



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

MEMORANDUM

SUBJECT: Region 3 Request for Concurrence on Proposed Nationally Significant or Precedent Setting Removal Action at the WRG4 Vermiculite Site, Ellwood City, Lawrence County, PA

FROM: James J. Burke, Director
Hazardous Site Cleanup Division (3HS00)

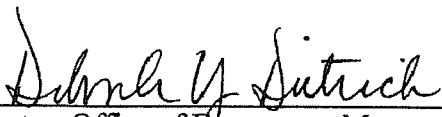
TO: Deborah Y. Dietrich, Director
Office of Emergency Management

This memorandum requests your concurrence on the attached Region 3 draft Action Memorandum, which requests funding for a removal action at the WRG4 Vermiculite Site, Ellwood City, Lawrence County, PA. The proposed Action Memorandum is considered nationally significant or precedent setting because the proposed action mitigates amphibole asbestos as the principle contaminant of concern.

My staff has discussed this proposed removal action with your staff in the Program Operations and Coordination Division, Office of Emergency Management. Your staff has advised us that this removal is considered nationally significant or precedence setting because the proposed action mitigates asbestos as the principle contaminant of concern.

The action memorandum is attached for your review.

Concur:



Director, Office of Emergency Management

4-8-08
Date



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, PA 19103-2029

JAN 31 2008

SUBJECT: Approval of a Request for Funds for a Removal Action at the
WRG4 Vermiculite Site
12th Street and Factory Avenue
Ellwood City, Lawrence County, Pennsylvania

FROM: James J. Burke, Director *J. Burke*
Hazardous Site Cleanup Division (3HS00)

TO: Susan Bodine, Assistant Administrator
Office of Solid Waste and Emergency Response (5201)

THRU: Debbie Dietrich, Director
Office of Emergency Management (5104A)

ATTN: Gilberto Irizarry, Director
Program Operation and Coordination Division (5104A)

ISSUE

The attached funding request prepared pursuant to the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980, as amended, 42 U.S.C. §9601, et seq. pertains to the WRG4 Vermiculite Site (Site) located in Ellwood City, Lawrence County, Pennsylvania. CERCLA removal site evaluations performed in accordance with Section 300.410 of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 C.F.R. § 300.410 have identified a threat to public health due to the uncontrolled presence of hazardous substances at the Site. The removal site evaluations have identified fibrous amphibole asbestos that has been released into the environment from the processing of vermiculite ore and the disposal of associated waste products at this Site by W.R. Grace/Zonolite Co.

The On-Scene Coordinator (OSC) has determined that this Site meets the criteria for a Removal Action under Section 300.415 of the NCP. Funds have been requested in the amount of \$1,311,220 of which \$ 1,020,083 are Regional Removal Allowance Costs, to mitigate the threats posed by the Site. Pursuant to delegation of authority 14-2 to approve CERCLA Removal Actions costing up to \$2 million and actions up to 12 months, Region III has approved this request.

Attachment: Funding Request



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, PA 19103-2029

SUBJECT: Request for a Removal Action
WRG4 Vermiculite Site
12th Street and Factory Avenue
Ellwood City, Lawrence County, Pennsylvania

FROM: Deborah Lindsey, On-Scene Coordinator
Western Response Branch (3HS32)

TO: James J. Burke, Director
Hazardous Site Cleanup Division (3HS00)

I. PURPOSE

The purpose of this Action Memorandum is to request funds and document approval for a time critical Removal Action to mitigate the release and threatened release of hazardous substances, pollutants and/or contaminants from the WRG4 Vermiculite Site (Site), located in Ellwood City, Lawrence County, Pennsylvania pursuant to Section 104 of the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended (CERCLA), 42 U.S.C. § 9604. Removal site evaluations have been conducted at the Site in response to an Agency-wide initiative to investigate vermiculite facilities that received vermiculite ore from the W.R. Grace vermiculite mine in Libby, Montana. The removal site evaluations were performed by the On-Scene Coordinator (OSC) in accordance with Section 300.410 of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 C.F.R. § 300.410, and identified a threat to public health or welfare or the environment due to hazardous substances at the Site. The proposed removal action addresses the need to mitigate the potential threats posed by fibrous amphibole asbestos that was released into the environment from the processing of vermiculite ore and the disposal of associated waste products at this Site by W.R. Grace/Zonolite Co.

To mitigate the threat, CERCLA funding is requested to conduct a Removal Action pursuant to Section 300.415 of the NCP, 40 C.F.R. § 300.415, to prevent the release and/or substantial threat of release of hazardous substances from the Site and to protect public health. A Removal Action Project Ceiling of \$1,311,220, including \$1,020,083 from the Regional Removal Allowance, is necessary to mitigate the threats as identified in this Action Memorandum. Other than the Agency-wide vermiculite investigation discussed above, there are no nationally significant or precedent-setting issues associated with the response.

II. SITE CONDITIONS AND BACKGROUND

A. Site Description

1. Removal Site Evaluation

Between October 2000 and August 2006, EPA conducted sampling investigation activities at the Site to determine the potential health threat posed by amphibole asbestos-containing materials which were generated at the former W.R. Grace/Zonolite vermiculite expansion facility. Soil contaminated with asbestos has been detected in both surface and subsurface soils.

The Site is situated on approximately two acres of land and includes a brick building with a metal corrugated roof on a partially asphalted and gravel lot. The interior of the building appears to have been modified a number of times over the years and it is difficult to identify facility features that are characteristic of a vermiculite expansion operation. An abandoned railroad spur was located on the north side of the building. W.R. Grace reported that historical documents indicate the presence of a railroad spur on the south side of the property between the brick building and Factory Avenue which has either been removed or covered over. The Site was being used by a trucking company for short term storage and is reportedly being marketed for sale.

As part of a national evaluation of facilities that received vermiculite ore from the Libby, Montana mine owned by W.R. Grace, EPA conducted an initial site visit on October 31, 2000. During that site visit, two bulk (soil and dust) 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 result for the other sample was non-detect. The one sample which detected tremolite asbestos fibers was collected outside (approximately 50 feet from the northeast corner of the brick building) from the surface of a soil berm and appeared to contain nonexpanded vermiculite. The one non-detect sample was collected from the housing of a ventilation fan in a storage room inside the brick building. EPA conducted additional sampling based on the presence of tremolite asbestos fibers in the one sample collected from the soil berm outside of the building and knowledge obtained about 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 within a 200 foot radius of the former vermiculite building. Samples were initially analyzed using the Transmission Electron Microscopy (TEM) method. The TEM analysis identified one sample as containing total asbestos structures, which includes all identifiable asbestos structures (fibers, bundles, cluster, and matrix). Five samples were reported as including respirable non-regulated amphibole structures indicative of the Libby, Montana ore and referred to as the "Libby Amphiboles".

In August of 2002, representatives from EPA, the Agency for Toxic Substances and Disease Registry (ATSDR), the Pennsylvania Department of Health, and W.R. Grace conducted a site visit to review the existing data in support of ATSDR's public health evaluation of the Site. As a result, it was determined by EPA and ATSDR that the TEM analysis may not have assessed larger asbestos bundles due to magnification or weight. It was also determined during this visit that air sampling data would be beneficial. Subsequently, Polarized Light Microscopy (PLM) analysis was performed on the previously collected samples using the National Institute for Occupational Safety and Health (NIOSH) method 9002 for asbestos fibers. The PLM analysis indicated that three of the six samples were non-detect. However, amphibole asbestos fibers (actinolite/tremolite) were reported in the remaining samples at a concentration of less than one percent (<1%).

In November of 2002, based on the determination made during the August 2002 Site visit, EPA collected two air samples from inside the building. Both air samples were reported as non-detect for asbestos fibers utilizing TEM analysis (START report, September 2003).

In August 2006, EPA conducted more extensive sampling at the Site as a result of new information that was received from local residents during a Public Health Consultation conducted by the ATSDR. EPA and START collected a total of 48 samples. This included 26 surface samples (0 to 12-inch), 18 subsurface samples (various depths), and four duplicate samples. A direct-push borehole unit was used to collect 17 borings. PLM analysis was performed on all of the samples. Seven samples had results of tremolite asbestos between 0.25% and 1%. Four samples had results of tremolite asbestos between 1% and 1.75%.

2. Physical Location

The site of the former W.R. Grace/Zonolite Co. vermiculite facility is located at 1210 Factory Avenue in Ellwood City, Lawrence County, Pennsylvania at approximate geographic coordinates 40° 51'34.44" north latitude and 80°18'0.03" west longitude. The property on which the facility is located is identified on the current Lawrence County tax map number 4603 as parcel 119A. The former parcel designation was 119, prior to the Loyal Order of the Moose #93 (Moose Lodge) purchasing a portion of the original factory parcel. The Moose Lodge property is designated as parcel 119B and is located to the west of the factory building along the west side of the original factory property parcel.

The area bounding the Site consists of residential, commercial, and industrial use properties. The Site is bordered to the north by the former B & O Railroad tracks which also operated as the Beaver and Ellwood Railroad; to the east by the Ellwood City Power Company service office and a luggage factory; to the west by the Moose Lodge; and to the south by residential homes. The Connoquenessing Creek is located approximately 2,000 feet beyond the Site to the west and 1,000 feet beyond the Site to the north. Access to the Site is not restricted except by the presence of some fencing along Factory Avenue. Attachment 1 is a Site Location Map depicting the physical location of the Site and sampling locations.

3. Site Characteristics

The Site is situated on approximately two acres of land and is comprised of 2 parcels of land. The parcel of land which includes the former vermiculite expansion facility is currently owned by Mr. Joseph Pletz-Benedict. The parcel owned by Mr. Benedict consists of an estimated 32,000 square foot brick building with a metal corrugated roof (constructed by the Calvert Wire and Cable Company, circa 1914) and is located on a partially asphalted and compacted gravel lot with overgrown vegetation. An abandoned railroad spur was located on the north side of the building. W.R. Grace reported that historical documents indicate the presence of a railroad spur on the south side of the property between the brick building and Factory Avenue which has either been removed or covered over. The building was last used by a trucking company for short term storage. Currently the building is vacant and reportedly for sale. A machine shop is located in the rear of the building and was operating during the last EPA visit of August 2006. Access to the property is unrestricted with fencing only present along Factory Avenue. The hillside behind the former vermiculite facility appears to be used by all terrain vehicles for recreational purposes. Illegal dumping and other signs of trespassing, e.g. trash, graffiti, campfires, beer bottles, are also present.

The adjacent parcel of land, originally included under the deed for the Site, is now owned by the Loyal Order of the Moose #93. During a period of time when the vermiculite facility was operational, the Moose Lodge property was a playground and ballfield often referred to as the “West End Playground”. Currently, the Moose Lodge property includes an estimated 6,400 square foot building and an asphalted parking lot. Access to the property is unrestricted and the hillside behind the Moose Lodge appears to be used by all terrain vehicles for recreational purposes as evidenced by vehicle track marks. Other signs of trespassing, e.g. trash, campfires, beer bottles, are also present.

Expansion of raw vermiculite ore occurred inside the building at 12th Street and Factory Avenue. Zonolite Co. and subsequently W.R. Grace operated the exfoliation facility in Ellwood City from 1954–1969. The property was purchased by Zonolite in 1954. W.R. Grace acquired the plant in 1963 when it acquired the assets of the Zonolite Company. Vermiculite ore was transported to the Ellwood City facility by railroad car and loaded into storage bins inside the facility for storage. A conveyor system would then feed the ore into furnaces located within the facility which would heat the ore to over 1500 ° F causing the vermiculite to expand or “exfoliate”. The expanded vermiculite would be conveyed to a stoner machine which would separate the expanded vermiculite from any unexpanded material or “waste rock”. A baghouse would also remove waste during the process prior to any air emissions. The final product was bagged and trucked out for distribution. The waste rock and baghouse fines from the expansion process contained amphibole asbestos. Reports from local residents and past workers indicate that the waste rock was placed on the adjacent playground and disposed of on the hillside behind the facility.

4. Release or Threat of Release of a Hazardous Substance, Pollutant or Contaminant

Asbestos is a hazardous substance as defined by 40 C.F.R. Section 302.4 of the NCP. As a result of the presence of asbestos in surface and subsurface soils at the Site, there has been an actual and/or threatened release of hazardous substances into the environment. Amphibole asbestos (tremolite/actinolite) has been detected at this Site. Asbestos is of potential concern because chronic inhalation exposure to excessive levels of asbestos fibers suspended in air can result in lung diseases such as asbestosis, mesothelioma and lung cancer. Exposures via ingestion and dermal contact are considered to be of lesser concern. Characteristics of amphibole asbestos that are of concern are fibers that are greater than 5 microns in length and have an aspect ratio (length to diameter) of greater than 5 to 1.

The route of exposure that represents the greatest human health concern is the inhalation of airborne fibers, dispersed from soil by the action of pedestrian or vehicular traffic and wind dispersion. In addition to the dispersion of fibers into the air, the frictional forces of foot and vehicular traffic on these surfaces would be expected to facilitate the breakdown of the amphibole asbestos bundles into smaller and more respirable fibers over time. Based upon analytical data from the sampling events, the estimated volume of asbestos contaminated soil is 3500 cubic yards (yd³). This is the proposed minimum amount of contaminated soil at the Site which would need to be excavated and properly disposed of to be protective of human health. Attachment 2 identifies the proposed area of excavation.

5. National Priority List Status

The Site is not presently on the National Priorities List (NPL) and has not been proposed to the NPL. The OSC will forward appropriate information to the site assessment program for followup as needed.

6. Maps, Pictures, and Other Graphic Representation

A Site Location Map and a Sample Location Map including the area proposed for the removal action are included as Attachments 1 and 2. Photographs of the Site are included as Attachment 3.

B. Other Actions to Date

1. Previous Actions

The removal site evaluations conducted between October 2000 and August 2006 as listed in Section II.A.1 of this Action Memorandum are the activities that have been performed at the Site by EPA Region III.

2. Current Actions

There are no current removal activities being conducted by EPA.

C. State and Local Authorities' Roles

1. State and Local Actions to Date

EPA has coordinated with the Pennsylvania Department of Environmental Protection (PADEP) during the removal site evaluations. PADEP participated during the first assessment but chose not to participate in any of the followup activities. The Pennsylvania Department of Public Health has assisted ATSDR with the Health Consultation.

State and local government agencies are not able to undertake timely response actions to eliminate the threats posed by the Site. The state and local governments do not have the resources to conduct the required cleanup action. The Borough of Ellwood City does not have the funding available to mitigate the threat of release of hazardous substances from this Site and the City Council has expressed concern that the Site is easily accessible to local youths.

Both organizations will support EPA during this removal action. The OSC will continue to update the state and local community concerning any actions at the Site.

III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT

Section 300.415 of the NCP, 40 C.F.R. §300.415, lists the factors to be considered in determining the appropriateness of a Removal Action. Specifically, paragraphs (b) (2) (i), (v), and (vii) of Section 300.415 apply as follows to the conditions as they exist at the WRG4 Vermiculite Site.

Section 300.415(b)(2)(i)	<i>“Actual or potential exposure to nearby human populations, animals or the food chain from hazardous substances or pollutants or contaminants”</i>
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Vermiculite, in both the expanded and unexpanded form, has been detected at the Site in the berm and hillside at the former vermiculite expansion property and the hillside of the adjacent Moose Lodge property. Surface and subsurface soils contain measured asbestos levels scattered widely throughout both of the properties. Residential and industrial properties are located immediately adjacent to the Site. There appears to be evidence of recreational all terrain vehicles and trespassing on the Site making a direct exposure to the amphibole asbestos found in both surface and subsurface soils when disturbed. The route of exposure that represents the greatest health concern is the inhalation of airborne fibers, dispersed from soil by the action of pedestrian or vehicular traffic and wind dispersion. In addition to the dispersion of fibers into the air, the frictional forces of foot and vehicular traffic on these surfaces would be expected to facilitate the

breakdown of the amphibole asbestos bundles into smaller and more respirable fibers over time. Air dispersion of asbestos fibers could potentially impact both the adjacent residential and industrial communities as well as any trespassers. Asbestos is of concern because chronic inhalation exposure to excessive levels of asbestos fibers suspended in air can result in lung diseases such as asbestosis, mesothelioma and lung cancer.

Section 300.415(b)(2)(v) *“Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released.”*

The warmer temperatures and drought conditions the area has experienced in the past will contribute to the migration of asbestos-containing soils. Wind, particularly in dry summer months, can lead to the migration of fine asbestos fibers from contaminated surface soils, causing the asbestos to become airborne and available for inhalation. Heavy rainfall, snow melt or other forms of run-off inducing events would also tend to wash the fibers from the surface soils onto the adjacent properties where they could also become airborne during the dry seasons.

Section 300.415(b)(2)(vii) *“The availability of other appropriate federal or state response mechanisms to respond to the release.”*

No other Local, State, or Federal agency is in the position, or currently has the resources, to independently implement an effective response action to address the on-going threats presented at this Site. EPA will conduct its actions in cooperation with State and local authorities.

IV. ENDANGERMENT DETERMINATION

Asbestos is a generic term for a group of six naturally-occurring fibrous silicate minerals. The predominant fibrous nature of minerals found at the WR4 Vermiculite Site are of the tremolite-actinolite solid solution series (referred to in this Action Memorandum as amphibole asbestos). Asbestos can cause asbestosis and is a recognized human carcinogen, causing lung cancer and mesothelioma, a lethal neoplasm of the lining of the chest and abdominal cavities. Cancer of the larynx and esophageal lining have also been associated with exposure to asbestos. Commercial forms of asbestos have been found to be carcinogenic in experimental animals.

With no established regulatory or health based standards to guide the determination of acceptable asbestos concentrations in surface soil or subsurface soils, the OSC consulted with the ATSDR throughout the removal assessments to determine if asbestos levels identified during sampling events at the Site indicate a risk to the surrounding community. The ATSDR consultation supported EPA’s current policy that a “1 % threshold” used in previous Agency-wide screenings and removal actions is not a health based level and should not be used when determining the need for a removal action. The ATSDR consultation also stated that studies have shown that disturbing soil containing < 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 public health consultation did identify site conditions at the WRG4 Vermiculite Site that indicate that occult asbestos contaminated waste rock could be present on the Site, and that if disturbed, could result in exposure to airborne asbestos. The 2007 ATSDR health consultation also states that the asphalt, gravel or vegetation that covers a majority of the Site does not constitute a long term control for the Site. The health consultation further states that since there are areas where asbestos was detected where the community has access, such as along the ATV trail and along the berm north and east of the facility and since Libby asbestos generally does not break down in the environment at an appreciable rate, management of the buried waste material should be handled in a manner that provides some level of assurance that the material will never be disturbed through activities such as construction or redevelopment. The ATSDR's health consultation concludes 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 recommends removal and/or containment of asbestos containing materials on-site. Based on EPA's assessment and ATSDR's recommendations, asbestos contaminated soil will be removed to a level of non-detect wherever possible. Asbestos contaminated soil on the hillside may have to be left in place if excavation begins to undermine the integrity of the slope. The asphalted and gravel areas will not be disturbed because the asbestos is controlled and contained.

Based upon information gathered in connection with the Site, actual or threatened releases of hazardous substances from this Site, if not addressed by implementing the response action selected in this Action Memorandum, may present an imminent and substantial endangerment to public health, welfare, or the environment. As such, the proposed response action set forth in this Action Memorandum should be implemented to abate the threats presented.

V. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Action

1. Proposed Action Description

To mitigate the threat to the public health posed by the asbestos present in surficial and subsurface soils at the Site, the proposed removal actions are outlined below. The removal will involve the following:

- a. Provide Site security sufficient to preclude access by trespassers or by persons not conducting or overseeing the removal action and prevent access to those areas where hazardous substances, or pollutants and contaminants are present.
- b. Continue to assess and characterize threats posed by the Site including sampling of soils for asbestos contamination in both on-Site and off-Site areas.

- c. Excavate and remove asbestos-contaminated soils to a level of non-detect. The excavation depth is estimated to be no more than two feet below grade unless surface conditions warrant an adjustment to the depth of excavation. Excavation depth in the berm areas, which are mostly above grade with a height of six to eight feet in some locations, is also estimated to be no more than two feet below grade. Asbestos contaminated soil that is at depth and contained under the asphalt and asphalt/gravel parking areas will not be excavated since it is located under a physical containment system.
- d. Fill all excavated areas with clean fill material using an approved compaction method. In areas where soil is contaminated with asbestos at depths greater than two feet below grade, place an appropriate warning barrier and cover such areas with clean soil to prevent direct contact with contaminated soil.
- e. Dispose of contaminated soils excavated pursuant to subparagraph c. above at an EPA-accepted off-site disposal facility in accordance with Section 121(d)(3) of CERCLA and 40 CFR 300.440.
- f. Suppress dust and control erosion during the removal action.
- g. Monitor and sample as necessary personal and ambient air during removal activities.
- h. Restore the surface features to pre-existing conditions as appropriate.
- i. Prevent future disturbances, such as excavation of areas of the Site where contamination remains at depths greater than two feet below grade and/or under physical containment systems. Coordinate with the current owner of the Site property and with the appropriate State and local authorities for institutional controls to implement such restrictions.
- j. Provide for post-removal Site control activities consistent with Section 300.415 (l) of the NCP, 40 C.F.R. § 300.415 (l); and EPA's "Policy on Management of Post Removal Site Control", (OSWER Directive 9360.2-02 (December 3, 1989)).

2. Contribution to Remedial Performance

The Site is not on the National Priorities List. The actions proposed in this funding request will not interfere with any remedial actions that may occur in the future and any actions will be consistent with the requirement of Section 104(a)(2) of CERCLA, 42 U.S.C. § 104(a)(2), which states that a removal action should contribute to the efficient performance of any long term action, should a remedial action occur.

It is anticipated that EPA's removal activities will eliminate the immediate public health

threat posed by the fibrous amphibole asbestos (tremolite and actinolite). In accordance with 40 CFR Section 300.415(l), EPA will pursue appropriate arrangements for post-removal site controls at this Site to ensure the long-term integrity of the removal, if necessary. The proposed removal action should complement and contribute to the overall success of any remedial actions in the future.

3. Description of Alternative Technologies

Alternative technologies will be considered to the extent that they prove to be cost effective, efficient, and consistent with the NCP.

4. Applicable or Relevant and Appropriate Requirements (ARARs)

The proposed Removal Action, which pertains to the excavation of asbestos-containing materials, and transportation and off-Site disposal of asbestos, will comply with Federal and State applicable or relevant and appropriate environmental requirements (ARARs) to the extent practicable. The OSC has a copy of an ARAR document (Document Number 253-4500-606) prepared by the PADEP Bureau of Land Recycling and Waste Management titled “Applicable or Relevant and Appropriate Requirements (ARARs) for Cleanup Response and Remedial Actions in Pennsylvania) dated August 2002. The OSC will work with the PADEP to identify and evaluate Site specific ARARs.

B. **Estimated Costs**

Extramural Costs	
Regional Allowance Costs (This cost category includes estimates for ERRS contractors, subcontractors, letter contracts, orders for services, notices to proceed, alternative technology contracts, and inter-agency agreements with other Federal Agencies)	\$1,020,083
Other Extramural Costs Not Funded from the Regional Allowance START Contractor	\$72,600
Subtotal, Extramural Costs	\$1,092,683
Extramural Costs Contingency (20% of Subtotal, Extramural Costs)	\$218,537
TOTAL REMOVAL ACTION PROJECT CEILING	\$1,311,220

VI. **EXPECTED CHANGE IN THE SITUATION SHOULD NO ACTION BE TAKEN OR ACTION DELAYED**

If the actions described in this Action Memorandum are not conducted, there would be a continuing potential threat to human health. Asbestos, which is a hazardous substance, will continue to be exposed on the surface of the Site. Substantial release of hazardous substances into the environment may occur from disturbances from trespassers and recreational users of ATV vehicles. These potential releases pose a significant threat to the human population in close proximity to the Site area.

VII. OUTSTANDING POLICY ISSUES

Asbestos removal actions have been completed around the country at numerous removal sites which were initiated under Section 300.415 of the NCP. This removal does not set a precedent or constitute a nationally significant issue other than being part of this national effort. Because of the potentially broad impact of the vermiculite ore with high levels of amphibole asbestos mined from the Libby, Montana deposits, EPA Region III is coordinating with EPA Headquarters and other regions to assure a consistent approach to vermiculite issues. There are no outstanding policy issues related to the proposed Removal Actions at this Site.

VIII. ENFORCEMENT STATUS

The OSC has consulted with the Cost Recovery Section on removal enforcement actions pertaining to the WRG4 Vermiculite Site. (See attached Confidential Enforcement Addendum.)

The total cumulative EPA costs for this Removal Action based on full-cost accounting practices that will be eligible for cost recovery are estimated below as:

Direct Extramural Costs:	\$1,311,220
Direct Intramural Costs:	\$ 113,880

Subtotal:	\$1,425,100
Indirect Costs (67.13%):	\$ 956,670
Estimated EPA Costs for the Removal Action:	\$2,381,770

The total EPA costs for this removal action based upon full-cost accounting practices that will be eligible for cost recovery are estimated to be \$2,381,770¹.

¹Direct Costs include direct extramural costs and direct intramural costs. Indirect Costs are calculated based on an estimated indirect cost rate expressed as a percentage of site-specific direct costs, consistent with the full cost accounting methodology effective October 2, 2000. These estimates do not include pre-judgment interest, do not take into account other enforcement costs, including Department of Justice costs, and may be adjusted during the course of a removal action. The estimates are for illustrative purposes only and their use is not intended to create any rights for responsible parties. Neither the lack of a total cost estimate nor deviation of actual total costs from this estimate will affect the United States' right to cost recovery.

IX. RECOMMENDATION

This Action Memorandum decision document represents the recommended Removal Action for the WRG4 Vermiculite Site located in Ellwood City, Lawrence County, Pennsylvania, developed in accordance with CERCLA, as amended, and not inconsistent with the NCP. This decision is based on the Administrative Record for the Site.

Pursuant to Section 113(k) of CERCLA and EPA Delegation No. 14-22, I hereby establish the documents listed below as the Administrative Record supporting the issuance of this Action Memorandum.


1. Trip Report for the WRG4 Vermiculite Site, August 2001
2. Trip Report for the WRG4 Vermiculite Site, September 2003
3. Trip Report for the WRG4 Vermiculite Site, February 2007
4. ATSDR Health Consultation, September 2005
5. ATSDR Record of Activity, February 2007

Conditions at the WRG4 Vermiculite Site meet the NCP Section 300.415(b) criteria for a removal action and I recommend your approval of the proposed Removal Action. The total Removal Action Project Ceiling, if approved, will be \$1,311,220. Of this, an estimated \$1,020,083 comes from the Regional Removal Allowance. Please indicate your approval or disapproval below:

Action by the Approving Official:

I have reviewed the above-stated facts and based upon those facts and the information compiled in the documents described above, I hereby determine that the release or threatened release of hazardous substances presents or may present an imminent and substantial endangerment to the public health or welfare or to the environment. I concur with the recommended Removal Action as outlined in this Action Memorandum.

APPROVED


James Burke, Director
Hazardous Site Cleanup Division
EPA Region 3

DATE

1/30/08

Attachments:

1. Site Location Map with Sample Locations

2. Site Location Map with Proposed Removal Area
3. Site Photos
4. Confidential Enforcement Addendum

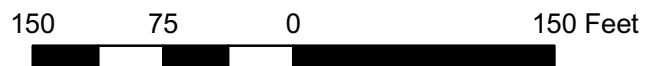
Legend

● Sample Locations



TDD No. W13-008-06-07-005
START Contract No. EP-S3-05-03

VERMICULITE WRG4 SITE 2006 SAMPLE LOCATION MAP



Map By:
WFH

Date Modified:
10/25/2006

Scale: 1:1,325



Source:

Base aerial imagery procured from PASDA at
<http://www.pasda.psu.edu> (USGS/NGA 2005 Lawrence County,
PA, Tile Number 17TNF580225). Shapefiles generated
based on GPS reference points.

Note:

Due to limited satellite coverage and extreme topography
some displayed elements could have been adjusted using a
combination of a GPS unit, photographs, and documentation.

Legend

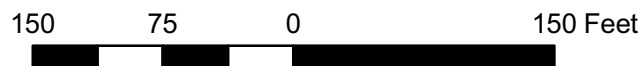


Approximate Removal Areas



TDD No. W13-008-06-07-005
START Contract No. EP-S3-05-03

VERMICULITE WRG4 SITE APPROXIMATE PROPOSED REMOVAL AREAS



Map By:
WFH

Date Modified:
09/12/2007

Scale: 1:1,325



Source:

Base aerial imagery procured from PASDA at
<http://www.pasda.psu.edu> (USGS/NGA 2005 Lawrence County,
PA, Tile Number 17TNF580225). Shapefiles generated
based on GPS reference points. Parcels from Lawrence County.

Note:

Due to limited satellite coverage and extreme topography
some displayed elements may have been adjusted using a
combination of a GPS unit, photographs, and documentation.

WRG4 Vermiculite Site
Ellwood City, Lawrence County, PA
SSID No. E358
Supporting Photographic Documentation
Photographs collected by Region III START-West



Date: 5/22/02

Description: NE view of factory building. Sample WRG4SS2 was collected from a vegetated area along the left side (front) of the factory building.



Date: 5/22/02

Description: Subsurface sample location WRG4SSB1 collected from a soil berm along the northwest corner of the building. Data from sample #103100-04 which was previously collected at this location indicated 2% tremolite.



Date: 5/22/02

Description: Sample location WRG4SS4 collected from a vegetated area near the SE corner of the building.



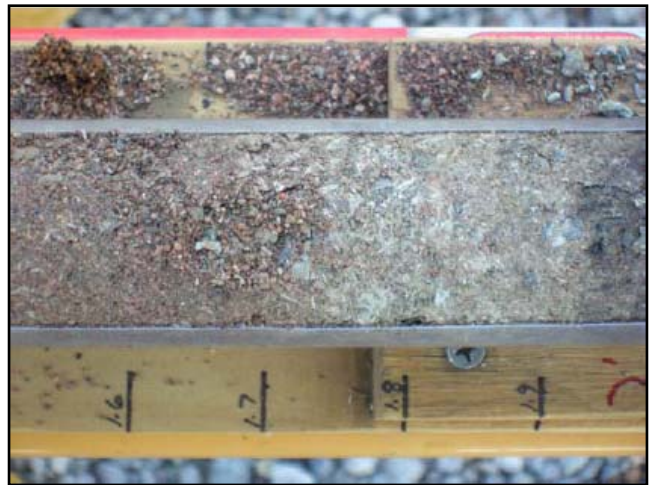
Date: 8/15/06

Description: Borehole location 5 located north of gravel parking lot midway between factory building and Moose Lodge.

WRG4 Vermiculite Site
Ellwood City, Lawrence County, PA
SSID No. E358
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Date: 8/15/06
Description: Fibers in soil clump from Borehole 1.



Date: 8/15/06
Description: White fibrous material near 10 ft below ground surface from Borehole 5.



Date: 8/15/06
Description: Borehole location 7 near SW Corner of factory building.



Date: 8/18/06
Description: Sample 26 collected near hopper. Visible vermiculite ore is Present.