

**REVISED REMOVAL ACTION  
WORK PLAN  
ZONOLITE ROAD  
ATLANTA, GEORGIA**

**PREPARED FOR:**

**W. R. GRACE & CO.  
URS JOB NO. 15262691  
SEPTEMBER 26, 2011**

**URS CORPORATION  
400 NORTHPARK TOWN CENTER  
ABERNATHY ROAD, SUITE 900  
ATLANTA, GEORGIA 30328  
(678) 808-8800**

<b>1.0</b>	<b>INTRODUCTION</b>	<b>1</b>
1.1	Project Background	2
<b>2.0</b>	<b>ORGANIZATION</b>	<b>4</b>
<b>3.0</b>	<b>SCHEDULE</b>	<b>8</b>
<b>4.0</b>	<b>Pre-REMOVAL PREPARATION</b>	<b>9</b>
4.1	Site Survey	9
4.2	Land Disturbance Plan and Permitting	9
4.3	Water Access Permit	9
4.4	Notification of Asbestos Abatement and Transportation to GA EPD	9
4.5	Property Access Agreements	9
4.6	Quality Management Plan	10
4.7	Quality Assurance Project Plan	10
4.8	Health and Safety Plan	11
<b>5.0</b>	<b>SOIL EXCAVATION</b>	<b>12</b>
5.1	Excavation Boundary	12
5.2	Site Preparation	12
5.3	Site Security	12
5.4	Soil Removal	12
5.5	Dust Suppression	13
5.6	Perimeter Air Monitoring	14
5.7	Confirmation Sampling	15
5.8	Waste Disposal	16
5.9	Transportation	17
5.10	Progress Reporting	17
5.11	Site Restoration	17
<b>6.0</b>	<b>POST-REMOVAL ACTIVITIES</b>	<b>19</b>
6.1	Post-Removal Control	19
6.2	Reporting	19

## LIST OF FIGURES

- Figure 1 – Site Location Map
- Figure 2 – Aerial Site Plan
- Figure 3 – Organization Chart
- Figure 4 – Schedule
- Figure 5 – Conceptual Site Layout

## LIST of APPENDICES

- Appendix A Land Disturbance Plan
- Appendix B QMP
- Appendix C QAPP
- Appendix D Health and Safety Plan
- Appendix E June 21, 2011 Letter from Terry Stilman re: Clean-up Levels
- Appendix F Air Monitoring Plan

## **1.0 INTRODUCTION**

In the spring of 2010, United States Environmental Protection Agency (EPA) and EPA's Superfund Technical Assistance and Response Team (START) contractor conducted activity-based air sampling and bulk material sampling at the Zonolite Road Site located on Zonolite Road in DeKalb County, Atlanta, Georgia (See Figures 1 and 2). On November 12, 2010, EPA and START conducted a removal site evaluation at the Site in response to an initiative to investigate vermiculite facilities that received vermiculite concentrate from the W. R. Grace vermiculite mine in Libby, Montana. The Site received between 499 and 1,225 tons of vermiculite concentrate from the W. R. Grace vermiculite mine in Libby, Montana.

In April 2011, Grace and the EPA entered into an Administrative Settlement Agreement and Order on Consent for Removal Action (AOC) to excavate an area measuring approximately 175 feet by 250 feet to the depth of native soil.

In May 2001, W. R. Grace retained URS Corporation (URS) to implement the following scope of work as outlined in the AOC:

### **Pre-Removal Preparation**

- Develop a Removal Action Work Plan that details plans for the excavation;
- Develop a Quality Assurance Project Plan (QAPP) and Quality Management Plan (QMP); and
- Prepare a Health and Safety Plan that ensures the protection of the public health and safety during performance of on-Site work in accordance with the schedule in the Work Plan.

### **Removal Action**

- Excavate and remove areas of asbestos contaminated soils in the plateau area (elevated waste pile, approximately 175 feet by 250 feet) to native soil with confirmatory sampling.
- Backfill excavated areas with clean fill material, if necessary.
- Dispose of contaminated soils at an approved facility.
- Suppress dust and control erosion during the removal action.
- Monitor and sample as necessary personal and ambient air during the removal activities.

- Restore disturbed areas in a manner that prevents flooding of adjacent properties and is consistent with future land use. All restoration activities at the Site will be coordinated with the landowner.
- Install a vegetative cover to prevent erosion of the soil backfill or disturbed areas. Area will be hydro-seeded after backfilling is complete.
- Erect warning signs and fencing to prevent access to contaminated areas.
- Submit a written progress report to EPA concerning actions undertaken pursuant to the AOC every two (2) weeks after the date of receipt of EPA's approval of the Work Plan until termination of the AOC, unless otherwise directed by the OSC in writing.

### Post-Removal

- Post-Removal Site Control - submit a proposal for post removal Site control, if required.
- Final Report - Within sixty (60) days after completion of all removal actions required under the AOC, the Respondent will issue a final report.

### **1.1 Project Background**

The Site is comprised of approximately 16 acres in Atlanta, DeKalb County, Georgia. The eastern portion of the Site is occupied by the Atlanta Soto Zen Center. The Site is bordered by light-industrial and commercial businesses to the north and to the east. Peachtree Creek runs along the south and west sides of the Site. Residential communities are located to the south, west and north sides of the Site. In 1950, Southern Zonolite Company built the former vermiculite expansion plant at the Site. In 1957, Southern Zonolite Company merged with the Zonolite Company. In 1963, the assets of the Zonolite Company were acquired by W. R. Grace (Grace). W. R. Grace continued to operate the expansion plant at the Site until 1970. According to W. R. Grace, the parcel was deeded to R.W. Sterrett in 1983. Since then, DeKalb County has assumed ownership of a large part of the original property while other entities own the other parts. The EPA conducted a removal site evaluation at the Site in response to an initiative to investigate vermiculite facilities that received vermiculite concentrate from the W. R. Grace vermiculite mine in Libby, Montana. The Site received between 499 and 1,225 tons of vermiculite concentrate from the W. R. Grace vermiculite mine in Libby, Montana.

In the spring of 2010, EPA and EPA's Superfund Technical Assistance and Response Team (START) contractor conducted activity-based air sampling and bulk material sampling at the Site. On November 12, 2010, EPA and START conducted a site visit to evaluate the presence of vermiculite below the ground surface.

In April 2011, Grace and the EPA entered into an Administrative Settlement Agreement and Order on Consent for Removal Action (AOC) to excavate an area measuring approximately 175 feet by 250 feet to the depth of native soil. The AOC contained provisions to prepare a work

plan including a Health & Safety plan (HASP), Quality Assurance Project Plan (QAPP), and Quality Management Plan (QMP).

## **2.0 ORGANIZATION**

The Project Team will include the following organizations and individuals. The organization is presented on Figure 3 – Organizational Chart. The Team will be updated once a removal contractor has been selected.

### **Agencies**

Terry Stilman, On-Scene Coordinator  
Emergency Response Branch  
United States Environmental Protection Agency  
Region IV  
61 Forsyth Street  
Atlanta, Georgia 30303-8960  
[Stilman.Terry@epamail.epa.gov](mailto:Stilman.Terry@epamail.epa.gov)

### **DeKalb County Contacts:**

John H. Johnson, Attorney  
Troutman Sanders LLP  
Bank of America Plaza, Suite 5200  
600 Peachtree Street, NE  
Atlanta, GA 30308-2216  
404-885-3166 Office  
[John.johnson@troutmansanders.com](mailto:John.johnson@troutmansanders.com)

Dave Butler, Greenspace Environment Manager  
DeKalb County Natural Resources Management Office  
330 W. Ponce DeLeon Ave. 6th Floor  
Decatur, GA 30030  
404 371-2540 Office  
404 660-7511 Cell  
[dabutler@DeKalbcountyga.gov](mailto:dabutler@DeKalbcountyga.gov)

DeKalb County Watershed Management  
1580 Roadhaven Drive  
Stone Mountain, GA 30083-1399  
(770) 621-7272

### **W. R. Grace**

Robert J. Medler, Project Coordinator  
Remedium Group, Inc.  
6401 Poplar Ave, Suite 301  
Memphis, TN 38119  
901-820-2024 Office  
901-493-5856 Cell  
[Robert.j.medler@grace.com](mailto:Robert.j.medler@grace.com)

Robert R. Marriam, Consultant  
Remedium Group, Inc.  
6401 Poplar Ave, Suite 301  
Memphis, TN 38119  
901-820-2023 Office  
901-277-9031 Cell  
[Robert.r.marriam@grace.com](mailto:Robert.r.marriam@grace.com)

Lynne Gardner, Site Information Manager  
Remedium Group, Inc.  
6401 Poplar Ave, Suite 301  
Memphis, TN 38119  
901-820-2029 Office  
901-652-9011 Cell  
[Lynne.g.gardner@grace.com](mailto:Lynne.g.gardner@grace.com)

Bill E. Miller, Remedium Site Representative  
Remedium Group, Inc.  
6401 Poplar Ave, Suite 301  
Memphis, TN 38119  
901-515-6032 Cell  
[Bmiller@bigriver.net](mailto:Bmiller@bigriver.net)

**Consultant – URS Corporation Contacts**

Jay White, Project Director  
URS Corporation  
1000 Corporate Centre Drive  
One Corporate Centre, Suite 250  
Franklin, TN 37067  
(615) 224-2134 (Direct)  
(615) 771-2480 (Main)  
(615) 771-2459 (Fax)  
[Jay.White@URSCorp.com](mailto:Jay.White@URSCorp.com)

Brent Jacobs, Project Manager  
URS Corporation  
400 Northpark Town Center  
1000 Abernathy Road, NE Suite 900  
Atlanta, Georgia 30328  
Tel: 678.808.8800  
Cell: 770.630.0913  
Fax: 678.808.8400  
[Brent.Jacobs@URSCorp.com](mailto:Brent.Jacobs@URSCorp.com)

Dustin Biddle, Field Representative  
URS Corporation  
400 Northpark Town Center  
1000 Abernathy Road, NE Suite 900  
Atlanta, Georgia 30328  
Tel: 678.808.8800  
Cell: 770.630.0913  
Fax: 678.808.8400  
[Dustin\\_Biddle@URSCorp.com](mailto:Dustin_Biddle@URSCorp.com)

**Analytical Laboratory**

Charles LaCerra, Lab Representative  
EMSL Analytical, Inc.  
200 Route 130 North  
Cinnaminson, NJ 08077  
Office: 800.220.3675  
Fax: 856.786.5974

**Disposal Landfill**

Andy Adams, Client Services  
Waste Management – Pine Bluff Landfill  
13809 East Cherokee Drive  
Ball Ground, Georgia 30107  
Off: 770.479.2936  
Cell: 770.616.0663

**Site Surveyor**

David Hester  
GeoSurvey, Ltd.  
1349 Old 41 Hwy  
Building 200, Suite 220  
Marietta, GA 30066  
Off: 770.795.9900  
Cell: 678.232.3728  
[www.geosurvey.com](http://www.geosurvey.com)

**Air Monitoring Contractor**

Robert Brawner  
One Consulting Group, Inc.  
448 Ralph David Abernathy Boulevard  
Building Seven  
Atlanta, Georgia  
Office: 404.815.8005  
Fax: 404.815.8002  
Cell: 678. 313.7594  
[www.onecginc.com](http://www.onecginc.com)

### **Removal Contractor**

In accordance with OCGA 391-3-14, a Georgia licensed asbestos contractor will be selected to perform the removal activities. The contractor will be required to submit proof of a valid license and evidence of the asbestos training as required. The contractor will also be required to provide an asbestos supervisor that has satisfactorily completed the required training for removal and abatement of asbestos. A copy of the contractor's license and documentation of the supervisor training will be maintained onsite during the removal action.

A site walk with potential bidders was conducted on August 18, 2011. Selection of a Georgia licensed asbestos contractor will occur after the bids are received and reviewed. USEPA will be notified of the contractor selection at least fourteen (14) days prior to commencement of field work.

### **3.0 SCHEDULE**

A site schedule is presented as Figure 4. The schedule was developed based on the estimated timeframes to perform the various activities as outlined in this work plan. The schedule also incorporates the timeframes listed in the AOC for the work plan submittal, review of the work plan by EPA, and the submittal and approval of the revised work plan.

As shown on the proposed schedule, a number of the pre-removal activities will be performed simultaneously and will begin before the approval of the work plan in order to expedite the removal action.

## **4.0 PRE-REMOVAL PREPARATION**

This section outlines the activities that will be performed prior to the implementation of the removal action.

### **4.1 Site Survey**

URS retained GeoSurvey, Ltd., a Georgia licensed surveyor, to survey the site for the purposes of preparing a Land Disturbance Permit Plan and to document the final area remediated and the location of confirmation samples collected following the removal action. The initial survey has been performed and included in the Land Disturbance Permit Plan as discussed in Section 4.2 below. Additional surveying will be performed on an as needed basis and in accordance with the schedule presented on Figure 4.

### **4.2 Land Disturbance Plan and Permitting**

An application for a Land Disturbance Permit will be completed and submitted to DeKalb County by URS. In addition, DeKalb County requires a National Pollutant Discharge Elimination System (NPDES) permit be obtained for the removal action. URS prepared a Land Disturbance Plan in accordance with the DeKalb County Planning & Development Department guidelines and checklist provided at <http://www.co.DeKalb.ga.us/planning/pdf/environmental/erosion.pdf>. A copy of the plan is included in Appendix A.

### **4.3 Water Access Permit**

Dust suppression will be a major component of site activities during the removal action. The remediation contractor will obtain a permit necessary to utilize the fire hydrant located at the end of Zonolite Place near the Soto Zen Center as a source of water for dust suppression. The remediation contractor will submit the permit to the DeKalb County Watershed Management office.

### **4.4 Notification of Asbestos Abatement and Transportation to GA EPD**

URS will notify GA EPD by written notice on the Asbestos Abatement or Demolition Project Notification form. A Georgia licensed abatement contractor's agent will be required to complete the form. Notification must be made within ten calendar days prior to project inception in accordance with Georgia Rule 391-3-1-.02(9)(b)7 and the Federal NESHAP Rule as adopted by GA EPD.

### **4.5 Property Access Agreements**

W. R. Grace and/or DeKalb County currently own all the property where the removal activities will occur. Therefore no access agreements are required other than the existing agreement with DeKalb County. W. R. Grace has been in contact with the property management company for the businesses located directly north of the Site to limit access to the parking lot at the rear of the building during the daytime when Site activities are being conducted.

#### **4.6 Quality Management Plan**

URS has developed a Quality Management Plan (QMP) as specified in the AOC. The QMP was prepared in accordance with “EPA Requirements for Quality Management Plans (QA/R-2)” (EPA/240/B0-1/002). On June 24, 2011, the QMP was submitted under separate cover to EPA for review and approval. The QMP was approved by EPA in a letter dated August 1, 2011. A copy of the QMP is included in Appendix B.

#### **4.7 Quality Assurance Project Plan**

URS has developed a Quality Assurance Project Plan (QAPP) as stipulated in the AOC. The QAPP was prepared in accordance with “EPA Requirements for Quality Assurance Project Plans (QA/R-5)” (EPA/240/B-01/003, March 2001), and “EPA Guidance for Quality Assurance Project Plans (QA/G-5)” (EPA/240/R-02/009, December 2002). The QAPP details the sampling and analyses to be performed pursuant to the AOC and will conform to EPA direction, approval, and guidance regarding sampling, quality assurance/quality control (QA/QC), data validation, and chain of custody procedures. The activities will follow, as appropriate, the guidance document entitled “Quality Assurance/Quality Control Guidance for Removal Activities: Sampling QA/QC Plan and Data Validation Procedures” (OSWER Directive No. 9360.4-01, April 1, 1990), as guidance for QA/QC and sampling. On June 29, 2011, the QAPP was submitted under separate cover to EPA for review and approval. On August 1, 2011, W.R. Grace received the EPA comments to the QAPP. The comments have been addressed and the revised QAPP is included in Appendix C.

URS will retain EMSL Analytical, Inc. (EMSL) located in Cinnaminson, New Jersey to perform the required asbestos analyses. EMSL participates in a QA/QC program that complies with the appropriate EPA guidance and has a documented Quality System that complies with ANSI/ASQC E-4 1994, “Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs” (American National Standard, January 5, 1995), “EPA Requirements for Quality Management Plans (QA/R-2) (EPA/240/B-01/002, March 2001),” and the U.S. EPA Region 4 Standard Operating Procedures and Quality Assurance Manual (May 1996), or equivalent documentation as determined by EPA.

#### **4.8 Health and Safety Plan**

URS has developed a Health and Safety Plan (HASP) in accordance with OSHA regulations 29 CFR 1910.120 for the Site. Each contractor will also be required to develop a HASP to specifically cover its personnel in accordance with OSHA regulations. The purpose of the HASP is to assign responsibilities, establish personal protection standards and mandatory safety procedures, and provide for contingencies that may arise while remediation is being conducted at the Site. The provisions of the HASP are mandatory for on-site personnel engaged in hazardous material management activities associated with this project which may involve health and safety hazards. On June 24, 2011, the HASP was submitted under separate cover to EPA for review and approval. On August 1, 2011, W.R. Grace received comments to the HASP from EPA. The comments have been addressed and the revised HASP is included in Appendix D.

## **5.0 SOIL EXCAVATION**

This section describes the Site activities that will be performed to achieve the removal action objective. In a letter dated June 21, 2011 from Terry Stilman, EPA Region 4 On-Scene Coordinator, the clean-up goal for asbestos in soil at the Atlanta (DeKalb County) site was determined to be less than (<) 0.25% Libby amphibole asbestos as quantified by USEPA Method 600/R-93/116 with CARB 435 Prep 400 Count analysis (Appendix E). The clean-up goal for asbestos in air was determined to be 0.02 fibers/cubic centimeter (f/cc) and quantified by TEM analysis.

The objective of this removal action is to assure the remediated area meets the soil and air action levels. Excavation in the plateau will continue until the objective is met. Attainment of the objective will be determined by post-excavation confirmatory soil samples and activity-based air sampling. This removal action consists of excavating the existing plateau down to native soil. The actual quantity of soil to be removed will be determined by confirmatory sampling.

### **5.1 Excavation Boundary**

The material to be excavated is located in a plateau area that measures approximately 250 feet by 175 feet (Figure 5). Previous sampling by EPA and W. R. Grace tentatively defined the area requiring removal. The material is currently covered with vegetation (mostly kudzu) and other scrub trees and grasses. The northern boundary of the material is located adjacent to a drainage stream bank. The actual excavation boundary will be determined once vegetation has been removed and the extent of visible vermiculite identified.

### **5.2 Site Preparation**

The scope of Site preparation activities will include preparation of an access/haul road, installation of security fencing, and establishment of a truck parking area. Additional items to be addressed prior to the start of excavation include installation of the erosion control features as required by the E&SC Plan (Appendix A). Raising a low-hanging power line located at the proposed site entrance will be the responsibility of the removal contractor. Prior to commencing excavation at the Site, URS will invoke the local utility clearance program.

### **5.3 Site Security**

Preliminary layout of the temporary fencing is shown on Figure 5. High visibility orange “snow” fencing will be installed around the anticipated removal area in order to delineate the exclusion zone. Temporary signs will be posted on all sides on 75-foot centers on posts.

### **5.4 Soil Removal**

The soil removal process will be performed in accordance with the Georgia EPD Asbestos Removal and Encapsulation Rules (OCGA 391-3-14) and 29 CFR 1910.1101. The excavation will be performed with a track hoe or equivalent equipment. The excavation process will start on the western side of the Site and proceed towards the east. The trucks will be loaded as material is excavated and not from a stockpile. The soil removal process will include the following four work tasks:

- Initial Truck Lining;

- Soil Excavation and Truck Loading;
- Encapsulation of Excavated Materials in Trucks; and
- Manifesting.

**Initial Truck Lining** - The objective of truck lining is to place an 8 millimeter or greater polypropylene leak proof sheeting in the truck bed so the excavated materials can be placed inside the liner. The initial truck lining will be performed in the truck staging area by several of the contractor employees. The liner will be placed in such a manner that the waste will be fully encapsulated after the truck has been loaded. A scaffold system or similar system may be erected to assist the workers in accessing the trucks to placing the liners inside the truck beds.

**Soil Excavation and Truck Loading** – The objective of the excavation process is to excavate the asbestos materials in a gentle manner to remove the materials and minimize the disturbance and release of dust and/or asbestos fibers into the atmosphere. The material will be excavated with a track hoe or equivalent equipment sufficient in size to properly excavate and load the excavated materials directly into lined trucks. The excavation process will be monitored by a contractor’s employee or “spotter”. The spotter will monitor the excavation process and coordinate the loading process and truck traffic in and out of the excavation area. After a truck is initially lined, the truck will drive to the area where the excavation is occurring so the material can be directly loaded into the truck inside the liner. After the truck is loaded, it will proceed back to the truck staging area to complete the encapsulation of the material in the liner as described in the work task below. To help achieve the objective of minimizing fugitive dust, dust suppression will be performed as described below in Section 5.5. In addition, air monitoring will be performed to monitor the effectiveness of the excavation process and dust suppression methods. The air monitoring plan describing the air monitoring program, action levels, and corrective actions, is included in Appendix F.

**Encapsulation of Excavated Materials in Trucks** – After a truck has been loaded, the truck will proceed to the truck lining area so the lining process can be completed to fully encapsulate the excavated material to prevent fugitive dust emissions during transport. The liner will be overlapped and sealed with a spray on adhesive or taped.

**Manifesting** - Once the material has been fully encapsulated, the manifesting process will be completed. Signed copies of the manifest will be maintained onsite and the delivery of each truckload to the approved landfill verified each day.

## **5.5 Dust Suppression**

The contractor will utilize appropriate dust suppression methods during the removal action. Dust suppression efforts can be divided into the following categories:

- 1) Dust Suppression during Active Excavation, and
- 2) Dust Suppression during Non-Working Hours

### **Dust Suppression During Active Excavation**

The primary dust suppression method will consist of wetting of the soils with a water truck and/or fire hose. Fogging nozzles will also be utilized during the truck loading operation. Wetting of exposed soils during breaks may also be required dependent upon weather conditions.

A fire hydrant is located at the corner of Zonolite Place. The contractor will obtain a permit or permission from DeKalb County Department of Watershed Management to utilize the fire hydrant as a water source during the removal action. The objective of the dust suppression is to keep the soil damp to reduce asbestos fibers from being released into the atmosphere. If the air monitoring and/or air monitoring analytical results outlined in Section 5.6 of this work plan indicate additional dust suppression is needed, then other measures will be implemented such as a sprinkler system. Work on previous expansion plant sites has shown this method of dust control to be very effective.

However, if one of these additional measures needs to be implemented based on the air monitoring, then the contractor will be directed to stop all excavation and soil loading activities until the measure or measures can be implemented.

#### **Dust Suppression During Non-Working Hours**

Dust suppression during non-working hours will consist of covering the areas that have been disturbed by the excavation process with plastic sheeting. The disturbed area will be covered at the end of each work day with plastic sheeting and secured with sand bags or other heavy objects capable of securing the sheeting.

### **5.6 Perimeter Air Monitoring**

URS will contract with One Group Consulting to perform perimeter and personal air monitoring at the Site. Perimeter and personal air monitoring and sampling will be performed throughout the course of the remediation activities at the Site. In a letter dated June 21, 2011 from Terry Stilman, EPA Region 4 On-Scene Coordinator, the clean-up goal for asbestos in air at the Atlanta (DeKalb County) site was determined to be 0.02 fibers/cubic centimeter (f/cc) and quantified by TEM analysis (Appendix E).

URS will work with the air monitoring contractor to ensure that a comprehensive air monitoring work plan will be in place prior to initiating work at the Site. Included in the air monitoring plan will be protocols to ensure that air quality is maintained within acceptable limits both in the immediate vicinity of the work and in the surrounding areas. Types of air monitoring/sampling to be conducted at the Site will include background air sampling, meteorological monitoring, and activity-based air sampling simulated by raking.

Background air samples will be collected offsite (if practical and accessible) or at the Site perimeter and upwind at a distance sufficient to prevent real-time influence by the activity-based activities to be conducted at the Site. A background air sample will be collected concurrent with all site activities on each day during which remediation activities are performed at the Site.

Preliminary air monitoring stations are shown on Figure 3 – Site Layout. The air monitoring program is outlined in an Air Monitoring Plan (Appendix F).

A majority of the air monitoring stations will be located on the northern side of the site where the businesses are located. Air monitoring stations will also be located on the southern, eastern, and western sides of the removal operations. The Air Monitoring Plan details the procedures for

baseline monitoring prior to the start of the removal action including personnel and perimeter air monitoring, frequency of air monitoring during the removal, action levels, and analytical methods. Air monitoring analytical results will be provided to EPA in a timely manner.

## **5.7 Confirmation Sampling**

Confirmation sampling of the soils in the excavation area will be collected and analyzed. Confirmatory bulk sampling locations will be determined based on extent of the excavation at the Site. URS will establish a grid system of 50' x 50' in the excavation area to collect confirmation samples for laboratory analysis to verify the asbestos material has been removed in accordance with the AOC. URS proposes to collect composite confirmatory bulk (soil) samples at a rate of 1 sample per 2,500 square feet. Each composite bulk sample will be made up of five aliquots collected from within the 2,500 square-foot sample grid. Grab samples will also be collected from the individual aliquots in the four quadrants comprising the grid and submitted to the laboratory on hold, pending the analyses of the composite sample. The confirmation samples will be collected in accordance with the QAPP. The samples will be shipped under chain-of-custody to EMSL Analytical, Incorporated located in Cinnaminson, New Jersey for analysis of asbestos by USEPA Method 600/R-93/116 with CARB 435 Prep 400 Count.

If a composite sample exceeds the removal clean-up level of <0.25% asbestos, then the four individual aliquots will be analyzed to try and ascertain which section of the grid exceeds the removal clean-up level. Each quadrant of the grid that exceeds the clean-up level will be re-excavated and re-sampled to verify the clean-up level has been met.

After the bulk analysis sampling indicates the asbestos materials have been removed to meet the removal clean-up level of <0.25% asbestos, then the Activity-Based Sampling (ABS) will be performed in accordance with the procedure outlined in the QAPP. The removal will be considered completed when the analytical results meet the ABS action clean-up goal of 0.02 fibers per cubic centimeter (cc).

ABS will be conducted to simulate human exposure to asbestos during typical site activities. There will be three activity-based outdoor air sampling rounds. Each ABS event will occur over a minimum 120-minute period. Raking was selected as the ABS scenario for this site and documented in a letter from Terry Stilman, Region 4 On-Scene Coordinator, dated June 21, 2011 (Appendix E). The specific location of the raking for this event will be determined based on the final area excavated with concurrence with EPA. The area will consist of an open area devoid of vegetation and with exposed soil. The event will occur prior to the final site restoration and re-vegetation activities.

In each raking event, the participant will rake the entire designated area to gather loose dust and soil, using a standard garden rake. A grab or multi-point composite bulk material sample of the raked dust/soil will be collected after the round of raking activity is completed. During each activity, air samples will be collected from the breathing zones of event participant. The participant, wearing the appropriate PPE, will be fitted with two sampling pumps, one set at a low flow rate (3.0 L/min) and the other set at a higher flow rate (10 L/min). The pumps will be contained within a backpack or harness, with the filter cassettes secured to the participants shoulder straps so that their inlets are within the participant's breathing zone. Both the high and

low flow rate sampling trains will consist of an appropriate portable air sampling pump with an attached 25-mm diameter, 0.8 µm MCE filter cassette. The inlet caps of both the low and high flow rate filter cassettes will be removed (so that they are open-faced) during sampling and the cassettes will be positioned downward.

In addition to ABS of the personal breathing space of the participant, air samples will also be collected around the perimeter of each activity at upwind and downwind locations to assess the impact of the activity on outdoor air. Several sampling locations will be selected around the activity area and at each location there will be two sampling pump assemblies, one set at a low flow rate (3 L/min) and the other set at a higher flow rate (10 L/min). The flow rate sampling train for both pumps will consist of an appropriate portable air sampling pump with an attached 25-mm diameter, 0.8 µm MCE filter cassette. The inlet caps of both the low and high flow rate filter cassettes will be removed (so that they are open-faced) during sampling and the cassettes will be positioned downward and perpendicular to the wind direction. Perimeter samples will be collected for the duration of each ABS event.

The removal will be considered completed when the analytical results meet the ABS action clean-up goal of 0.02 fibers per cubic centimeter (cc).

## **5.8 Waste Disposal**

The Georgia Rules for Solid Waste Management, Chapter 391-3-4-.04(8) provide for the disposal of asbestos containing solid wastes into permitted landfills. Two permit classifications of landfills are available in Georgia for the disposal of such wastes including Municipal Solid Waste landfills (Subtitle D) and Construction and Demolition Landfills. GA EPD was contacted to obtain a list of permitted landfills within a reasonable distance from the Site.

The permitted landfills were evaluated with respect to distance, costs, and the potential impact to the transportation imposed by traffic. W. R. Grace submitted notification to EPA on May 24, 2011 that W.R. Grace intended to utilize the Waste Management Pine Bluff Landfill located in Ballground, Georgia for the waste disposal. The notification contained the following information:

- 1) name and location of the facility to which the Waste Material is to be shipped;
- 2) type and quantity of the Waste Material to be shipped; and
- 3) expected schedule for the shipment of the wastes.

W. R. Grace received EPA's certification of the Waste Management Ballground landfill in accordance with the AOC on May 26, 2011 that the proposed receiving facility is operating in compliance with the requirements of CERCLA Section 121(d)(3), 42 U.S.C. § 9621(d)(3), and 40 C.F.R. § 300.440. URS will obtain a waste disposal profile application for the landfill and complete and submit the application for approval. All investigative derived waste including sampling materials, personnel protection equipment, etc. will also be disposed with the excavated materials.

W.R. Grace is still evaluating other landfills to determine if a closer landfill is suitable and can be utilized. If an alternative landfill is identified, W.R. Grace will submit a notification for the facility to obtain EPA's certification.

## **5.9 Transportation**

The soils will be transported by a licensed and properly insured transporter. Prior to loading a truck with the material, each truck will be lined with plastic sheeting that will be of sufficient strength and material to prevent the exposure of the material to the atmosphere during the transportation and offloading process at the receiving facility. Typically, an 8 millimeter or greater leak proof polypropylene sheeting is utilized to secure the material during transportation, and is readily available from local suppliers. The excavated material will be placed inside the plastic sheeting. When the truck loading has been completed, the excavated material will be covered with the plastic sheeting and sealed with an adhesive to encapsulate the material.

Due to the amount of trucks anticipated to complete the removal action, the transporter will notify Georgia Department of Transportation (GA DOT). GA DOT currently does not have any time restrictions for truck traffic on anticipated routes to a landfill

## **5.10 Progress Reporting**

Written progress reports will be submitted to EPA every two (2) weeks after the date of receipt of EPA's approval of the Removal Action Work Plan until termination of this Settlement Agreement, unless otherwise directed by the OSC in writing. These reports shall describe all significant developments during the preceding period, including the actions performed and any problems encountered, analytical data received during the reporting period, and the developments anticipated during the next reporting period, including a schedule of actions to be performed, anticipated problems, and planned resolutions of past or anticipated problems.

## **5.11 Site Restoration**

Site restoration will be performed after the confirmation samples verify the removal objective has been accomplished and will include the excavated areas as well as any areas disturbed or damaged by the project. Site restoration will generally consist of removing any temporary fencing and signs, plastic sheeting, trash, and construction debris in disturbed areas and installation of proper erosion control measures upon completion of work in the remedial area.

Final site restoration plans will be developed in coordination with DeKalb County and the EPA Identified Community Groups. Specifically, DeKalb County has requested that:

- 1) a portion of the temporary road be removed with the exact portion to be determined at conclusion of the project and
- 2) silt fencing and other runoff/erosion control measures be left in place.

Professional engineering assistance will be used to evaluate and design the final site grading plan with input from DeKalb County and the EPA Identified Community Groups. These plans will assure that areas disturbed by the remediation efforts will be restored to prevent flooding and ponding as well as conform to the expected use of the property by DeKalb County and the EPA Identified Community Groups. Control of run off from the site and impacts to the South Fork of Peachtree Creek will also be incorporated into the restoration plans.

If backfill is required for the excavated areas, a representative sample of the borrow material will be collected and analyzed for volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), and asbestos prior to use as a borrow material. EPA will be provided the name and location of the proposed borrow material. In addition, EPA will be notified ten days in advance of the sample collection of the borrow material so EPA can collect a split sample. The VOCs will be analyzed by USEPA SW-846 Method 8260B and for SVOCs by USEPA SW-846 Method 8270C. The asbestos sample will be submitted to EMSL for analysis for bulk asbestos by USEPA Method 600/R-93/116 with CARB 435 Prep 400 Count.

## **6.0 POST-REMOVAL ACTIVITIES**

This section outlines the post-removal activities to be performed to complete requirements under the AOC.

### **6.1 Post-Removal Control**

Following completion of the removal, verification that the removal objective has been achieved, and site restoration activities, the temporary road will be left in place pending coordination with the DeKalb County Natural Resources Management Office. In addition, the final excavated area will be surveyed to document the area that was remediated. In accordance with the AOC, W. R. Grace will submit a proposal, if required, for post-removal Site control consistent with Section 300.415(k) of the National Contingency Plan (NCP) and OSWER Directive 9360.2-02. W. R. Grace does not anticipate post-removal site controls will be required after verification that the cleanup goal has been achieved.

### **6.2 Reporting**

A final report will be submitted within sixty (60) days after completion of all removal actions for EPA review and approval. The final report shall conform, at a minimum, with the requirements set forth in Section 300.165 of the National Contingency Plan (NCP) entitled "OSC Reports". The final report shall include a good faith estimate of total costs or a statement of actual costs incurred in complying with the AOC, a listing of quantities and types of materials removed off-Site or handled on-Site, a listing of the ultimate destination of those materials, a presentation of the analytical results of all sampling and analyses performed, and accompanying appendices containing all relevant documentation generated during the removal action (e.g., manifests, invoices, bills, contracts, and permits). The final report shall also include the following certification signed by a person who supervised or directed preparation of the final report:

Under penalty of law, I certify that to the best of my knowledge, after appropriate inquiries of all relevant persons involved in the preparation of the report, the information submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Reports or other submissions required by the AOC will be submitted in electronic format unless a paper copy is specifically requested by EPA.