UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
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CONTAINS ENFORCEMENT-SENSITIVE INFORMATION

MEMORANDUM

DATE: March 22, 2010

SUBJ: Request for a Removal Action at the Zonolite/W.R. Grace Site, Easthampton, Hampshire County, Massachusetts - **Action Memorandum**

FROM: John McKeown, On-Scene Coordinator
Emergency Response and Removal Section I

THRU: David McIntyre, Chief
Emergency Response and Removal Section I

Arthur V. Johnson III, Chief
Emergency Planning & Response Branch

TO: James T. Owens III, Director
Office of Site Remediation and Restoration

I. PURPOSE

The purpose of this Action Memorandum is to request and document approval of the proposed removal action at the former Zonolite/W.R. Grace Site (the Site), located in Easthampton, Massachusetts. Amphibole asbestos fibers present inside of the building and in soil at the Site, if not addressed by implementing the response actions selected in this Action Memorandum, will continue to pose a threat to human health and the environment. There has been no use of the OSC's $200,000 warrant authority. The potentially responsible parties (PRPs) have expressed interest in actively participating in the clean up action.

II. SITE CONDITIONS AND BACKGROUND

CERCLIS ID# : MAD019335561
SITE ID# : 01FK
CATEGORY : Time-Critical

A. Site Description

1. Removal site evaluation

In an October 2008 Memorandum, the U. S. Environmental Protection Agency (EPA) Office of Solid Waste and Emergency Response (OSWER) directed EPA Regional Removal Programs to reassess vermiculite sites that received asbestos-contaminated ore from Libby, Montana. The Memorandum provided guidance and a detailed process for accomplishing this task. In January of 2009, the On-Scene Coordinator (OSC) contacted Massachusetts Department of Environmental Protection (MassDEP) to obtain an update on the status of the Site.

After reviewing file material and previous sampling data indicating the presence of amphibole asbestos fibers in onsite soils (asbestos-containing soils), the OSC coordinated with MassDEP to set up a site meeting/visit. Other parties attending the meeting included representatives from Massachusetts Highway Department (Mass Highway), City of Easthampton and EPA Region I START. Following the meeting, the OSC tasked START to conduct a Preliminary Assessment/Site Investigation (PA/SI) using information gained from the site visit and the large volume of sampling data and historical information regarding the Site (See paragraph (II)(B)(1) below).

From 1963 to 1992, Zonolite/W.R. Grace leased the Former Zonolite Facility from Oldon in order to operate an exfoliation plant. Zonolite/W.R. Grace received asbestos-containing vermiculite concentrate (by rail) from the Zonolite mine in Libby, Montana, and produced Zonolite attic insulation and Monokote fireproofing material. In 1992, Zonolite/W.R. Grace removed all equipment from the building, washed down the building and conducted confirmation air sampling. The building was vacant from 1992 to 1997.

From sometime in the late 1990's through 2000, JPS Acquisition Elastomerics Company leased the building from Oldon for use as a warehouse. At present, Oldon continues to own the Former Zonolite Facility, which is used by a neighboring business, DOS Concrete Service, as a storage yard and warehouse. DOS Concrete Service plows a portion of the driveway and parking area and mows the lawn in front of the building at the Former Zonolite Facility in exchange for use of the parking lot and storage inside the building.

The Site consists of several properties with asbestos-containing soils, including the Former Zonolite Facility, and adjacent properties. Private parties own all site-related properties with the exception of the railroad right-of-way, which the City of Easthampton acquired through eminent domain.

START completed the PA/SI and submitted the final report to the OSC, who used it and the recommendations included in a 2006 site-related Health Consultation prepared by the Agency for Toxic Substances and Disease Registry (ATSDR)/Massachusetts Department of Public Health (MassDPH) to conclude that a CERCLA time-critical removal action is required to address the risks at the Site. The OSC documented this recommendation in a Site Investigation Closure Memorandum dated 22 May 2009.

2. Physical location

Latitude: 42° 15′ 13.7″ North
Longitude: 72° 41′ 24.8″ West

The Former Zonolite/W.R. Grace Facility is located at 19 Wemelco Way in a mixed residential/commercial/agricultural area of Easthampton, Hampshire County, Massachusetts.

The former Zonolite/W.R. Grace Facility boundaries consist of:

- East – hayfield;
- South – rail right-of-way running northeast to southwest. The rail right-of-way is currently thickly wooded;
- West – Wemelco Way;
- North – DOS Concrete Service, Inc. parcel.

3. Site characteristics

The Site is approximately 2.3 acres in size and consists of the Former Zonolite Facility and all adjacent properties with asbestos-containing soils. These adjacent properties include (see attached Figure 1):

- the former Pioneer Valley Rail Line (Map 155-14), (the "Railroad Right-of Way);
- farmland located southeast of the rail line (Map 165-47) (the "Cernak Parcel");
- the current DOS Concrete Service, Inc. parcel located northwest of the Former Zonolite Facility (Map 164-1) (the "DOS Parcel"); and
- wooded property located across Wemelco Way from the Former Zonolite Facility (Maps 164-3 and 164-4) (the "Elastomerics Parcel").

The Site consists of a large vacant exfoliation plant (the building) located in the southwest corner, a parking lot located in the northwest corner and the wooded eastern portion. Tennessee Gas Pipeline has a 30-foot wide easement bisecting the property running north to south and located behind the east side of the building. Amphibole asbestos fibers at the Former Zonolite Facility are present in surface and subsurface soils surrounding the building and inside the building. Asbestos-containing soils on the Former Zonolite Facility can be divided into five separate distinct geographic and characteristic groups:

Area A (an area of asbestos-containing surface soils located east of area C);
Area B (an area of asbestos-containing surface and subsurface soils located east

of Area C;
Area C (an area of asbestos-containing surface and subsurface soils located within the Tennessee Gas Pipeline easement;
Area D (an area of asbestos-containing surface soils located west of Area C);
Area E (an area of asbestos-containing surface and subsurface soils located west of Area C.

The nearest residences are located approximately 600 feet east of the Site along the north side of the former rail line. Approximately 1,393 people live within ½ mile. The most likely current exposure pathway is for workers from DOS Concrete Service which occupies both the DOS Parcel and the Former Zonolite Facility, persons walking along the former rail trail and residents that live nearby who may traverse any areas within the Site. According to the EPA Region 1 Environmental Justice Mapping Tool, the Site is not in an environmental justice area.

4. Release or threatened release into the environment of a hazardous substance, or pollutant or contaminant

The hazardous substance is amphibole asbestos, primarily asbestos-containing vermiculite originating from the Zonolite Mine in Libby, Montana. This is a "hazardous substance" as defined by Section 101(14) of CERCLA and 40 CFR § 302.4.

Asbestos is a general name applied to a group of silicate minerals consisting of thin, separable fibers arranged in parallel. Asbestos minerals fall into two classes, serpentine and amphibole. Serpentine asbestos has relatively long and flexible crystalline fibers and include chrysotile, the predominant type of asbestos used commercially. Amphibole asbestos minerals are brittle and have a rod- or needle-like shape. Amphibole minerals regulated as asbestos by the U.S. Department of Labor's Occupational Safety and Health Administration (OSHA) includes five classes: fibrous tremolite, actinolite, anthophyllite, crocidolite, and amosite.

Asbestos poses health risks when people breathe fibers present in the air. When inhaled in significant quantities, asbestos fibers can cause asbestosis (a scarring of the lungs, which makes breathing difficult), mesothelioma (a rare cancer of the lining of the chest or abdominal cavity) and lung cancer. The link between exposure to asbestos and other types of cancers is less clear.

5. NPL status

The Site is not currently on the National Priorities List, and has not received a Hazardous Ranking System rating.

B. Other Actions to Date

1. Previous actions

Following the closure of the facility in 1992, Zonolite/W.R. Grace removed equipment from the building and washed the building to remove residue asbestos material. Zonolite/W.R. Grace collected clearance indoor air samples to support the effectiveness of the building clearance procedure.

In May 2000, MassDEP and EPA Region I conducted limited soil sampling at the facility and along the rail line. EPA analyzed the samples using polarized light microscopy (PLM) and a contract laboratory analyzed them using transmission electron microscopy (TEM). The analytical results indicate amphibole asbestos fibers in surface and subsurface soils, ranging from 5% to 10%.

In August of 2000, MassDEP issued a Notice of Responsibility/Notice of Response Actions to Zonolite/W.R. Grace, which hired Woodward and Curran to characterize the Site and identify areas of amphibole asbestos contamination in soil. Sampling results indicated amphibole asbestos fibers in the surface and subsurface soils at the previous mentioned locations. EPA and MassDEP agreed that MassDEP take the lead on overseeing cleanup efforts financed by W.R. Grace. This effort continued until W.R. Grace declared bankruptcy in 2001.

Since 2005, the City of Easthampton, which owns the Railroad Right-of-Way, has been working with the Mass Highway to extend the Manhan Rail Trail to the Right-of-Way and lay an extension of sewer line in that area. The City recently obtained $1.1 million in federal funding through Mass Highway for use in 2010 to address asbestos-containing soils along the Right-of-Way and construct the portion of the Manhan Bike Path from South Street to Coleman Road (approximately ¾ miles of rail trail). However, the Mass Highway project would only address contamination at the railroad Right-of-Way portion of the Site and, as noted, work is not scheduled to begin until mid-2010.

From 2005–2008, MassDEP worked with Oldon and the City of Easthampton in planning for remediation at the Site. However, the parties never initiated any work to remediate the asbestos-containing soils.

2. Current actions - None

C. State and Local Authorities' Roles

1. State and local actions to date

The Commonwealth of Massachusetts has been very active in this project. In May 2000, MassDEP and EPA worked together to assess the asbestos contamination at the Site. The MassDPH worked with ATSDR to develop the 2006 Health Consultation and remains actively involved in Site meetings and Site visits. Mass Highway and the City of Easthampton are involved in the former rail line/bike trail.

2. Potential for continued State/local response

The OSC will continue to work and coordinate with MassDEP and MassDPH regarding site-related issues including surface impoundment construction and future operation and maintenance (O&M), and transportation and disposal options of contaminated soils. The OSC will coordinate with Mass Highway to ensure a smooth transition between this action and the construction phase of the bike trail.

III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants; [§300.415(b)(2)(i)];

Amphibole asbestos fibers at concentrations ranging from trace to nearly 10% are present in surface and subsurface soils at the Site. ATSDR/MassDPH documented the adverse health effects posed by amphibole asbestos in the 2006 Health Consultation for this Site.

Human exposure via inhalation to amphibole asbestos fibers is the main threat posed by the contamination at the Site. The most likely current exposure pathway is for workers from DOS Concrete Service, which occupies the DOS Parcel and the Former Zonolite Facility, persons walking along the former rail trail, and residents that live nearby who may traverse the Site. The human inhalation exposure risk potentially increases in the future depending on the uses of the Facility, significant increased activity along and adjacent to the planned bike trail, and future use of the hayfield located adjacent to the site's eastern boundary.

In addition to the risk posed by asbestos-containing surface soil, a subsurface soil risk exists for Tennessee Gas Pipeline workers required to conduct maintenance on the pipeline located within the easement that bisects the Former Zonolite Facility.

High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate [§300.415(b)(2)(iv)];

Amphibole asbestos fibers are located inside the building and in soils at or near the surface. EPA has documented in previous studies and sampling events that amphibole asbestos fibers can migrate under the proper conditions.

Much of the asbestos-containing soil at the Site is vegetated to some degree. During the winter season, snow covers the Site for various periods. Amphibole asbestos fibers are less likely to migrate under these conditions. However, human activity and site use will likely increase with the construction and future use of the bike path on the railroad Right-of-Way.

Amphibole asbestos fibers located inside the building may migrate to other locations inside and outside of the building with increased foot traffic, open bay doors and the use of heavy equipment.

Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released [§300.415(b)(2)(v)];

Amphibole asbestos fibers can migrate easily in dry, windy conditions, which occur frequently during the summer. Weather conditions combined with increased human activities will increase the likelihood for human exposure and asbestos fiber migration.

The availability of other appropriate Federal or State response mechanisms to respond to the release [§300.415(b)(2)(vii)];

The City of Easthampton is the current owner of the railroad Right-of-Way. Mass Highway has budgeted money (obtained through federal funding) for use in 2010 to address asbestos-containing soils along the Right-of-Way and to construct approximately ¾ mile of the Manhan Bike Trail. The Mass Highway project only addresses the contamination on the Right-of-Way and is not scheduled to begin until mid 2010. [EPA believes that it will be able to begin necessary response work before the Mass Highway project would be underway, and that it can provide a comprehensive approach that addresses the entire Site.] The State does not have the funding to conduct the remainder of the removal action.

IV. ENDANGERMENT DETERMINATION

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, or welfare, or the environment.[1]

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[1]See Massachusetts Department of Public Health Environmental Toxicology Program Center for Environmental Health prepared under cooperative agreement with Agency for Toxic

V. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Actions

1. Proposed action description

The proposed action will address amphibole asbestos fibers located inside the building and in surface and subsurface soils of the parcels identified above, and as shown in Figure 1.

In areas of the Site where amphibole asbestos fibers are only present in surface soils, all surface soils containing detectable levels of asbestos will be excavated and either disposed off-site or in a surface impoundment to be located in Areas A and B of the Former Zonolite Facility parcel.

In areas of the Site where amphibole asbestos fibers are found in surface and subsurface soils (i.e., Areas B and E of the Former Zonolite Facility parcel, as shown in Figure 1), EPA will excavate as needed and place such soils in a surface impoundment to be located in Areas A and B. In addition, in order to protect future site workers, asbestos-containing soil within the thirty-foot gas pipeline easement will be excavated and placed in a surface impoundment to be located in Areas A and B of the Former Zonolite Facility parcel.

Specific removal activities will include the following:

- Conduct a reconnaissance visit with contractor personnel to assess layout of the Site, and determine required equipment, personnel and utilities;
- Develop and implement an asbestos-specific health and safety plan;
- Prepare a work plan and air monitoring plan addressing asbestos-specific issues and assuring protection of cleanup workers and surrounding properties;
- Plan proper sampling, identification, and characterization of asbestos-containing soils and other hazardous materials;
- Mobilize personnel and equipment;
- Provide site security as determined necessary by the OSC based on Site conditions;
- Delineate work zones and decontamination area;
- Perform air monitoring as required;

Substances and Disease Registry, U.S. Department of Health and Human Services, *Health Consultation, Former Zonolite Facility, Wemelco Way, Easthampton, Hampshire County, Massachusetts, EPA Facility ID: MAD019335561, December 15, 2006.*

- Sample, identify and characterize all asbestos-containing soils and other hazardous materials;
- Excavate asbestos-containing surface soils located on the railroad Right-of-Way and prepare for either placement in a surface impoundment located in Areas A and B of the Former Zonolite Facility or at an EPA-approved disposal facility;
- Excavate asbestos-containing soils located in Areas A, C, D and E of the Former Zonolite Facility, the Cernak Parcel, the DOS Parcel and the Elastomerics Parcel, and place in a surface impoundment to be located in Areas A and B of the Former Zonolite Facility;
- Take all required actions as needed to facilitate vegetation cutting; surveying; site grading; excavation or grading of asbestos-containing soils in Areas A and B of the Former Zonolite Facility; relocation of asbestos-containing soil; installation of a minimum two-foot cover consisting of a demarcation (geotextile) layer covered with at least two feet of compacted non-asbestos-containing material and hydroseeded;
- Take required actions as needed to remove amphibole asbestos fibers from the building and dispose in a surface impoundment located in Areas A and B of the Former Zonolite Facility;
- Coordinate with Tennessee Gas Pipeline during excavation of asbestos-containing soil located within Area C of the Former Zonolite Facility and the railroad Right-of-Way;
- Coordinate transportation and disposal of hazardous substances to an EPA-approved disposal facility;
- Repair any response-related damage at the Site; and
- Demobilize all equipment and personnel.

2. Community relations

The OSC will continue to coordinate with MassDEP, MassDPH, the City of Easthampton, and other involved entities. If necessary, the OSC will coordinate a public information session with the surrounding community, and will issue press releases and fact sheets as required.

3. Contribution to remedial performance

EPA designed the cleanup proposed in this Action Memorandum to mitigate the threats to human health and the environment posed by the Site. The actions taken at the Site would be consistent with and will not impede any future responses.

4. Description of alternative technologies

EPA does not plan to use alternative technology for this removal action.

5. Applicable or relevant and appropriate requirements (ARARs)

Federal ARARs:

40 CFR Part 262 Standards Applicable to Generators of Hazardous Waste:

Subpart B - The Manifest
262.20 : General requirements for manifesting
262.21 : Acquisition of manifests
262.22 : Number of copies of manifests
262.23 : Use of the manifest

Subpart C - Pre-Transport Requirements
262.30 : Packaging
262.31 : Labeling
262.32 : Marking

Subpart D - Recordkeeping and Reporting
262.40 : Recordkeeping

40 CFR Part 264 Standards for Owners and Operators of Hazardous waste Treatment, Storage, and Disposal Facilities:

Subpart I - Use and Management of Containers
264.171 : Condition of containers
264.172 : Compatibility of waste with containers
264.173 : Management of containers
264.174 : Inspections
264.175 : Containment
264.176 : Special requirements for ignitable or reactive waste
264.177 : Special requirements for incompatible wastes

40 CFR Part 264 Hazardous Waste Regulations - RCRA Subtitle C:
268-270 : Hazardous and Solid Waste Amendments Land Disposal Restrictions Rule

40 CFR Part 61 Clean Air Act – National Emission Standards for Hazardous Air Pollutants (NESHAP) Subpart M – worker safety requirements.

The EPA OSC will meet Federal ARARs to the extent practicable considering the exigencies of the situation. The following, while not ARARs, will be complied with during the removal action:

29 CFR Parts 1910, 1926, and 1904: OSHA Health and Safety Regulations.

State ARARs:

Massachusetts Contingency Plan 310 CMR Section 7.15; U Asbestos Commonwealth of Massachusetts standards for handling, transporting and disposing asbestos.

The OSC will coordinate with State officials to identify additional State ARARs, if any. In accordance with the National Contingency Plan and EPA Guidance Documents, the OSC will determine the applicability and practicability of complying with each ARAR identified in a timely manner.

6. Project schedule

The PRPs have expressed interest in conducting the required work within this Action Memorandum under an Administrative Order on Consent (AOC). The PRPs will provide a detailed project schedule for this time-critical removal action within the project work plan developed as part of the AOC. EPA anticipates the removal action to be complete within six months of its commencement.

B. Estimated Costs

The table below reflects EPA estimated costs if the aforementioned AOC is not in effect.

COST CATEGORY		CEILING
REGIONAL REMOVAL ALLOWANCE COSTS:		
ERRS Contractor		$600,000.00
Interagency Agreement		$ 0.00
OTHER EXTRAMURAL COSTS NOT FUNDED FROM THE REGIONAL ALLOWANCE:		
START Contractor		$125,000.00
Extramural Subtotal		$725,000.00
Extramural Contingency	15%	$108,000.00
TOTAL, REMOVAL ACTION CEILING		**$833,000.00**

VI. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

In the absence of the response action described herein, conditions at the Site will continue to remain constant or deteriorate, and the threats associated with the presence of amphibole asbestos fibers in the building and on-site soils will persist. Delayed action will increase public health risks and environmental risks posed by the release or threat of release of amphibole asbestos fibers.

VII. OUTSTANDING POLICY ISSUES

The proposed action is precedent setting because asbestos is the principal contaminant of concern.

VIII. ENFORCEMENT ... For Internal Distribution Only

See attached Enforcement Strategy.

The total EPA costs for this removal action based on full-time accounting practices that will be eligible for cost recovery are estimated to be $833,000 (extramural costs) + $100,000 (EPA intramural costs) = $933,000 X 1.4541 (regional indirect rate) = **$1,356,675** [2].

IX. RECOMMENDATION

This decision document represents the selected removal action for the Zonolite/W.R. Grace Site in Easthampton, Massachusetts, developed in accordance with CERCLA, as amended, and is not inconsistent with the National Contingency Plan. EPA will document this decision in the administrative record for this Site.

Conditions at the Site meet the NCP Section 300.415 (b) (2) criteria for a removal action due to the following:

Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants [§300.415(b)(2)(i)];

High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate [§300.415(b)(2)(iv)];

Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released [§300.415(b)(2)(v)];

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[2]Direct Costs include direct extramural costs $833,000 and direct intramural costs $100,000. Indirect costs are calculated based on an estimated indirect cost rate expressed as a percentage of site-specific costs [45.41% x $933,000, consistent with the full 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.

The availability of other appropriate Federal or State response mechanisms to respond to the release [§300.415(b)(2)(vii)];

I recommend that you approve the proposed removal action. The total removal action project ceiling if approved will be $833,000.

APPROVAL: _____ DATE: 3-23-2010

DISAPPROVAL: _____ DATE: _____