



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 10  
IDAHO OPERATIONS OFFICE  
1435 N. Orchard St.  
Boise, Idaho 83706

SUBJECT: Third Amendment to the Action Memorandum for an Emergency Removal at the Orofino Asbestos Site, Orofino, Clearwater County, Idaho

FROM: Greg Weigel, Federal On-Scene Coordinator  
Emergency Response Unit

THRU: Chris D. Field, Manager   
Emergency Management Program

TO: Daniel D. Opalski, Director  
Office of Environmental Cleanup

I. PURPOSE

The purpose of this Action Memorandum Amendment is to request and document approval of a ceiling increase and an exemption to the statutory limits of 12 months and \$2,000,000 for the removal action described herein for the Orofino Asbestos Site (Site) in Orofino, Clearwater County, Idaho.

II. SITE CONDITIONS AND BACKGROUND

This Amendment will address the failure of the repository retaining wall constructed as part of the removal action. The following is a brief overview of the action memorandum and amendments and construction and failure of the retaining wall. A more thorough description of the removal actions, along with construction of the retaining wall, is found in the 2010<sup>1</sup> and 2011<sup>2</sup> Removal Action Reports.

Action Memoranda

The original Action Memorandum (dated September 30, 2010) identified seven locations where asbestos contaminated material was placed as fill (or was suspected to have been placed), including property also known as the Riverview Construction Asbestos Site, during work associated with the 2008 Phase II and 2009 Phase III construction of waterline improvements for the Riverside Water and Sewer District (District) in the City of Orofino and Clearwater County. The total removal action project ceiling for this Action Memorandum was \$840,000.

<sup>1</sup> Ecology and Environment, Inc. (E & E), 22 June 2011, *2010 Removal Action Report, Orofino Asbestos Site, Orofino, Clearwater County, Idaho*, prepared for the U.S. Environmental Protection Agency, Seattle, Washington, under Contract No. EP-S7-06-02, TDD No. 10-09-0008.

<sup>2</sup> Ecology and Environment, Inc. (E & E), 8 March 2012, *2011 Removal Action Report, Orofino Asbestos Site, Orofino, Clearwater County, Idaho*, prepared for the U.S. Environmental Protection Agency, Seattle, Washington, under Contract No. EP-S7-06-02, TDD No. 10-09-0008.

After the original removal action was started on 13 October 2010, the U.S. Environmental Protection Agency (EPA) identified an additional fifteen locations where asbestos contaminated soil was placed as fill material (or was suspected to have been placed) during work associated with the 2008 Phase II and 2009 Phase III construction of waterline improvements for the District. Further, the EPA discovered many scattered pieces of suspected asbestos cement pipe (ACP) on the ground surface along public rights-of-way where the Phase II and Phase III waterline improvements occurred. The first Amendment (dated May 10, 2011) to the original Action Memorandum provided for a ceiling increase to address the additional locations and a change in the scope of response to provide for an interim gravel barrier to be placed on certain properties until a final cleanup action could be implemented during 2011. This Amendment increased the total removal project ceiling to \$1,176,000.

The second Amendment (dated July 13, 2011) enabled completion of the five locations where interim gravel barriers were constructed in 2010 and where work was postponed until 2011 at four other locations because the landowners could not be contacted or because of inclement weather. This Amendment increased the total removal project ceiling to \$1,876,000.

### Repository Retaining Wall

The purpose of this Amendment is to address the failure of the repository retaining wall constructed as part of the 2011 removal action work.

Asbestos-contaminated soil removed from remote properties located within Orofino and Clearwater County was consolidated with existing contaminated soil at the First Baptist Church (Church) to create an on-Site repository. An engineered gravity-based retaining wall constructed with manufactured concrete blocks serves as north and west outer perimeter of the repository. Once all the asbestos-contaminated soil was placed and compacted, a protective barrier consisting of a 4-inch asphalt surface and a dry retention pond was constructed (refer to Attachment 1 – Site Figure).

During early March 2012, the Church Pastor contacted the EPA and provided photographs showing that the retaining wall had settled causing the upper tiers of the wall to move inward and the lower tiers to expand in several locations. An investigation of the repository revealed that heavy precipitation, including rain and snow, captured over the entire parking area and adjacent hillside coupled with snow plowed from the gravel and the asphalt parking areas overwhelmed the dry retention pond and added significant weight to the contaminated soil behind the retaining wall. When the contaminated soil became saturated with water, the soil further compacted due to additional weight from the stockpiled snow and caused soil particles to shift and fill in voids that were previously left. The soil had been compacted to 90%, but the retaining wall design did not anticipate the additional weight of the snow under saturated conditions. As the soil compacted, the concrete blocks that were using the soil for support were undermined and saturated soil on top of those blocks pushed down on the backside of the blocks causing the block to roll inward. After the initial failure the retaining wall system was compromised. The lower portion of the retaining wall which required the upper portion to work with it as a single unit now was being overloaded, both from an excessive amount of soil but also from the failed upper portion of the wall acting as a surcharge load.

The CERCLIS ID No. is IDN001002885 and the Site ID No. is 10JN.

A. Site Description

Refer to the original Action Memorandum.

B. Other Actions to Date

1. Previous actions

Refer to the original Action Memorandum.

2. Current actions

Two investigations have been performed to address failure of the repository wall. The purpose of the first investigation was to provide geotechnical consultation services for the proposed drywell to be constructed at the on-Site repository.<sup>3</sup> The purpose of the second investigation was to determine the extent of storm drainage facilities which will be required to treat and dispose of the increase in stormwater runoff created by construction of the on-Site repository.<sup>4</sup>

C. State and Local Authorities Roles

Refer to the original Action Memorandum.

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

The original Action Memorandum described those threats associated with asbestos and ACP on the ground. This Amendment describes those threats associated with asbestos and ACP from the on-Site repository because the retaining wall is failing and will continue to fail.

A. Threat to Public Health or Welfare

1. 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)]

The elevated concentrations of chrysotile asbestos found at the Site indicate that the potential for inhalation exposures exists. The repository retaining wall is failing and will continue to fail, thus the asbestos disposed within the repository is susceptible to uncontrolled release to the environment.

As noted in the original Action Memorandum, there is not a known safe level or period of asbestos exposure. Exposure to airborne friable asbestos may result in potential health risks because persons breathing the air may breathe in asbestos fibers. Continued exposure can increase the amount of fibers that remain in the lungs. Fibers embedded in lung tissue over time may cause serious lung diseases, including asbestosis, lung cancer, or mesothelioma.

<sup>3</sup> ALLWEST Testing & Engineering, LLC (ALLWEST), 23 May 2012, *Geotechnical Consultation, Orofino Baptist Church Drywell, 291 118<sup>th</sup> Street, Orofino, Idaho*, prepared for Environmental Quality Management.

<sup>4</sup> JM Engineering, 25 May 2012, *Storm Drainage Report for Soil Containment Project Site, Orofino, Idaho*, prepared for Environmental Quality Management, Seattle, Washington.

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

As noted above in Section II, weather conditions were instrumental in causing the failure of the repository retaining wall. Heavy precipitation, including rain and snow, captured over the entire parking area and adjacent hillside coupled with snow plowed from the gravel and the asphalt parking areas overwhelmed the dry retention pond. Given the large dimensionality of the climate system, the repository is susceptible to continued structural degradation because of the potential for a particular weather event to cause greater damage to the retaining wall.

3. The availability of other appropriate federal or state response mechanisms to respond to the release [300.415(b)(2)(v)]

No other federal or state response mechanism has the capacity or willingness to perform the removal action in a timely manner.

#### IV. ENDANGERMENT DETERMINATION

Refer to the original Action Memorandum.

#### V. EXEMPTION FROM STATUTORY LIMITS

Consistent with Section 104(c)(1)(A) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. § 9604(c)(1)(A), a ceiling increase and an exemption from the statutory limits of 12 months and \$2,000,000 is appropriate based on the following criteria:

A. There is an immediate risk to public health or welfare or the environment

The asbestos-contaminated soil consolidated within the on-Site repository presents an immediate risk to public health or welfare. The retaining wall system is compromised, and the retaining wall will continue to fail until the wall is rebuilt in accordance with the original design and with sufficient storm drainage installed. The risk of release of asbestos fibers is presently minimal due to the early stage of wall failure. However, if the wall is not addressed, it will continue to fail and inevitably result in the uncontrolled release of the asbestos fibers. Members of the Church, nearby residents, or other community members could potentially be exposed to asbestos-contaminated soil because of such a release.

As noted in Section III(A)(1), the elevated concentrations of chrysotile asbestos present at the Site indicate that the potential for inhalation exposures exists. There is no known safe level or period of asbestos exposure. Exposure to airborne friable asbestos may result in a potential health risk because persons breathing the air may breathe in asbestos fibers. Continued exposure can increase the amount of fibers that remain in the lungs. Fibers embedded in lung tissue over time may cause serious lung diseases, including asbestosis, lung cancer, or mesothelioma.

B. Continued response actions are immediately required to prevent, limit, or mitigate an emergency

Immediate implementation of the removal action selected in this Amendment is required to prevent, mitigate, or minimize the actual or potential human health risks posed by the asbestos-contaminated soil present at the Site. The retaining wall is failing and will continue to fail. As a result, there is a threat of

release of the asbestos from the repository. The damaging mechanical forces associated with the prior handling of the asbestos-contaminated soil may have caused the ACP within the repository to become further crumbled, pulverized, or reduced to powder, thereby increasing the risk of releasing asbestos fibers into the environment if disturbed.

Additionally, there are no physical barriers such as fences or administrative and/or legal controls that minimize the potential for human exposure to contamination due to failure of the retaining wall. The failure of the wall and repository must be addressed to eliminate risk of inhalation of asbestos fibers by members of the Church, nearby residents, or other community members.

C. Assistance will not otherwise be provided on a timely basis

As noted in Section III(A)(3), there are no known other appropriate federal or state response mechanisms or potentially responsible parties capable of providing the necessary resources in a prompt manner needed to address the actual or potential human health risks associated with the asbestos-contaminated soil.

## VI. PROPOSED ACTIONS AND ESTIMATED COSTS

### A. Proposed actions

#### 1. Proposed action description

The retaining wall will be deconstructed and the asbestos-contaminated soil will be removed and staged temporarily elsewhere on-Site. The retaining wall will be reconstructed in accordance with the original wall design, and will include additional measures to address significant storm events and loading from anticipated snow removal activities at the Site. The contaminated soil will be replaced and free draining granular fill material and filter fabric will be placed between the contaminated soil and the retaining wall. Where necessary, the asphalt cap will be removed and replaced.

The dry retention pond will be deconstructed. A new drywell will be installed within the retention pond, and a PVC liner will be installed to collect snow melt and storm water and to convey the water to the drywell. The surface of the retention pond will be reconstructed and graded towards the drywell.

#### 2. Contribution to remedial performance

Refer to the original Action Memorandum.

#### 3. Engineering Evaluation/Cost Analysis (EE/CA)

Not applicable.

#### 4. Applicable or relevant and appropriate requirements

Refer to the original Action Memorandum.

#### 5. Project Schedule

The Response activities are expected to begin July 2012, and to require 10 to 11 weeks to complete.

B. Estimated Costs

EPA extramural costs for conducting the removal action described herein are estimated below:

Extramural Costs	Current Ceiling	Proposed Increase	Proposed Ceiling
<u>Regional Allowance Costs</u> ERRS Contractor	\$1,581,000	\$729,000	\$2,310,000
<u>Other Extramural Costs Not Funded from the Regional Allowance</u> START Contractor	\$295,000	\$150,000	\$445,000
Total Removal Action Project Ceiling	\$1,876,000	\$879,000	\$2,755,000

The project ceiling does not include estimates of other costs -- such as intramural direct labor, travel, and indirect costs, and subsequent enforcement costs -- that are recoverable under Section 107 of CERCLA.

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

Refer to the original Action Memorandum.

VIII. OUTSTANDING POLICY ISSUES

None.

IX. ENFORCEMENT

Refer to attached confidential enforcement addendum.

## X. DETERMINATION

Conditions at the Site meet the criteria for a CERCLA section 104(c) emergency exemption, and I recommend your approval of an exemption from the 12-month and \$2,000,000 limitations, and a ceiling increase of \$879,000. The total project ceiling if approved will be \$2,755,000, of which an estimated \$729,000 will be funded from the FY12 Regional removal allowance.

## XI. APPROVAL/DISAPPROVAL

By the approval that appears below, the EPA selects the removal action for the Site as set forth in the recommendations contained in this Amendment together with the Action Memorandum.

Approve:   X  

  
 Daniel D. Opalski, Director  
 Office of Environmental Cleanup

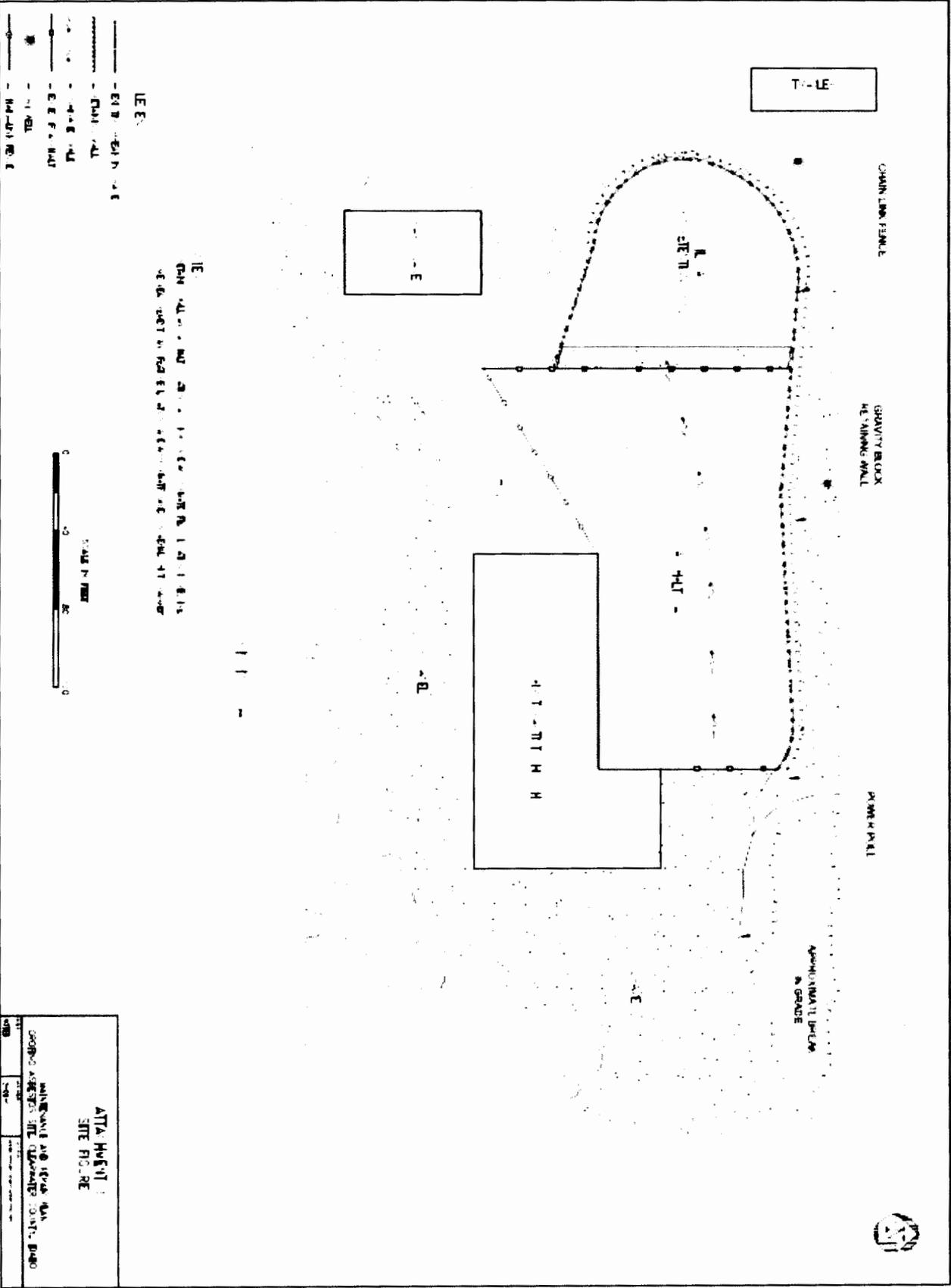
Disapprove: \_\_\_\_\_

\_\_\_\_\_  
 Daniel D. Opalski, Director  
 Office of Environmental Cleanup

Effective date of this Decision:   8/2/2012  

## XII. ATTACHMENTS

- Figure 1 – Site Figure
- Original Action Memorandum
- 1<sup>st</sup> Amendment to the Action Memorandum
- 2<sup>nd</sup> Amendment to the Action Memorandum
- Confidential Enforcement Addendum



1. THE ABOVE SITE PLAN IS TO BE CONSIDERED AS A PRELIMINARY PLAN AND IS NOT TO BE USED FOR CONSTRUCTION WITHOUT THE APPROVAL OF THE LOCAL AUTHORITY.

**ATIA HWY 101 & 102**  
**SITE PLAN**  
 PREPARED BY: [Name]  
 DATE: [Date]  
 PROJECT NO.: [Number]