

United States Environmental Protection Agency
Region III
POLLUTION REPORT

Date: Sunday, November 30, 2008

From: Deborah Lindsey

Subject: On-Going Removal Activities

WRG4 Vermiculite Site

1210 Factory Street, Ellwood City, PA

Latitude: 40.8595660

Longitude: -80.3000080

POLREP No.:	10	Site #:	E358
Reporting Period:	9/18/08 - 10/28/08	D.O. #:	0703-03-009
Start Date:	7/16/2008	Response Authority:	CERCLA
Mob Date:	4/17/2008	Response Type:	Time-Critical
Demob Date:		NPL Status:	Non NPL
Completion Date:		Incident Category:	Removal Action
CERCLIS ID #:	PAN000305592	Contract #	EP-S3-07-03
RCRIS ID #:			

Site Description

As a result of EPA's investigation at the W.R. Grace mine in Libby, Montana, the EPA initiated an evaluation of current and former vermiculite facilities in the United States which received ore from the Libby mine. The W.R. Grace/ Zonolite Co. facility (e.g. WRG4 Vermiculite Site or "Site") in Ellwood City, Pennsylvania was reported by the EPA to have received vermiculite ore from the Libby mine and operated as an exfoliating facility from approximately 1954 to 1969.

An initial assessment was conducted at the WRG4 Vermiculite Site on October 31, 2000, by the EPA Region III START-South Contractor (RAI), who was accompanied by an EPA On-Scene Coordinator. During that site visit, two bulk samples were collected. The results of the October 2000 sampling revealed the presence of tremolite asbestos fibers at concentrations of 2% in one of the bulk samples. The results for the other sample was non-detect. EPA decided to conduct additional sampling based on the presence of tremolite in the sample collected at the facility and the reported volume of vermiculite ore previously processed at the facility.

In May of 2002, EPA conducted additional sampling at the WRG4 Vermiculite Site. Five surface samples and one subsurface sample were collected from the soils surrounding the former vermiculite facility. Samples were initially analyzed using the Transmission Electron Microscopy (TEM) method. The TEM analysis indicated that one sample was identified as containing total asbestos structures, which represents all asbestos structures (fibers, bundles, cluster, and matrix). Five samples were reported as including respirable non-regulated amphibole structures indicative of the Libby ore and referred to as the "Libby Amphiboles". It was later determined that the TEM analysis may not have assessed larger asbestos bundles due to magnification or weight. Polarized Light Microscopy (PLM) analysis was then performed on the samples using NIOSH method 9002 for asbestos fibers. PLM analysis indicated that three of the six samples were non-detect. However, asbestos fibers (actinolite/tremolite) were reported in the remaining samples at a concentration of less than one percent (<1%).

In September of 2005, ATSDR released a Health Consultation for the Site as part of the National Asbestos Exposure Review (NAER) project. The consultation indicated that not enough information is known about how and how often people came in contact with Libby asbestos from the plant (ATSDR, September 2005). Following the release of this document, ATSDR was contacted by a former resident who described a playground that was located near the plant during its operation. According to the resident, vermiculite waste materials were piled near the playground, and that children may have had contact with them. Since this facility received vermiculite from Libby, Montana, it was likely that some of the waste vermiculite material was contaminated with amphibole asbestos. It was determined that further review of the Site may be necessary.

In August of 2006, START conducted a sampling event at the Site. A direct-push borehole device was used to collect core samples; and where that was not a feasible approach, hand augers were used for

sample collection. Samples were analyzed for asbestos fibers via polarized light microscopy (PLM) using NIOSH method 9002. A total of 48 samples were collected from the site. The analytical data reported non-detect for exactly one-half (24) of the 48 samples. The other 24 samples were found to contain between <.25% and 1.75% tremolite. Data from this event was forwarded to ATSDR for review.

The ATSDR's health consultation concluded that the WRG4 Vermiculite Site 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. (EPA Action Memorandum, 2008)

On April 8, 2008, an Action Memorandum for implementing a removal action at the site was signed and approved by the Director of the Office of Emergency Management for the EPA. The removal site evaluation had identified a threat due to the uncontrolled presence of hazardous substances at the Site. The removal site evaluation had identified that fibrous amphibole asbestos was released into the environment from the processing of vermiculite ore and the disposal of associated waste products at the Site by W.R. Grace/Zonolite Company.

On July 18, 2008, EPA, START, and ERRS arrived on site to begin removal operations.

Current Activities

The Site was shutdown from September 18, 2008 through September 29, 2008 for a scheduled work break.

START conducted four (4) days of background air sampling during the break using the revised high volume air sampling procedures. START also used the shut down period to finalize all equipment needs and power sources.

A Pittsburgh & Lake Erie Railroad (PLERR) representative agreed to extend the area under the current access agreement in an email on 9/18/08. A revised agreement was executed between PLERR and EPA. The revised access agreement provides access to approximately 700 feet of former PLERR property known as the Ellwood City Branch Line. The property is located in both Wayne Township and Ellwood City Borough, Lawrence County, Pennsylvania. Refer to the PLERR property boundary access map for the actual limits of access.

For the week of September 30 through October 4:

ERRS began to clear and grub the northern section of the Moose Lodge hillside based on the new access agreement with the PLERR which extended the property boundary. Clearing and grubbing was to proceed to the end of the asphalted parking lot for an additional 150 feet. Clearing and grubbing activities were being conducted in 20 foot swaths and covered in plastic until covered with clean fill. Approximately 65 feet x 90 feet of hillside was cleared including the removal of root balls during the week. Wood chipping activities were conducted on October 3rd. Trees that had been cleared from the hillside and staged in the former vermiculite facility parking lot were chipped and blown down onto the hillside adjacent to the Buffalo & Pittsburgh Railroad.

START did not conduct air sampling or air monitoring during the week due to weather conditions (rain or forecast of rain). START continued to work on the revised air sampling requirements and participated in two conference calls with ATSDR to discuss air sampling methods and data needs.

For the week of October 6 through October 10:

ERRS conducted wood chipping activities from the perimeter of the parking lot beside the former vermiculite facility for two days and then moved the chipping operations to the bottom of the Moose Lodge hillside for one additional day. ERRS also began preparing the area at the toe of the Moose Lodge hillside for the gabion baskets. A wall of gabion baskets is being constructed at the bottom of the hillside to provide additional stability to the hillside and build up the slope to a 2:1 grade. Site preparations for the gabion baskets included excavating a trench, building a base with compacted crush-n-run and building forms for a concrete foundation. ERRS completed approximately 70 feet of trenching and prep work. Gabion baskets arrived on-site on October 9th and a crew of two began to assemble the baskets. During the reporting period ERRS also continued to remove concrete debris and root balls from the hillside to their respective staging areas. Rain during the reporting period delayed operations being conducted at the base of the hillside.

START conducted air sampling and/or air monitoring during the week. Air sampling was not conducted

on certain days due to weather (rain or the forecast of rain). START also conducted oversight and discussed exceedances on the DataRam with the RM on October 7th during wood chipping operations.

On or about October 9th, the OSC returned a call to a local resident regarding wood chipping operations. Local resident was very upset that wood chipping was being conducted and the potential for asbestos to have been released into the neighborhood. OSC assured resident that no additional wood chipping operations would be conducted and that air monitoring/air sampling data would be reviewed to determine if any asbestos fibers were released as part of the operations. OSC also informed by START that a local reporter was on-site on October 8th and took pictures of chipping operations. Article was in the Ellwood City ledger on October 9th.

For the week of October 13 through October 17:

ERRS continued clearing, grubbing and dressing out the northern section of the Moose Lodge hillside. ERRS also continued to prepare the base of the hillside for installation of the gabion baskets by building forms and preparing the base. Approximately 100 ft (10 cubic yards) of concrete foundation was poured on October 15th and an additional 100 ft (10 cubic yards) of concrete foundation poured on October 17th. Concrete base of 200 ft is ready for gabion baskets to be installed and filled with rip rap.

START conducted air sampling and/or air monitoring during the week. No monitoring or sampling conducted on Thursday due to rain. START shipped a batch of 13 air samples to the DAS lab for analysis. START also worked with the Client Services Team in Ft Meade on a modification to the DAS analytical laboratory contract. START procured an analytical lab to analyze the air samples collected during chipping operations since work under the DAS lab was on-hold pending a contract modification. Samples were shipped to the START lab on October 16th.

OSC Kelly assisted OSC Lindsey on review of current cover system and how to proceed. ERRS RM and OSC discussed that the current plan to build up slope to a 2:1 slope and installation of a impermeable liner is not feasible and could pose significant drainage problems as the work gets closer to the active rail line. OSC Lindsey decided to proceed with the installation of the gabion wall at the base of the Moose Lodge hillside, rough grade the hillside with a soil cover of 6 to 12 inches and install a temporary soil erosion mat for the upcoming winter months. OSC will task START to provide technical assistance in evaluating different cover systems that are better suited for current site conditions. Cover system evaluation would include the gabions and current grade of slope.

For the week of October 20 through October 24:

ERRS continued trenching and building forms for the last 100 ft section of concrete footings for the gabions baskets. Approximately 100 ft of concrete foundation (9 cubic yards) was poured on October 23rd. Entire concrete foundation is complete. ERRS also began placement of gabion baskets and hand filling baskets with rip rap. A filter fabric was installed behind the gabion baskets to filter drainage coming from the hillside. ERRS also began to backfill the area around the concrete foundation and behind the gabion baskets as well as reshape the slope by a utility pole's guide wires. A number of empty gabion baskets were vandalized the night of October 23rd. ERRS was able to retrieve them from the adjacent ravine and reshape them. Twenty concrete barriers were delivered and placed at the top perimeter of the Moose Lodge parking lot to help prevent any cars from going over the hillside.

START conducted air sampling and/or air monitoring during the week. Preliminary analytical results from the air sampling conducted during wood chipping operations was received on October 21st. START and the OSC contacted CST Ft Meade requesting assistance on data validation requirements and the potential for CST Ft Meade to perform the data validation on the outside laboratory's data package. CST Ft. Meade provided a checklist for data validation and agreed to perform the data validation. START worked with the lab on getting lab deliverables for validation

For the week of October 27 through October 28:

ERRS continued to work on filling the first and second tier of gabion baskets with rip rap. ERRS placed the remaining 20 concrete barriers (total of 40 barriers) at the edge of the Moose Lodge parking lot. Barriers were placed to rest on the temporary fencing feet to help anchor fencing into ground. Rebar also placed behind concrete barriers for added stability. ERRS prepared the site for a shutdown by covering and securing the hillside and material stockpiles.

START conducted air monitoring on October 27th. No monitoring conducted the following day due to rain and intermittent sleet. START shipped a batch of 26 air samples to the DAS lab for analysis.

PADEP representative on-site for site visit

Due to forecasted weather, ERRS demobed one day earlier than originally planned

On-Going Actions During the Reporting Period:

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.

ERRS continued to wet down work areas, access road and support zones for dust suppression

ERRS continued to cover cleared areas with visqueen plastic when operations are not being conducted

Planned Removal Actions

Continue air monitoring/air sampling

Complete construction of gabion retention wall

Complete rough grading of hillside

Install temporary soil erosion control matting on hillside

www.response.epa.gov/WRG4Vermiculite