deconned before leaving the ravine area.

At the end of October 22, ERRS began preparing the site for forecasted heavy rains scheduled to start during the night and into Friday. Conditions were too muddy to work in the ravine on October 23. Equipment was deconned for the weekend and crews loaded tree debris into the roll-offs.

ERRS RM continued to coordinate with potential disposal facilities for T&D. Samples of the soils were collected and analyzed for disposal characterization.

The Air Sampling Plan was finalized and START began conducting air monitoring/air sampling at up to 4 onsite stations in the ravine area during three days of operations per week. There is no air sampling being conducted at the offsite reference location during the removal action in the ravine. The START air sampling/monitoring program includes collecting high volume air sampling with an Aircon II sampling pump and co-located low flow air sampling as a backup sample. Air monitoring is being conducted utilizing a Dataram 4000 particulate monitoring units. A meteorological weather station is used to monitor on-site conditions and data used to generate daily wind roses.

#### **Planned Removal Actions**

- Complete clearing/grubbing operations and load tree debris into roll-offs.
- Continue to excavate asbestos contaminated soils in the ravine area up to a depth of 2 feet
- Continue with dust suppression activities while removal activities are being conducted.
- Continue to conduct air sampling/air monitoring activities

#### **Key Issues**

Acquire analytical services for analysis of air sampling filters.

Acquire disposal facilities for T&D of asbestos contamination soil and tree debris

[response.epa.gov/WRG4Vermiculite](https://response.epa.gov/WRG4Vermiculite)