U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
Zonolite Co/ WR Grace Vermiculite Expansion GAO 150 - Removal Polrep

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region IV

Subject: **POLREP #2**
Continuation of Removal Action
Zonolite Co/ WR Grace Vermiculite Expansion GAO 150
B412
Travellers Rest, SC
Latitude: 35.0433979 Longitude: -82.4102628

To:
From: Terry Stilman, OSC
Date: 7/7/2011
Reporting Period: 7/5/11 - 7/7/11

1. Introduction

1.1 Background

Site Number:	B412	**Contract Number:**	
D.O. Number:		**Action Memo Date:**	
Response Authority:	CERCLA	**Response Type:**	Time-Critical
Response Lead:	PRP	**Incident Category:**	Removal Action
NPL Status:	Non NPL	**Operable Unit:**	
Mobilization Date:	5/18/2011	**Start Date:**	5/18/2011
Demob Date:		**Completion Date:**	
CERCLIS ID:	SCD003344108	**RCRIS ID:**	
ERNS No.:		**State Notification:**	5/05/11
FPN#:		**Reimbursable Account #:**	

1.1.1 Incident Category

Time Critical Removal Action

1.1.2 Site Description

The GAO 150 site is a former vermiculite expansion facility that began operations under the ownership of the Universal Zonolite Insulation Company (later changed to the Zonolite Company). Vermiculite ore was received for dry ore processing and expanding at the GAO 150 site from mines located in Tigerville and Enoree, South Carolina from 1946 to 1956. In 1956, a more efficient wet ore processing plant was opened in Enoree, South Carolina and ore processing at the GAO 150 site ceased. Vermiculite concentrate continued to be expanded at the GAO 150 site, however, with shipments of concentrate mainly coming from the Enoree ore processing facility. W.R. Grace bought the Zonolite Company in 1963, and the purchase included the GAO 150 site. Aside from receiving local vermiculite ore and concentrate, W.R. Grace records indicate that as much as 11,203 tons of vermiculite concentrate were shipped from the W.R. Grace (formerly Zonolite) vermiculite mine in Libby, Montana to the GAO 150 site from 1956 to 1981. Vermiculite from the Libby, Montanna mine is known to contain a percentage of asbestos. At the time of the September 2009 field event at the GAO 150 site, the facility was closed and the equipment used for vermiculite expansion had been removed.

1.1.2.1 Location

The GAO 150 site is located about 6.5 miles north-northwest of downtown Greenville, South Carolina, in a mainly rural area interspersed with residences and residential communities. Furman University is located approximately one mile south of the GAO 150 site. A few industrial facilities border the GAO 150 site to the north. A retirement community adjoins the GAO 150 site along its southern perimeter. Residential properties adjoin the GAO 150 site along its southeastern perimeter, and many other residences and residential communities are located in the immediate vicinity of the site.

1.1.2.2 Description of Threat

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

On September 22 and 23, 2009, and February 15, 2011, Tetra Tech, EPA, and REAC personnel conducted aggressive air sampling, ABS sampling, and bulk material sampling at the GAO 150 site.

On February 15, 2011, during a follow-up assessment by OSC Stilman and START, additional bulk sampling was conducted. The follow-up assessment was conducted to determine the need for additional action based on previous sampling and the demolition of Site buildings. Particular attention was focused on the biking/running trail. During that follow-up assessment suspected vermiculite material was observed within several feet of the trail.

Material that appeared to be vermiculite concentrate was noticed on the ground along the west side of the bike trail and in at least one place along the east side of the trail.

The coverage of this material was especially heavy on and around a concrete slab located near the trail and just south of what is thought to have been the southern boundary of the building complex formerly located on the west side of the bike trail. This material did not appear to be contained within silt fencing, and potentially at risk of being spread both through wind transport and as a result of rain event-related surface water flow. The majority of the bike trail appeared to be unpaved and consisted of gravel and bare dirt. Walkers, runners, and bicyclers were observed on the trail throughout the EPA/START site visit. Two bulk material samples were collected from the GAO 150 site during the site visit.

Analytical results conducted by visual estimate indicated that levels as high as 5 percent asbestos identified as tremolite were detected.

Given the changes to the Site, proposed development of the property for residential or other use and recent discovery of high levels of asbestos containing vermiculite at land surface, OSC Stilman issued a Notice of Federal Interest to the land owner, W. R. Grace.

On 05/18/2011, EPA, START, W. R. Grace and W. R. Grace's contractor arrived on-scene to conduct extent of contamination sampling in anticipation of a removal action. 36 bulk sampling location were selected adjacent to the bike/running trail. An additional 8 locations were selected at suspect areas around the Site. EPA provided oversite, sampling assistance and split samples with W R Grace. Sampling activities were complete and the site was demobed on 05/19/2011.

Based on analytical results, additional excavation areas, adjacent to the trail, were added to the scope of the removal action.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

2.1.2 Response Actions to Date

WR Grace provided EPA, with a removal action plan for conduct of the clean-up. Based on the analytical, excavation is occur at three separate areas at the Site.

During the reporting period the following occurred (OSC Stilman, OSC Harper and START conducting oversite):

Excavation Activities (S250 and N300 Locations)

WR Grace contractor, JBR Environmental Services excavated contaminated soil from an area measuring approximately 25 feet by 10 feet at both the S250 and N300 locations based on analytical data obtained from May 2011 sampling event. Estimated quantities summarized below:

- S250: Two rolloff containers (total of approximately 20 cubic yards); area was excavated to an average depth of approximately 2.5 feet below ground surface.
- N300: Four rolloff containers (total of approximately 40 cubic yards); southern portion of area was excavated to approximately 3.5 feet bgs and northern portion of area was excavated to approximately 5 to 6 feet bgs.

Rogers & Callcott, WR Grace sampling contractor, collected 4 confirmation samples from each of the two excavations, including two from the bottom of the excavation, one from the east sidewall, and one from the west sidewall.
Rogers & Callcott conducted ABS air sampling (walking scenario) inside each excavation using 3 personnel (each with a 3 liter per minute pump and a 10 liter per minute pump). Walking activities were conducted in each excavation with sampling pumps running for a total of 60 minutes.

Concrete Pad Activities

JBR Environmental Services began removal activities on and in the vicinity of the concrete pad that formerly housed vermiculite silos. Activities included:

- Excavation of a shallow trench along the east side of the concrete pad (immediately west of the walking path); vermiculite was observed in the trench.
- Begin scraping of the eastern portion of the concrete pad; these activities were initiated but not yet completed.
- No soil from these activities has been shipped offsite yet; materials are temporarily being stockpiled on the concrete pad.

- To determine if the vermiculite spotted is asbestos containing, Rogers & Callcott collected a total of 5 bulk solids samples from the shallow trench excavated along the east side of the concrete pad.

2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)

W R Grace is the present owner of the property and the former operator of the facility and will be conducting the action under EPA oversite.

2.1.4 Progress Metrics

Waste Stream	*Medium*	*Quantity*	*Manifest #*	*Treatment*	*Disposal*
Asbestos Contamination	**Soil**	**60 CuY**			**Landfill**

2.2 Planning Section

2.2.1 Anticipated Activities

2.2.1.1 Planned Response Activities

Continued excavation of identified contaminated areas, followed by confirmation activity based sampling. The trail will continue to be closed until completion of the removal action.

2.2.1.2 Next Steps

2.2.2 Issues

2.3 Logistics Section

No information available at this time.

2.4 Finance Section

No information available at this time.

2.5 Other Command Staff

No information available at this time.

3. Participating Entities

No information available at this time.

4. Personnel On Site

EPA - 2
START - 1
WR Grace - 1
WR Grace contractors - 14

5. Definition of Terms

No information available at this time.

6. Additional sources of information

No information available at this time.

7. Situational Reference Materials

No information available at this time.