ecology and environment, inc.
Global Environmental Specialists
720 Third Avenue, Suite 1700
Seattle, Washington 98104
Tel: (206) 624-9537, Fax: (206) 621-9832

May 16, 2017

Angie Zavala, On-Scene Coordinator
United States Environmental Protection Agency, Region 10
1200 Sixth Avenue, Mail Stop ECL-133
Seattle, Washington 98101

Re: Final 2015–2016 Removal Activities Report for the Orofino Asbestos Site
Contract Number EP-S7-13-07, Technical Direction Document Number 15-04-0001

Dear Ms. Zavala:

Enclosed please find the final report for the 2015–2016 Removal Activities at the Orofino Asbestos Site located in Orofino, Idaho. If you have any questions regarding this submittal, please call me at (206) 920-1739.

Sincerely,

ECOLOGY AND ENVIRONMENT, INC.

Steven G. Hall
START-IV Removal Team Leader

This page intentionally left blank.

2015-2016 REMOVAL ACTIVITIES REPORT

Orofino Asbestos Site
Orofino, Clearwater County, Idaho
TDD: 15-04-0001

Prepared for:

U.S. Environmental Protection Agency, Region 10
1435 North Orchard Street
Boise, Idaho 83706

Prepared by:

Ecology and Environment, Inc.
720 Third Avenue, Suite 1700
Seattle, Washington 98104

May 2017

This page intentionally left blank.

Table of Contents

Table of Contents (cont.)

Section **Page**

List of Tables

This page intentionally left blank.

List of Figures

This page intentionally left blank.

List of Abbreviations and Acronyms

Abbreviation	Definition
µm	micrometer
%	percent
%R	percent recovery
ACM	asbestos-containing material
ACP	asbestos-cement pipe
BMPs	Best Management Practices
CARB	California Air Resources Board
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CMP	corrugated metal pipe
District	Riverside Water and Sewer District
DQOs	data quality objectives
E & E	Ecology and Environment, Inc.
EMSL	EMSL Analytical, Inc.
EPA	United States Environmental Protection Agency
EQM	Environmental Quality Management, Inc.
ERRS	Emergency and Rapid Response Services
f/cc	fibers per cubic centimeter
FBC	First Baptist Church
IDEQ	Idaho Department of Environmental Quality
L/min	liters per minute
MCE	mixed-cellulose ester
McGillivray	McGillivray Environmental
NIOSH	National Institute for Occupational Safety and Health
NRCS	United States Department of Agriculture Natural Resources Conservation Services
O&M	operations and maintenance
OSC	On-Scene Coordinator
OSHA	Occupational Safety and Health Administration
Owyhee	Owyhee Construction, Inc.
PCM	phase contrast microscopy
PEL	permissible exposure limit
PLM	polarized light microscopy
PPE	personal protective equipment
PRSC	post-removal site controls
QA	quality assurance
QC	quality control
R	rejected
RPD	relative percent difference
site	Orofino Asbestos Site
SSSP	Site-Specific Sampling Plan
START	Superfund Technical Assessment and Response Team

List of Abbreviations and Acronyms (cont.)

TDD	Technical Direction Document
yd^3	cubic yards

Executive Summary

In 2015–2016, the United States Environmental Protection Agency (EPA) performed removal activities at the Orofino Asbestos Site in Orofino, Idaho. The removal activities were performed at a repository containing asbestos-containing material (ACM) and asbestos-contaminated soil that was constructed by EPA in several earlier removal actions.

In 2008 and 2009, while installing new underground water supply lines for Riverside Water and Sewer District (District), Owyhee Construction, Inc. the contractor for the District, improperly removed and damaged the existing water supply lines made from asbestos-cement pipe (ACP). The contractors then gave asbestos-contaminated soil away as fill material to more than 20 residential, commercial, and religious properties in and around Orofino. Between 2010 and 2015, EPA performed several removal actions at the Orofino Asbestos Site to mitigate the threat posed to human health and the environment from the asbestos in the ACP and asbestos-contaminated soil.

In 2010, EPA performed a removal action at several of the site properties and disposed of the ACP and asbestos-contaminated soil off site in an approved landfill. In 2011, instead of transporting the contaminated soil to an off-site landfill, EPA consolidated the asbestos-contaminated soil from the remaining properties into a repository constructed at the First Baptist Church (FBC) in Orofino, which had also received a large quantity of the contaminated fill material. The asbestos-contaminated soil was consolidated behind an engineered retaining wall and underneath an asphalt and soil cap. In 2012, EPA reconstructed the retaining wall and installed a dry well to improve site drainage due to settling issues.

In April and May 2015, EPA returned to the site to perform some minor upgrades and repairs, including the repair of an area of the asphalt parking lot that had settled since the 2012 removal action. The area was excavated and re-compacted, and then new asphalt layers were installed to match the existing asphalt parking lot. The asphalt work was completed in May 2015. Additional repairs included drainage and vegetative cover improvements to the dry retention basin and drywell. Access to the property below the retaining wall from the asphalt cap was improved by installation of soil ramps. One ramp was constructed at the northeast corner of the retaining wall to provide improved access to the lower property area located north of the retaining wall, and access was also improved to the western yard near the parsonage.

During the April–Mary 2015 removal action, air sampling and dust monitoring were conducted to ensure that the work was performed in accordance with best management practices, and the results indicated that site activities were performed in a manner that was safe for site personnel, nearby residents, and passers-by.

Throughout the remainder of 2015 and 2016, EPA returned to the site several times to inspect the repository and meet with representatives from the Idaho Department of Environmental Quality (IDEQ) and the pastor of the FBC to establish post-removal site controls and an operations and maintenance (O&M) plan for the repository. In March 2016, EPA also returned to the site to re-apply hydroseed to the dry retention basin to encourage the growth of grass. EPA has offered to provide funds from a special account to IDEQ so that IDEQ can perform the O&M. If IDEQ

does not agree to perform the O&M, then EPA will explore the possibility of other local agencies conducting the O&M.

1 Introduction

In 2015–2016, the United States Environmental Protection Agency (EPA) performed removal activities at the Orofino Asbestos Site (site) in Orofino, Idaho. The removal action was performed at a repository containing asbestos-containing material (ACM) and asbestos-contaminated soil that EPA had constructed at the First Baptist Church (FBC) in Orofino in removal actions conducted in 2011 and 2012, after placing a temporary gravel cover over the contaminated material in 2010.

In April and May 2015, EPA returned to the site with its contractors to perform some minor repository upgrades and repairs in response to certain conditions that had developed since 2012. EPA repaired a settled section of the asphalt cap, improved drainage to the drywell in the dry retention basin, conducted revegetation measures in the dry retention basin, and improved access to the property below the retaining wall.

Throughout the remainder of 2015 and 2016, EPA continued to work on post-removal site controls (PRSC) and to develop an operations and maintenance (O&M) plan for the repository. EPA also returned to the site several times to inspect the repository and meet with representatives of the Idaho Department of Environmental Quality (IDEQ) and the pastor of the FBC. In March 2016, EPA's Emergency and Rapid Response Services (ERRS) contractor also returned to the site to re-apply hydroseed to the dry retention basin to encourage the growth of grass.

In 2016, EPA performed a removal site evaluation and removal action at the Orofino Asbestos Site—Riverview Construction Asbestos Unit. A description of the work performed and results are described in a separate report (E & E 2017b).

In late fall 2016, EPA began to assess the construction details and stability of the FBC repository, including the retaining wall. The methods and results of that assessment are described in a separate report (E & E 2017a).

EPA tasked Ecology and Environment, Inc. (E & E), under Superfund Technical Assessment and Response Team (START)-IV contract number EP-S7-13-07, Technical Direction Document (TDD) number 15-04-0001, to provide technical, engineering, and documentation support for the Orofino Asbestos Site. Construction activities for the removal action were performed by Environmental Quality Management, Inc. (EQM) under the EPA Region 10 ERRS contract.

This 2015–2016 removal activities report includes the following sections: Introduction (Section 1); Site Description and Background (Section 2); Removal Action Description (Section 3); Project Organization, Cost, and Schedule (Section 4); Removal Activities (Section 5); Post-Removal Site Controls (Section 6); Waste Management, Transportation, and Disposal Activities (Section 7); Sampling and Monitoring Activities (Section 8); Quality Assurance/Quality Control (Section 9); Community Relations (Section 10); Health and Safety (Section 11); Difficulties Encountered/Recommendations (Section 12); Summary and Conclusions (Section 13); and References (Section 14). Photographs taken throughout the 2015-2016 removal activities are presented in Appendix A.

This page intentionally left blank.

2 Site Description and Background

2.1 Site Location and Layout

Site Name	Orofino Asbestos Site
Owner	First Baptist Church (FBC)
SSID #	10JG
CERCLIS #	IDN001002878
Location	Orofino, Clearwater County, Idaho
Latitude	46° 29' 40.41" N
Longitude	116° 18' 17.20" W

Orofino is a rural community located in the North Central Region of Idaho along Orofino Creek and the Clearwater River (Figure 2-1). The population is approximately 3,100 and the City is the county seat for Clearwater County.

The 2015–2016 removal activities were performed at a repository for ACM and asbestos-contaminated soil constructed by EPA from 2011–2012 on the property of the FBC located at 291 118th Street (Figure 2-2). The FBC property generally slopes down to the north and west and the building is built into the hill such that the upper story is at ground level to the south and the lower story is at ground level to the north.

In 2008–2009, FBC received asbestos-contaminated soil as fill material from Owyhee Construction, Inc. (Owyhee), who was performing the water system upgrades for the District. The contaminated fill material was placed to the north and northwest of the FBC building to level the slope and expand their parking area.

The repository constructed by EPA in 2011–2012 is located to the north and northwest of the Church building, where the contaminated fill had been placed. The repository retaining wall is located along the northern and western boundaries of the repository near the property boundary. The asphalt portion of the cap is directly to the north of the FBC building, and the dry retention basin (i.e., soil cap area) is located in the northwest corner of the property.

Final record drawings, including a final site survey, drainage improvement details, access improvements, asphalt repair details, and the survey monuments for long-term monitoring of the retaining wall, are included in Appendix B.

2.2 Surrounding Land Uses

The FBC property is located in a residential neighborhood, with several single-family residences on adjacent properties.

2.3 Site History, Operations, and Ownership

Information related to the overall site history, operations, and ownership, including the 2008–2009 activities by the contractors who placed the asbestos-contaminated fill at the various locations in and around Orofino, is summarized in the 2010 removal action report (E & E 2011).

Site-related asbestos-contaminated soil currently remains at two locations in Orofino. The first property that EPA investigated in 2010 was a vacant lot located at 12976 Highway 12, and this site is known as the Orofino Asbestos Site—Riverview Construction Asbestos Unit. The contamination at this property was addressed separately from the remaining properties that compose the Orofino Asbestos Site; see Sections 2.5.1 and 2.5.3 for more details.

The remainder of the properties that received the asbestos-contaminated soil were addressed by EPA as part of the Orofino Asbestos Site. After 2011, site activities focused on the repository located on the FBC property at 291 118th Street. The contaminated fill material that was placed on this property in 2008-2009 originated from District sewer lines in the neighborhood rights-of-way and thus were not generated due to FBC-related activities.

2.4 Regulatory and Enforcement History

There are no known regulatory or enforcement actions at the site prior to EPA's involvement beginning in 2010. For a summary of EPA's 2010 investigations, refer to Section 2.4 of the 2010 removal action report (E & E 2011).

2.5 Site Cleanup Activities

Since 2010, EPA has performed several removal actions in the Orofino area to address the ACM and asbestos-contaminated soil used as fill material. Additionally, in 2010, the responsible party (Owyhee) placed a protective barrier of gravel over asbestos-contaminated fill material at the Riverview Construction Asbestos Unit. Summaries of these cleanup activities are provided below, and additional details are provided in the EPA removal action reports (E & E 2011, 2012, 2013, and 2016).

2.5.1 RP-Led Removal Action at Riverview Construction Asbestos Unit, 2010

Approximately 16,860 cubic yards (yd^3) of asbestos-contaminated fill from the District water line improvement project was placed by Owyhee at a vacant lot located at 12976 Highway 12. In 2010, pursuant to an Administrative Settlement Agreement and Order on Consent with EPA, Owyhee placed a protective gravel barrier over the asbestos-contaminated soil. In 2011 EPA determined that the gravel barrier was sufficient as a final protective barrier (E & E 2012), and EPA performed no work at the Riverview Construction Asbestos Unit during the 2012 removal action (E & E 2013).

2.5.2 EPA-Led Removal Actions at Orofino Asbestos Site, 2010-2012

2.5.2.1 2010 Removal Action – Initial Response and Off-Site Disposal

In August of 2010, EPA initiated a removal action to excavate asbestos-contaminated soil from multiple sites around Orofino, Idaho. The source of the asbestos-contaminated soil was ACP that had been used as underground water lines for the District, the local water utility district. During a waterline improvement project in 2008 and 2009, ACP was crushed and soil with the ACP pieces present was given away to area property owners as fill material. EPA performed the 2010 removal action in October through early November. By the end of the 2010 removal action, EPA had learned of a total of 21 properties that had received the asbestos-contaminated soil as fill material, but EPA was not able to address all properties in 2010 because of weather, access, and funding issues. During the 2010 removal action, the excavated ACP and asbestos-contaminated soil were sent to a licensed off-site landfill. EPA returned to the site in the fall of 2011 to complete the removal action.

By the end of 2010, EPA had completed the cleanup of 12 properties, while 10 others were not completed and were scheduled for cleanup in 2011. Interim gravel covers were placed over some of these properties, including the FBC, if ACP was observed at the surface, depending on property-specific conditions and the consent of property owners. (E & E 2011)

During the 2010 removal action, a total of 2,494 tons of asbestos-contaminated soil and 11.5 yd^3 of ACM debris were taken off site to the Waste Management Graham Road Landfill in Medical Lake, Washington. Table 2-1 includes a summary of the waste quantities managed during the 2010 removal action.

2.5.2.2 2011 Removal Action – FBC Repository Construction

EPA returned to the site in August 2011 to finish removing the ACP and asbestos-contaminated soil from seven properties. At an eighth property, no ACP was observed, but EPA removed pieces of a different type of ACM (Transite™) from the surface of the ground for proper off-site disposal. Recovered ACP and ACM from these properties was disposed of off-site at the licensed landfill. A total of 1,190 pounds of ACP and ACM was removed from the eight properties and transported for off-site disposal at the Waste Management Graham Road Landfill in Medical Lake, Washington.

Due to high transportation and disposal costs, the asbestos-contaminated soil from these properties was not sent off-site for disposal. Instead, it was consolidated at the FBC property located at 291 118th Street. FBC had already received a large quantity of asbestos-contaminated soil as fill material during the 2010 removal action (an estimated 10,420 yd^3), and rather than removing this asbestos-contaminated soil for off-site disposal, EPA and the FBC agreed to consolidate the asbestos-contaminated soil from the other properties with the contaminated soil at the FBC behind an engineered retaining wall and contained under an asphalt and soil cap. A total of 1,660 yd^3 of asbestos-contaminated soil was removed from the seven properties and transported to the FBC property located at 291 118th Street for disposal beneath the protective barrier constructed on-site. Including the material that was already present, there was an

estimated total of 12,100 yd^3 of asbestos-contaminated soil under the protective cover at this property (E & E 2012). Table 2-1 includes a summary of the waste quantities managed during the 2011 removal action.

2.5.2.3 2012 Removal Action – FBC Repository Reconstruction

In early 2012, during an inspection of the wall by the FBC pastor, large gaps were discovered between the individual blocks that form the western curved portion of the retaining wall. It was determined that the gaps between the wall blocks were caused by settling in the soil behind the wall, which caused the blocks to shift backwards towards the soil. Because of this unanticipated settling, EPA returned to the site to repair the wall to prevent further settling and to prevent the risk of wall failure and/or the release of the asbestos from behind the wall.

Retaining wall repair activities in 2012 included temporarily removing some of the asbestos-contaminated soil, disassembling the retaining wall from the western third of the northern section around to the southwest end of the wall, reconstructing the wall, and replacing and compacting the asbestos-contaminated soil. The protective chain-linked fence on top of the wall was temporarily removed during the reconstruction. The asbestos-contaminated soil was excavated from behind the wall, stockpiled, and managed on-site.

During the reconstruction of the wall, a drywell was installed in the middle of the dry retention basin to facilitate surface water drainage from the asphalt parking area. Upon the completion of the wall, the protective chain-link was rebuilt at the top of the wall.

EPA also repaired two areas of the asphalt parking lot that had settled since the 2011 removal action. The areas were excavated and re-compacted, and then new asphalt layers were installed to match the existing asphalt parking lot. The asphalt work was completed in November 2012.

The wastes generated from the 2012 Orofino Asbestos Site removal action included 378 yd^3 of asbestos-contaminated soil that was transported off site to a landfill licensed for asbestos waste. This waste was generated by the excavation for and placement of the drywell concrete structure and the associated drain rock around the drywell in the middle of the repository.

2.5.3 EPA-Led Removal Action at Riverview Construction Asbestos Unit, 2016

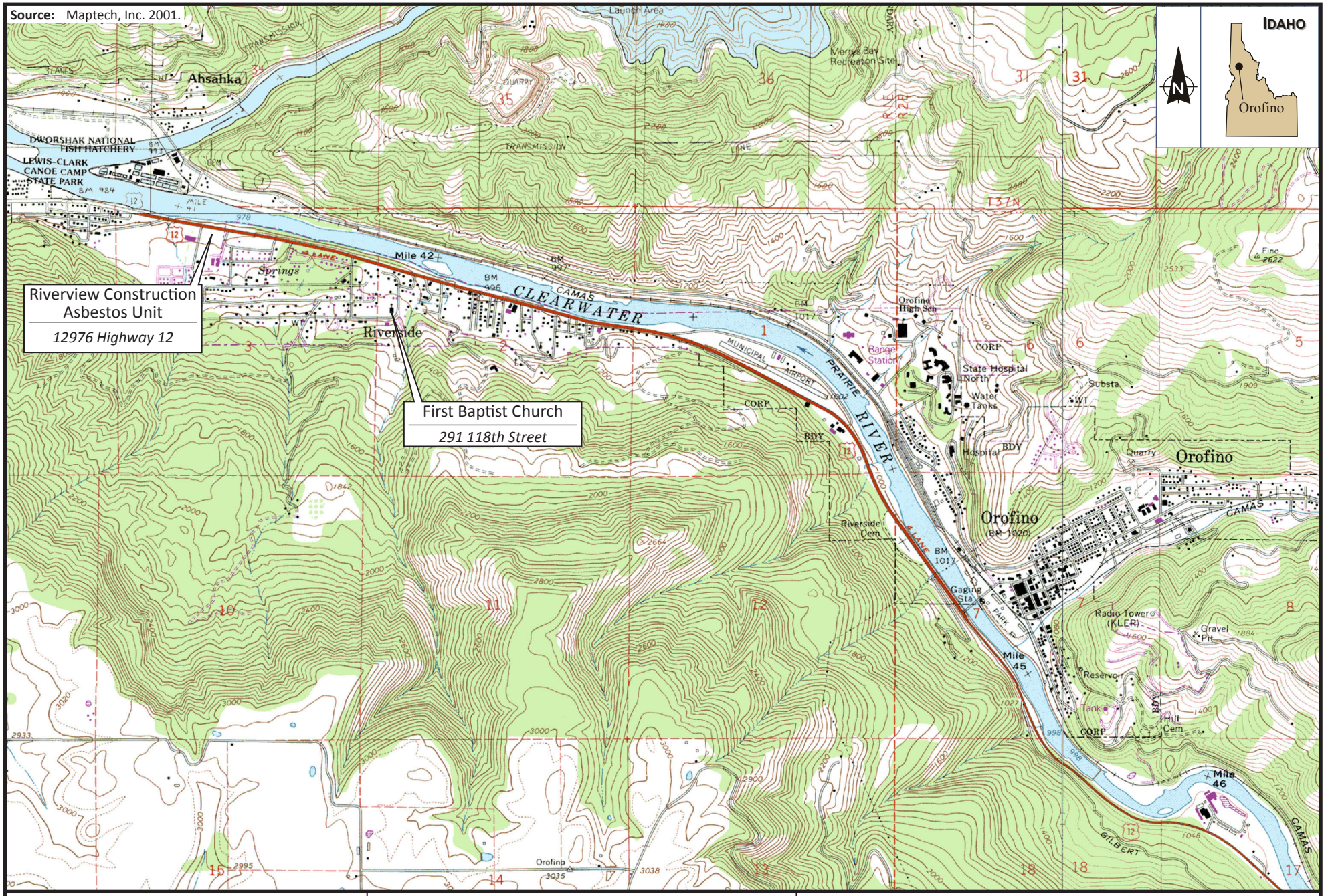
In 2016, EPA decided that the original gravel barrier installed by the responsible party in 2010 at the Riverview Construction Asbestos Unit was insufficient and should be replaced with an augmented gravel cover. EPA returned to this site in October 2016 to construct a permanent gravel cover over the contaminated fill. This removal action is described in a separate report (E & E 2017b).

Table 2-1 Asbestos Waste Managed During 2010-2012 Removal Actions

Asbestos Waste Stream	Quantity	Total Cumulative Quantity Placed at FBC	Units	Final Waste Location
2010 Removal Action				
ACM (ACP) sent off site for disposal	11.5	--	yd^3	Waste Management Graham Road Landfill, Medical Lake, Washington
Asbestos-contaminated soil sent off site for disposal	2,494	--	tons	Waste Management Graham Road Landfill, Medical Lake, Washington
Asbestos-contaminated soil placed at the FBC by Owyhee	10,420	10,420	yd^3	Contained under protective barrier at FBC, 291 118th Street, Orofino, Idaho
Asbestos-contaminated soil placed at Riverview site by Owyhee	16,860	--	yd^3	Contained under gravel cover barrier at the Riverview Construction Asbestos Unit, 12976 Highway 12, Orofino, Idaho
2011 Removal Action				
ACM (ACP and Transite™) sent off site for disposal	1,190	--	pounds	Waste Management Graham Road Landfill, Medical Lake, Washington
Asbestos-contaminated soil added to the FBC from remaining properties by EPA	1,660	~12,100	yd^3	Contained under protective barrier at FBC, 291 118th Street, Orofino, Idaho
2012 Removal Action				
Asbestos-contaminated soil removed for the installation of the dry well	378	--	yd^3	Waste Management Graham Road Landfill, Medical Lake, Washington
Remaining asbestos-contaminated soil	(-378)	~11,700	yd^3	Contained under protective barrier at FBC, 291 118th Street, Orofino, Idaho

Key:
~ = approximately
ACM = asbestos-containing material
ACP = asbestos-cement pipe
FBC = First Baptist Church
yd^3 = cubic yards

This page intentionally left blank.



ecology and environment, inc.
Global Environmental Specialists
Seattle, Washington

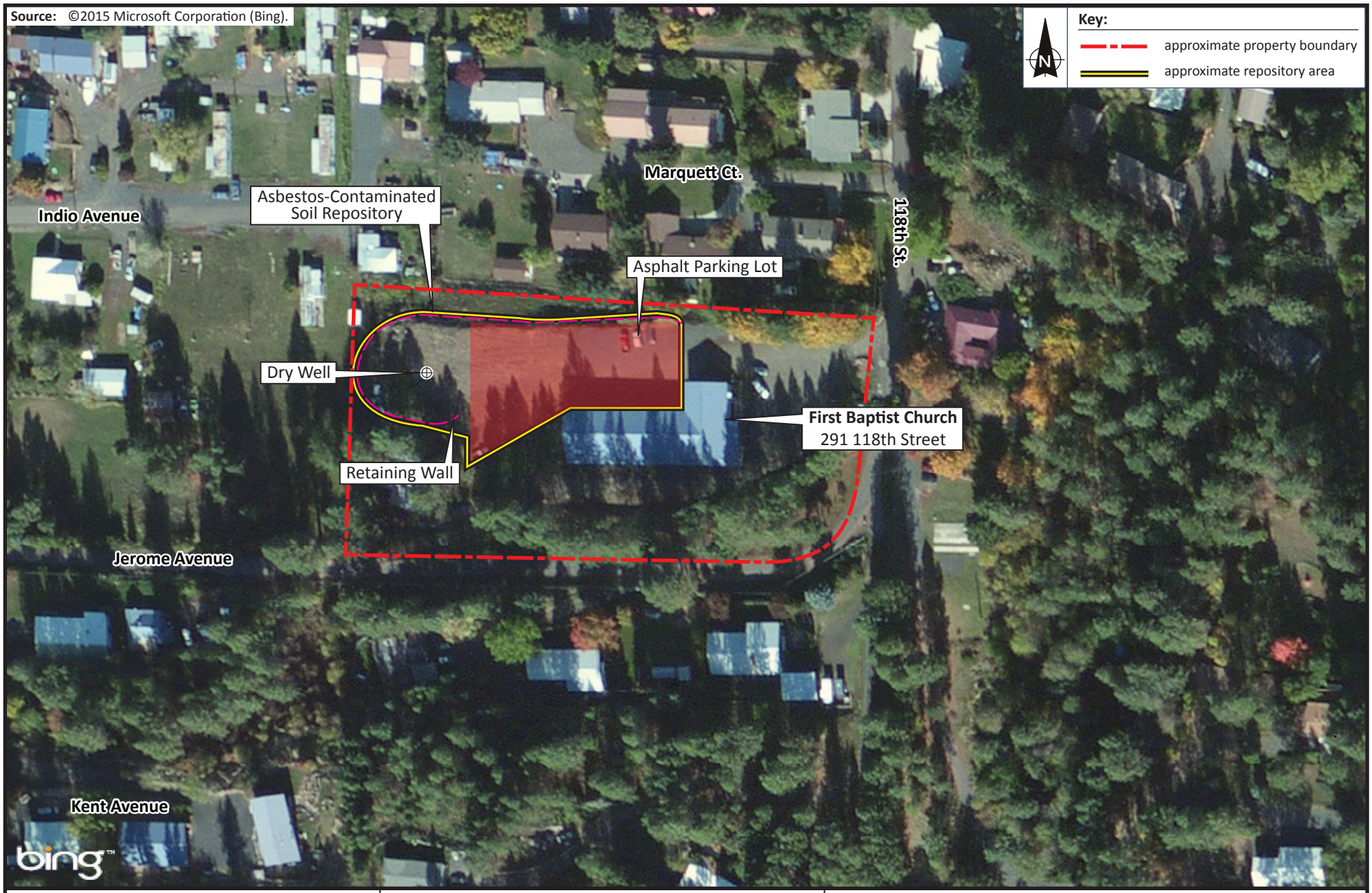
OROFINO ASBESTOS SITE
Orofino, Idaho

0 1,282 2,564
Approximate Scale in Feet

Figure 2-1
SITE LOCATION MAP

Date:	Drawn by:	
3/27/17	AES	10:START IV\16120002\fig 2-1

This page intentionally left blank.



ecology and environment, inc.
Global Environmental Specialists
Seattle, Washington

OROFINO ASBESTOS SITE
Orofino, Idaho

0 75 150
Approximate Scale in Feet

Figure 2-2
SITE LAYOUT MAP

Date:	Drawn by:	
3/27/17	AES	10:START IV\14070012\fig 2-2

This page intentionally left blank.

3 Removal Action Description

EPA performed the 2015–2016 removal activities to conduct minor upgrades, improve surface water drainage from the asphalt cap, repair settled areas of the asphalt cap, and improve the dry retention basin drainage and vegetation.

3.1 Removal Action Objectives

The 2015–2016 removal activities were performed in accordance with plans designed by START. The construction plans and drawings for the repository repairs and improvements are included in Appendix B.

The objectives of the 2015-2016 removal activities were to:

- Repair settled areas of the parking lot (i.e., the asphalt portion of the cap) by excavating the asbestos-contaminated soil from the damaged areas and transporting it off-site to an appropriate landfill for asbestos waste; backfill and compact excavated areas with imported clean backfill appropriate for an asphalt sub-base; and replace asphalt cover over excavated and backfilled area.
- Improve surface water drainage in the dry retention basin (i.e., the soil portion of the cap) by improving the dry well drainage design, and install a gravel apron along the soil cap/asphalt cap interface.
- Establish vegetation over the dry retention basin.
- Improve access to the lower portion of the retaining wall to allow access by FBC personnel to perform maintenance and monitoring.

In addition to addressing these conditions, several other minor upgrades and repairs were performed as a part of the 2015 removal action. Additional details regarding these repairs are provided in Section 5.

This page intentionally left blank.

4 Project Organization and Schedule

EPA performed the 2015 removal action from April 20, 2015, through May 4, 2015, with additional site work on March 2–3, 2016. This section describes the participating organizations, project costs, and schedule.

4.1 Key Organizations and Roles

The 2015–2016 removal activities were performed by EPA and its contractors:

On-Scene Coordinator (OSC): The removal activities were performed under the supervision of an EPA OSC.

START: E & E, under an EPA Region 10 START contract, provided on-site technical assistance, collected and submitted environmental samples, and documented site activities.

Emergency and Rapid Response Services: Removal activities construction tasks were performed under the EPA Region 10 ERRS contract by EQM and its subcontractor McGillivray Environmental (McGillivray).

4.2 Project Costs

EPA costs for the 2015-2016 removal activities included ERRS and START. Estimated costs for the removal activities are summarized below in Table 4-1.

Table 4-1 Project Costs

	Cost to Date ($)	Ceiling Costs ($)
Extramural Costs		
ERRS	155,100	220,900
START-IV	121,500	121,715
Total	**276,600**	**342,615**

4.3 Final Project Schedule

Table 4-2 summarizes the project schedule during the 2015-2016 removal activities.

Table 4-2 Project Schedule

Activity	Date
EPA, ERRS, and START mobilized to the site to begin the removal action.	April 20, 2015
ERRS completed asphalt repairs, completed dry retention basin drainage repairs and revegetation, completed construction of access ramps, and completed paving. START demobilized from the site.	May 1, 2015
ERRS installed parking space stoppers. ERRS subcontractor installed sealant on asphalt joints and cracks. ERRS demobilized from the site.	May 4, 2015
ERRS returned to the site to apply hydroseed to the dry retention basin area.	March 2, 2016
EPA and START conducted an inspection of the site and trained an FBC representative in inspection protocols.	March 3, 2016
EPA and START conducted another inspection and training session at the FBC repository	October 6, 2016

5 2015–2016 Removal Activities

The following sections describe the activities that EPA and its contractors performed during the Spring 2015 removal action to obtain the objectives described in Section 3. An additional maintenance action occurred in Spring 2016, and is described in Section 5.6.

5.1 Mobilization and Site Layout

EPA, ERRS, and START personnel arrived at the site on April 20, 2015. EPA met with Pastor Hale Anderson of the FBC to coordinate the site activities. ERRS equipment initially included one medium size excavator, two front end loaders, one compaction roller, one asphalt cutter, one remote-controlled mini-compactor, and one small trench compactor. Additional equipment mobilized to the site later during the 2015 removal action included a small excavator and an asphalt sweeper. START brought air sampling equipment, dust monitors, sampling supplies, and EPA Region 10's communications rig for use as the site's mobile command post and sampling equipment storage.

The mobile command post and other equipment were staged at the FBC property. The section of asphalt parking lot under repair was cordoned off to limit public access to the construction zone, but the majority of the parking lot access was maintained so that churchgoers could access the FBC church building as needed.

5.2 Asphalt Repair

A section of the parking lot near the north wall was damaged due to settling in the underlying soil, causing water to pool instead of drain towards the dry retention basin (see photos 5 and 6 of Appendix A). Additionally, minor gouging of the asphalt in the parking lot area was noted by the FBC, as well as evidence of cars hitting the top of the retaining wall. EPA decided to install parking space stoppers to prevent vehicles from striking the retaining wall, and ERRS proceeded with acquisition of materials for parking space stoppers.

The asphalt in the damaged area was cut out, and the asbestos-contaminated soil below the subbase material was excavated to a depth of approximately three feet below the asphalt grade (see photos 27 and 29 of Appendix A). The excavated asphalt, subbase material, and contaminated repository material was loaded directly into off-site haul trucks, each consisting of a truck and a trailer, and hauled to the Finley Buttes Landfill in Boardman, Oregon for disposal. Prior to loading the waste, ERRS lined the beds of the trucks and trailers with an outer woven geotextile exterior liner material, followed by a 6-mil polyethylene inner liner between the soil and the woven geotextile, so that the load could be completely wrapped for transportation and disposal (i.e., a "burrito wrap") (see photos 19 and 24 of Appendix A). Additional disposal details are provided in Section 7.

When excavation was completed, a nonwoven geotextile liner was placed in the bottom of the excavation prior to placement of backfill material. The geotextile was placed to allow compaction of the subbase by preventing migration of subbase material into the subsurface

repository material (see photos 37 and 51 of Appendix A). Excavation backfill material and asphalt subbase (¾-inch-minus gravel) was delivered to the site. ERRS blended the subbase material stockpiles to evenly distribute fines and gravel particles throughout the stockpile. A composite sample of the ¾-inch-minus material was collected by START and sent for analysis to confirm the absence of asbestos in the imported backfill material (see Section 8). The excavation area was then backfilled with the ¾-inch-minus gravel and compacted in six-inch lifts as a sub-base for the new asphalt cover. AllWest Testing & Engineering, the ERRS subcontractor, arrived on site to perform in-situ compaction testing of the first lift in the western half of the asphalt repair area. Initial tests indicated low compaction and ideal moisture content. ERRS re-compacted the first lift to maximum achievable compaction (95 percent [%] to 98%), prior to placement of the second lift. ERRS continued to place six lifts, with compaction and in-situ compaction testing.

ERRS used the sweeper equipment to clean the parking lot of rock and tracked soil, and wash the parking lot at the end of site activities. On May 1, 2015, an ERRS subcontractor replaced the asphalt over the area of the FBC parking lot that had been excavated, backfilled, and compacted. Construction of the asphalt grade was completed according to Idaho Transportation Department specifications, as called out in the design plans (see Sheet C6 of design plans in Appendix B). Additionally, ERRS installed parking space stoppers using 12-inch rebar driven through the asphalt. The rebar was sealed in place using heavy-duty construction adhesive, to prevent water infiltration into the contaminated soil contained in the repository.

Cuddy & Associates, the START survey subcontractor, arrived on site to record site features and to place and record permanent monitoring benchmarks along the retaining wall blocks.

5.3 Dry Retention Basin and Drainage Repairs

Before the 2015 repository upgrades, the drywell and associated 6-foot diameter corrugated metal pipe (CMP) was initially installed flush with the surface of the nine-inch topsoil cap (see photo 30 of Appendix A). The topsoil cap was designed to provide for minor moisture evaporation and drainage into the drywell during extreme precipitation events, with the CMP extending nine inches above the PVC impermeable liner (see photo 31 of Appendix A). The PVC impermeable liner was placed as a barrier between the contaminated soil and the topsoil. This orientation of the CMP and drywell prevented water from reaching the drywell and drain rock inlet, and caused standing water to back up onto the parking lot area, and also causing over-saturation of the soil cap and impeding vegetation growth within the basin. To repair this issue, ERRS used shovels to remove the topsoil around the CMP down to the PVC liner. The CMP was cut so it was flush with the elevation of the PVC liner, and rubber hose was installed around the edge of the CMP to prevent damage to the PVC liner from the sharp edges (see photos 33 and 36 of Appendix A). The PVC liner was folded down the inside of the CMP and the gravel replaced inside the CMP.

Top soil composed of a 50%/50% blend of soil and EKO brand compost from Lewiston, Idaho was delivered to the site. Topsoil composition requirements were called out in the design specifications, including topsoil gradation and chemistry (see Sheet C3 of design plans in Appendix B). A composite sample of the topsoil material was collected by START and sent for

analysis to confirm the absence of asbestos in the imported soil media (see Section 8). ERRS placed the topsoil around the dry retention basin with the wheeled mini-loader. Approximately 200 tons of topsoil was added to the dry retention pond, adding six inches to the topsoil cap, increasing the total topsoil cap to approximately 15 inches. The topsoil cap was then graded to slope down from the wall towards the drywell to allow for drainage.

A drainage swale was also constructed to facilitate drainage of the parking lot surface runoff to the drywell (see photo 115 of Appendix A). The swale was oriented east-west, and placed to drain from the midpoint of the parking lot boundary directly to the drywell (see Sheet C4 of design plans in Appendix B). Representatives from the United States Department of Agriculture Natural Resources Conservation Services (NRCS) office in Orofino visited the site April 21, 2015, to consult with EPA. NRCS observed the dry retention basin and made recommendations on a local seed mix to re-vegetate the dry retention basin. ERRS obtained the recommended seed mix, which consisted of approximately 50% chariot hard fescue and 50% nakiska sheep fescue (see photo 82 of Appendix A). ERRS applied the seed to the dry retention basin using a hand broadcast seeder, rolled and compacted the seed into the topsoil using a water barrel, and applied mulch.

To further facilitate surface water drainage from the parking lot, ERRS also installed a washed rock apron at the eastern edge of the dry retention basin (see photos 54, 56, and 67 of Appendix A). A woven geotextile was placed along the base of the trench to prevent topsoil in the drainage basin from migrating into the drainage rock and keep the drainage rock in place. Washed drain rock was placed in the trench and along the length of the interface of the asphalt and dry retention basin. The washed rock apron design consisted of 1.5-inch washed drain rock placed in the trench, with a transition of 2-to-4-inch washed drain rock placed at the topsoil interface (see Sheet C3 of design plans in Appendix B).

5.4 Access Ramp Construction

On April 27, 2015, ERRS began construction of a soil ramp at the northeast corner of the retaining wall to provide improved access to the lower property area located north of the retaining wall (see photos 60 and 61 of Appendix A). The ramp was routed to avoid disturbing the minimum number of trees, while maintaining a maximum slope of 13%, as well as to avoid destabilizing the wall structure. Material was only added along the base of the retaining wall to form the ramp, and no soil was disturbed or moved along the base of the wall. ERRS removed a single, 15-foot tall pine tree, and trimmed the lower branches of two additional trees located along the ramp pathway. The soil ramp was graded and compacted using the mini-tracked excavator. After compaction, ERRS placed a layer of ¾-inch-minus aggregate, which was compacted and tracked in with the mini-excavator (see photos 75, and 86 through 88, of Appendix A). The soil sides and bank of the ramp were seeded with the same upland seed mix used in the dry retention basin.

ERRS also placed soil backfill between the southwest corner of the retaining wall to improve access to the western yard near the parsonage. The soil was placed to fill in the drop-off from the southwest section of the parking lot area, and it was graded to create a ramp down from the parking lot to allow access to the property located north of the parsonage.

5.5 Best Management Practices and Air Monitoring

Throughout the 2015 removal action, EPA used similar best management practices (BMPs) and air monitoring as during the 2011 (E & E 2012b) and 2012 (E & E 2013) removal actions. START performed air monitoring and sampling. Three DataRAM particulate monitors with data loggers were placed around the perimeter of the site to monitor for airborne dust, and the results were well below the site action level for dust of 1 milligram per cubic meter (mg/m^3). START also collected three air samples, including two perimeter air samples around the excavation area and one personal sample from the cab of the mini-excavator. The results of the air monitoring and sampling are discussed in Section 8.

5.6 2016 Activities

EPA and ERRS mobilized to the site on the morning of March 2, 2016. ERRS equipment included a towable 1,000-gallon hydroseeder and the hydroseeding materials. ERRS and EPA inspected the retention wall. No issues were noted. ERRS applied two batches of hydroseed mix to the dry retention basin area, as well as the remainder of the second batch to the slope above the northeast access ramp constructed during the 2015 removal action. Each hydroseed batch consisted of 6 bags of mulch, 1/2 bag of fertilizer, seed, and 1,000 gallons of water. After completing the hydroseeding activities, ERRS cleaned the equipment (hydroseeder) and demobilized from the site.

EPA and START conducted an inspection of the site with the FBC pastor on March 3, 2016. EPA and START provided training on the inspection procedures for the FBC representative, as part of the O&M plan.

On October 6, 2016, EPA and START returned to the site to perform another inspection of the repository and its features with the representative of the FBC. During this site visit, EPA and START also inspected the status of the dry retention basin, which had been reseeded earlier in the year. Grass and other vegetation was observed to be growing in the dry retention basin.

6 Post-Removal Site Controls

Because asbestos-contaminated soil was left at the site, EPA has been developing a restrictive covenant and an O&M plan for the FBC property. Throughout 2015 and 2016, EPA continued to work with representatives of IDEQ to establish PRSC and a long-term O&M program. At the beginning of these negotiations, EPA asked IDEQ to oversee the O&M to be conducted by FBC. However, IDEQ questioned whether the Church had the financial means to conduct some of the O&M tasks. After a meeting with the pastor of the FBC and IDEQ, EPA learned that indeed the FBC lost several members and could not afford to conduct all the tasks required as part of the O&M. EPA offered to provide IDEQ with funds from this special account via a cooperative agreement so that IDEQ could conduct the O&M but IDEQ declined the offer, saying that they did not have a conduit to hire a contractor to conduct the work of the O&M. However, IDEQ agreed to conduct oversight of the few tasks the Church was able to perform if funded by EPA.

During continued negotiations between the manager of EPA's Emergency Management Program and IDEQ at the end of fall 2016, IDEQ indicated that they would like to see the repository removed, and that they had not been consulted in the decision to build it. IDEQ raised concerns about the long term stability of the repository and retaining wall, based on the settling issues after it was first built in 2011, a small gap between wall sections observed in 2015, and reports that the repository was built on a landslide deposit.

In response to IDEQ's concerns, EPA evaluated the stability of the repository and retaining wall and researched the underlying geologic formation. EPA intended to use the findings of this evaluation to assess the need to perform a removal action to remove the repository. The evaluation results showed that, while the repository was built in a landslide deposit area, the small gap in the wall was caused by normal settling and was not an indication of failure, and the repository was designed, constructed, and functioning in accordance with its intended use (E & E 2017a). Ultimately, since the repository is stable and the Region does not have adequate funds in its removal budget, the decision was made to leave the repository in place.

The EPA's Emergency Management Program manager will convey the assessment results to IDEQ and will try one more time to negotiate to fund them so they can perform the O&M. If IDEQ still does not agree to do it, EPA will explore other options such as providing funds to local agencies (City, County, State, Tribe, etc.) via cooperative agreement. Once EPA finalizes the O&M document, the FBC will file the Environmental Covenant.

This page intentionally left blank.

7 Waste Management, Transportation, and Disposal Activities

The wastes generated from the 2015 Orofino Asbestos Site removal action included approximately 145 yd^3 of asbestos-contaminated waste that was transported off site to a landfill that was licensed for asbestos waste and that was also approved to accept waste under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) off-site disposal rule. This waste was generated by the excavation and repair of the settled area of the parking lot. The excavated asphalt, subbase material, and contaminated repository soil was loaded directly into off-site haul trucks, each consisting of a truck and a trailer, and hauled to the Finley Buttes Landfill in Boardman, Oregon for disposal. Prior to loading the waste, ERRS lined the beds of the trucks and trailers with an outer woven geotextile exterior liner material, followed by a 6-mil polyethylene inner liner between the soil and the woven geotextile, so that the load could be completely wrapped for transportation and disposal (i.e., a "burrito wrap").

Asbestos-contaminated soil remains on site under protective barriers at the FBC property. Additionally, asbestos-contaminated soil remains under a protective gravel barrier at the Riverview Construction Asbestos Unit at 12976 Highway 12. A summary of these waste streams and final disposition locations is provided below. Copies of applicable waste disposal records are provided in Appendix C.

Table 7-1 Asbestos Waste Managed During 2010-2015 Removal Actions

Asbestos Waste Stream	Quantity	Total Cumulative Quantity Placed at FBC	Units	Final Waste Location
2010 Removal Action				
ACM (ACP)	11.5	--	yd^3	Waste Management Graham Road Landfill, Medical Lake, Washington
Asbestos-contaminated soil sent off site for disposal	2,494	--	tons	Waste Management Graham Road Landfill, Medical Lake, Washington
Asbestos-contaminated soil placed at the FBC by Owyhee	10,420	10,420	yd^3	Contained under protective barrier at FBC, 291 118th Street, Orofino, Idaho
Asbestos-contaminated soil placed at Riverview site by Owyhee	16,860	--	yd^3	Contained under gravel cover barrier at the Riverview Construction Asbestos Unit, 12976 Highway 12, Orofino, Idaho
2011 Removal Action				
ACM (ACP and Transite™)	1,190	--	pounds	Waste Management Graham Road Landfill, Medical Lake, Washington
Asbestos-contaminated soil added to the FBC from remaining properties by EPA	1,660	~12,100	yd^3	Contained under protective barrier at FBC, 291 118th Street, Orofino, Idaho
2012 Removal Action				
Asbestos-contaminated soil removed for the installation of the dry well	378	--	yd^3	Waste Management Graham Road Landfill, Medical Lake, Washington
Remaining asbestos-contaminated soil	(-378)	~11,700	yd^3	Contained under protective barrier at FBC, 291 118th Street, Orofino, Idaho
2015 Removal Action				
Asbestos-contaminated soil removed for asphalt repair	145	--	yd^3	Finley Buttes Landfill, Boardman, Oregon
Remaining asbestos-contaminated soil	(-145)	~11,555	yd^3	Contained under protective barrier at FBC, 291 118th Street, Orofino, Idaho

Key:
~ = approximately
ACM = asbestos-containing material
ACP = asbestos-cement pipe
FBC = First Baptist Church
yd3 = cubic yards

8 Sampling and Monitoring Activities

START collected air and soil samples during the 2015 removal action to support health and safety monitoring activities. Summaries of the samples and analyses are provided below:

- Air samples (perimeter and personal monitoring) were analyzed for asbestos and other fibers by phase contrast microscopy (PCM) in accordance with National Institute of Occupational Safety and Health (NIOSH) Method 7400;
- Soil samples were analyzed for asbestos by polarized light microscopy (PLM) in accordance with California Air Resources Board (CARB) Method 435 / EPA 600/R-93/116 and grain size analysis in accordance with American Society for Testing and Materials Methods D421/D422; and
- Geotechnical testing for compaction and moisture content of the ¾-inch-minus backfill was performed by AllWest Testing & Engineering, a subcontractor to ERRS.

Table 8-1 describes the samples collected during the 2015 removal activities and includes the date collected, sample matrix, and analytical parameter for each. Samples were collected and analyzed in accordance with the START Site-Specific Sampling Plan (SSSP), and data was managed in accordance with the Site-Specific Data Management Plan (E & E 2015). Off-site asbestos analyses, including PLM and PCM, were performed by EMSL Analytical, Inc. (EMSL) of Cinnaminson, New Jersey, as a subcontractor to E & E. The analytical data reports and validation memoranda are included in Tables 8-2 through 8-4 and Appendix D.

8.1 Air Samples

Air samples were collected during the removal activities involving potential exposure to the contaminated material under the asphalt cap repair work. START monitored worker exposure by collecting personal samples and monitored dust control efforts by collecting perimeter samples.

8.1.1 Personal Samples by PCM

A total of three personal samples (not including blanks) were collected and analyzed using PCM to measure potential asbestos exposures to site workers (i.e., heavy equipment operators) in the work zones. The data are presented in Table 8-2. Based on the 2012 removal action analytical results from the air samples documenting that the potential exposures to fibers was below acceptable levels, site workers donned Level D personal protective equipment (PPE) (hard hats, safety glasses, and steel-toed safety shoes with no respiratory protection).

Personal samples were collected in accordance with NIOSH method 7400. A mixed cellulose ester (MCE) filter cassette was placed in the worker's breathing zone and attached to the pump with polyethylene tubing. Personal samples were collected with 25-millimeter diameter filter cassettes with a pore size of 0.8 micrometer (µm) filter. The pumps were set at flow rates of approximately 3 liters per minute (L/min) and allowed to run for a minimum of 2 hours for permissible exposure limit (PEL) samples, although most ran for the duration of the work day. The flow rates of each pump were recorded before and after sampling with a flow meter, and the

average flow rate for the entire sampling time was calculated. The sample volume was then calculated using the average flow rate and the sample duration.

Table 8-2 summarizes the sample information and PCM results for the personal air samples. PCM results were all reported as non-detect (less than 0.001 fibers per cubic centimeter of air (f/cc)). All of the PCM results were below the Occupational Safety and Health Administration (OSHA) PEL of 0.1 f/cc.

8.1.2 Perimeter Samples by PCM

A total of six perimeter samples were collected for PCM analyses. Perimeter air samples were collected from stationary sources triangulated around the work area to determine the airborne concentration of asbestos and other fibers. The samples were collected with 25-millimeter diameter filter cassettes with a pore size of 0.8 µm, hung at approximately 4 to 6 feet above the ground to represent a person's breathing zone. The pumps were set at flow rates of approximately 3 L/min and allowed to run for a minimum of 2 hours, although most ran for the duration of the work day. Additionally, daily blank filter cassettes were collected and analyzed. The data are presented in Table 8-3.

The results of the PCM analyses performed on the perimeter samples are summarized in Table 8-3. The PCM results ranged from non-detect to 0.002 f/cc. The perimeter monitoring action limit for the removal action was a risk-based level of 0.01 f/cc. None of the PCM field samples exceeded this action level or the OSHA PEL of 0.1 f/cc. This data also supported the use of level D PPE for site workers.

8.2 Soil Samples for PLM and Grain Size

START collected two composite soil samples for asbestos and grain size analyses during the 2015 removal activities. The first soil sample (15040009) was collected as a composite sample from the ¾-inch-minus gravel stockpile material, and the second composite sample (15040010) was collected from the imported topsoil stockpile. Both soil samples were analyzed for asbestos using PLM following the California Air Resource Board (CARB) Method 435 sample preparation technique. The PLM results are summarized in Table 8-4 and indicate that each sample was non-detect for asbestos (less than 0.1%). The results of the grain size analysis are included in Appendix D.

8.3 Geotechnical Testing

During the reconstruction of the wall, real-time compaction testing was completed by a subcontractor to ERRS. The results were used to confirm that soil compaction was sufficient and are included in Appendix E.

Table 8-1 Summary of Samples

Sample #	ID	Matrix	Date Collected	Sample Location	Sample Sub-Location	Analysis
15040001	PL01PM	Air	4/21/2015	Perimeter	Perimeter East	Asbestos and Other Fibers by PCM
15040002	PL02PM	Air	4/21/2015	Perimeter	Perimeter West	Asbestos and Other Fibers by PCM
15040003	PL03PM	Air	4/21/2015	Personal	Equipment Operator	Asbestos and Other Fibers by PCM
15040004	FB01	Air	4/21/2015	Field Blank	--	Asbestos and Other Fibers by PCM
15040005	PL04PM	Air	4/23/2015	Perimeter	Perimeter East	Asbestos and Other Fibers by PCM
15040006	PL05PM	Air	4/23/2015	Perimeter	Perimeter West	Asbestos and Other Fibers by PCM
15040007	PL06PM	Air	4/23/2015	Personal	Equipment Operator	Asbestos and Other Fibers by PCM
15040008	FB02	Air	4/23/2015	Field Blank	Field Blank	Asbestos and Other Fibers by PCM
15040011	PL07PM	Air	4/24/2015	Perimeter	Perimeter East	Asbestos and Other Fibers by PCM
15040012	PL08PM	Air	4/24/2015	Perimeter	Perimeter West	Asbestos and Other Fibers by PCM
15040013	PL09PM	Air	4/24/2015	Personal	Equipment Operator	Asbestos and Other Fibers by PCM
15040014	FB03	Air	4/24/2015	Field Blank	Field Blank	Asbestos and Other Fibers by PCM
15040009	PL01SO	Soil	4/23/2015	Soil	3/4-inch-minus Stockpile	Asbestos by CARB/PLM and Grain Size
15040010	PL02SO	Soil	4/23/2015	Soil	Topsoil Stockpile	Asbestos by CARB/PLM and Grain Size

Key:
CARB – California Air Resource Board Method 435
PCM – phase contrast microscopy
PLM – polarized light microscopy

Table 8-2 Personal Air Sample Results – Phase Contrast Microscopy

Sample #	ID	Date Collected	Sample Location	Method	Result (fibers/cc)
15040003	PL03PM	4/21/2015	Equipment Operator	PCM	<0.011
15040007	PL06PM	4/23/2015	Equipment Operator	PCM	<0.002
15040013	PL09PM	4/24/2015	Equipment Operator	PCM	<0.002

Key:

PCM – phase contrast microscopy
fibers/cc – fibers per cubic centimeter

Table 8-3 Perimeter Air Sample Results – Phase Contrast Microscopy

Sample #	ID	Date Collected	Sample Location	Method	Result (fibers/cc)
15040001	PL01PM	4/21/2015	Perimeter East	PCM	<0.009
15040002	PL02PM	4/21/2015	Perimeter West	PCM	<0.010
15040004	FB01	4/21/2015	Field Blank	PCM	no asbestos detected
15040005	PL04PM	4/23/2015	Perimeter East	PCM	0.002
15040006	PL05PM	4/23/2015	Perimeter West	PCM	<0.002
15040008	FB02	4/23/2015	Field Blank	PCM	no asbestos detected
15040011	PL07PM	4/24/2015	Perimeter East	PCM	<0.002
15040012	PL08PM	4/24/2015	Perimeter West	PCM	<0.002
15040014	FB03	4/24/2015	Field Blank	PCM	no asbestos detected

Key:

PCM – phase contrast microscopy
fibers/cc – fibers per cubic centimeter

Table 8-4 Soil Sample Asbestos Results

Sample #	ID	Date Collected	Sample Location	Method	Result (%)
15040009	PL01SO	4/23/2015	3/4-inch-minus Stockpile	CARB/PLM	no asbestos detected (<0.1%)
15040010	PL02SO	4/23/2015	Topsoil Stockpile	CARB/PLM	no asbestos detected (<0.1%)

Key:

% – percent
CARB – California Air Resource Board Method 435
PLM - polarized light microscopy

9 Quality Assurance/Quality Control

Quality Assurance (QA)/Quality Control (QC) data are necessary to determine precision and accuracy and to demonstrate the absence of interferences and/or contamination of sampling equipment, glassware and reagents. Specific QC requirements for laboratory analyses are incorporated in the analytical methods (ASTM D-421/-422, NIOSH 7400, and EPA 600/R-93/116 with CARB 435 preparation) were followed for analytical work on the project. This section describes the QA/QC measures taken for the project and provides an evaluation of the usability of data presented in this report.

Data from the START–subcontracted laboratories were reviewed by a START chemist. Data qualifiers and labels were applied as necessary according to the following guidance:

- EPA (2009) *Guidance for Labeling Externally Validated Laboratory Data for Superfund Use.*

In the absence of other QC guidance, method- and/or SOP-specific QC limits were also utilized to apply qualifiers to the data.

9.1 Satisfaction of Data Quality Objectives

The following EPA (EPA 2006) guidance document was used to establish data quality objectives (DQOs) for this project:

- *Guidance on Systematic Planning Using the Data Quality Objectives Process* (EPA QA/G-4).

EPA determined that definitive data without error and bias determination would be used for the sampling and analyses conducted during the field activities. The data quality achieved during the field work produced sufficient data that met the DQOs stated in the SSSP (E & E 2015). A detailed discussion of accomplished project objectives is presented in the following sections.

9.2 QA/QC Samples

Trip blank QA samples are not required for grain size and asbestos analyses. Rinsate blank QA samples were not collected as they are not required for samples collected using dedicated sampling equipment. Spike QC samples are not applicable for grain size and asbestos analyses.

9.3 Project-Specific Data Quality Objectives

The laboratory data were reviewed to ensure that DQOs for the project were met. The following describes the laboratories' and/or field team's abilities to meet project DQOs for precision, accuracy and completeness and the field team's ability to meet project DQOs for representativeness and comparability. The laboratories and the field team were able to meet applicable DQOs for the project.

9.3.1 Precision

Precision measures the reproducibility of the sampling and analytical methodology. Laboratory and field precision is defined as the relative percent difference (RPD) between triplicate sample analyses. The laboratory triplicate samples measure the precision of the analytical method. The RPD values were reviewed for all grain size analyses (no duplicates were analyzed for the asbestos analyses). No sample results were qualified based on precision outliers; therefore the project DQO for precision was met.

9.3.2 Accuracy

Accuracy indicates the conformity of the measurements to fact. Laboratory accuracy is defined as the surrogate spike percent recovery (%R) or the matrix spike/matrix spike duplicate/blank spike %Rs for all laboratory analyses. Spike analyses are not required for grain size and asbestos analyses; therefore, accuracy DQOs were not applicable for this project.

9.3.3 Completeness

Data completeness is defined as the percentage of usable data (usable data divided by the total possible data). All laboratory data were reviewed for data validation and usability. No sample results were rejected (R); therefore the project DQO for completeness of 90% was met.

9.3.4 Representativeness

Data representativeness expresses the degree to which sample data accurately and precisely represent a characteristic of a population, parameter variations at a sampling point or environmental condition. The number and selection of samples were determined in the field to account accurately for site variations and sample matrices. The DQO for representativeness was met.

9.3.5 Comparability

Comparability is a qualitative parameter expressing the confidence with which one data set can be compared to another. Data produced for this site followed applicable field sampling techniques and specific analytical methodology. The DQO for comparability was met.

9.4 Laboratory QA/QC Parameters

The laboratory data also were reviewed for holding times/temperatures/sample containers and laboratory blank samples. These QA/QC parameters are summarized below.

9.4.1 Holding Times/Temperatures/Sample Containers

All holding times, sample temperatures, and containers were acceptable.

9.4.2 Laboratory Blanks

All laboratory blanks met the frequency criteria. No contaminants of concern were detected in the laboratory blanks.

This page intentionally left blank.

10 Community Relations

Throughout the removal activities, the OSC maintained communications with the pastor of the FBC and several members of their board of Elders. The OSC was also available to answer any questions about the ongoing removal activities from any party that was interested in the project. The OSC also visited nearby homes to inform immediately neighboring residents of the excavation activities and associated noise. EPA maintained a public website (https://response.epa.gov/Orofinoasbestossites) to document the progress of the removal activities, and published pollution reports at the completion of the 2015 and 2016 removal activities (Appendix F).

This page intentionally left blank.

11 Health and Safety

The OSC maintained ultimate authority and responsibility for site safety during the removal activities. ERRS and START each developed a site-specific health and safety plan. The OSC conducted a general site safety meeting at the beginning of the Spring 2015 removal activities to establish the health and safety procedures for the site. Daily safety meetings were conducted at the beginning of each day of site work and the meetings were attended by all personnel present, including the OSC, ERRS, and START. During the daily safety meetings, site personnel discussed the planned activities for that day and any task-specific health and safety issues. The daily safety meeting also included a review of any health and safety issue from the previous day and any relevant air monitoring data collected by START.

The physical hazards at the site included uneven terrain, heat stress, and heavy equipment. The chemical hazard associated with the site was asbestos. Based on data from air sampling conducted during the 2012 removal action which indicated no asbestos exposures above an acceptable level, the minimum level of PPE for the site was Level D, including safety glasses, hard hat, safety vest, and steel-toed safety shoes.

EPA established an exclusion work zone around the northwest portion of the FBC parking lot where asbestos-contaminated soil was handled or disturbed. The work zone was established and maintained with the installation of an orange safety fence around the site, and the site was secured to keep the public out at the end of each working day. Perimeter and personal monitoring confirmed that site personnel could wear Level D in the exclusion work zone; see Section 8. Excavated asbestos-contaminated soil was loaded directly to off-site haul trucks, thereby minimizing the handling of contaminated material. Prior to loading the waste, ERRS lined the beds of the trucks and trailers with an outer woven geotextile exterior liner material, followed by a 6-mil polyethylene inner liner between the soil and the woven geotextile, so that the load could be completely wrapped for transportation and disposal (i.e., a "burrito wrap"). Additionally, ERRS consistently used water from water trucks for dust and airborne asbestos fiber suppression.

The results of air sampling (personal and perimeter) and dust monitoring indicated that the site activities were performed in a manner that was safe for site personnel, nearby residents, and passers-by.

This page intentionally left blank.

12 Difficulties Encountered

There were no issues that adversely affected the conduct of the 2015–2016 removal activities. However, the cleanup work was challenging because of the close proximity of the retaining wall and repository to adjoining properties and the narrow community roadways. Close coordination with residents and the general public, along with well-designed and effectively implemented BMPs, ensured that difficulties were avoided or mitigated.

The design for the northeast access ramp layout was adjusted in the field. The original design layout placed the start of the ramp to begin near the entrance to the FBC driveway, approximately 70 east of the northeast extent of the retaining wall blocks. Once the layout was reviewed in the field, the projected path was determined to interfere with the established large trees lining the north boundary of the driveway entrance, and the location was moved approximately 30 feet to the west to minimize disturbance to the trees. This adjusted path route required a single small pine tree to be removed, and the lower limbs of an adjacent conifer to be trimmed.

This page intentionally left blank.

13 Summary and Conclusions

In the spring of 2015 EPA performed a removal action at the Orofino Asbestos Site in Orofino, Idaho, to complete repairs and minor upgrades at the FBC repository for asbestos-contaminated soil in response to certain conditions that had developed since the 2012 removal action. EPA returned to the site in March 2016 to re-apply hydroseed on the dry retention basin, and EPA conducted several additional visits periodically through the fall of 2016 to inspect the repository and meet with representatives of the FBC and/or IDEQ.

During these removal activities, settled areas of the asphalt cap were excavated, backfilled and re-compacted, and then the asphalt was replaced and minor seams and cracks were sealed. Approximately 145 yd^3 of asbestos-contaminated soil was disposed of off-site at the Finley Buttes Landfill, in Boardman, Oregon, which is CERCLA-approved and licensed to accept asbestos waste. A gravel apron was installed along the boundary of the dry retention basin and the asphalt parking lot to improve surface water drainage from the asphalt cap. Additional improvements to the dry retention basin drainage and vegetation included adjustments to the drywell feature, and the addition of extra topsoil. The topsoil cover was graded to direct the water away from the wall toward the drywell, and a swale was placed to direct the water from the gravel apron to the drywell. Access was improved to the lower north portion of the retaining wall to allow FBC members to conduct monitoring and maintenance, and the ramp at the southwest corner of the asphalt parking lot was also improved.

Asbestos-contaminated soil remains on-site under a protective barrier at the FBC property. EPA has been developing an O&M plan and attempting to establish PRSC in coordination with the FBC and IDEQ. Specifically, EPA has offered to provide funds from a special account to IDEQ so that IDEQ can perform the O&M. If IDEQ does not agree to perform the O&M, then EPA will explore the possibility of other local agencies conducting the O&M.

This page intentionally left blank.

14 References

Ecology and Environment, Inc. (E & E), May 12, 2017a, *Final Report, Orofino Asbestos Site, Repository Stability Assessment*, prepared for the United States Environmental Protection Agency, Seattle, Washington, under Contract No. EP-S7-13-07, TDD No. 16-12-0002.

_____, April 26, 2017b, *Removal Site Evaluation / Removal Action Trip Report, Orofino Asbestos Site – Riverview Construction Asbestos Unit,* prepared for the United States Environmental Protection Agency, Seattle, Washington, under Contract No. EP-S7-13-07, TDD No. 16-12-0006.

_____, 2015, *Site-Specific Sampling Plan for the Orofino Asbestos Site*, prepared for the United States Environmental Protection Agency, Seattle, Washington, under Contract No. EP-S7-13-07, TDD No. 14-07-0012. March 2015.

_____, March 2015, *Site-Specific Sampling Plan Alteration Form and Site-Specific Data Management Plan for the Orofino Asbestos Site*, prepared for the United States Environmental Protection Agency, Seattle, Washington, under Contract No. EP-S7-13-07, TDD No. 14-07-0012.

_____, May 2013, *2012 Removal Action Report, Orofino Asbestos Site*, prepared for the United States Environmental Protection Agency, Seattle, Washington, under Contract No. EP-S7-06-02, TDD No. 10-09-0008.

_____, March 8, 2012, *2011 Removal Action Report, Orofino Asbestos Site, Orofino, Clearwater County, Idaho*, prepared for the United States Environmental Protection Agency, Seattle, Washington, under Contract No. EP-S7-06-02, TDD No. 10-09-0008.

_____, June 22, 2011, *2010 Removal Action Report, Orofino Asbestos Site, Orofino, Clearwater County, Idaho*, prepared for the United States Environmental Protection Agency, Seattle, Washington, under Contract No. EP-S7-06-02, TDD No. 10-09-0008.

JM Engineering, August 2011, Structural Design Calculations of Segmental Block Retaining Wall, Contaminated Soil Containment Project, Orofino, Idaho, for Wilbert Precast, Inc., Spokane, Washington.

United States Environmental Protection Agency (EPA), January 2010, *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review*, OSWER 9240.1-51, EPA 540-R-10-011.

_____, January 2009, *Guidance for Labeling Externally Validated Laboratory Data for Superfund Use*, EPA-540-R-08-005.

_____, January 2007, *USEPA Contract Laboratory Program Statement of Work for Inorganic Analysis, Multi-Media, Multi-Concentration, ILM05.4.*

_____, 2006, *Guidance on Systematic Planning Using the Data Quality Objectives Process* (EPA QA/G-4), EPA/240/B-06/001. February 2006.

_____, August 2000, *Guidance for the Data Quality Objectives Process,* EPA QA/G-4, Office of Research and Development, Washington, D.C., EPA/600/R-96/055.

This page intentionally left blank.

A Photographs

This page intentionally left blank.

TDD Number: 16-12-0002
Photographed by: Steve Hall (SH), Maren Fulton (MF), ERRS

Photo 1 Placing top soil on dry retention basin.

Direction: *Northwest* *Date: 4/21/15* *Time: 07:40* *Taken by: SH*

Photo 2 Dry retention basin.

Direction: *Northwest* *Date: 4/21/15* *Time: 07:40* *Taken by: SH*

Photo 3 Cutting asphalt.

Direction: *Northeast* *Date: 4/21/15* *Time: 09:10* *Taken by: SH*

Photo 4 DataRAM (#1) dust monitor; materials being delivered in background.

Direction: *Northwest* *Date: 4/21/15* *Time: 09:31* *Taken by: SH*

Photo 5 Cutting asphalt.

Direction: *East* *Date: 4/21/15* *Time: 09:19* *Taken by: SH*

Photo 6 View of excavator breaking asphalt, and puddled water in asphalt repair area.

Direction: *West* *Date: 4/21/15* *Time: 11:20* *Taken by: SH*

Photo 7 ERRS removes asphalt from asphalt repair area.

Direction: *Northeast* *Date: 4/21/15* *Time: 11:24* *Taken by: SH*

Photo 8 Broken pieces of asphalt in asphalt repair area.

Direction: *Southwest* *Date: 4/21/15* *Time: 11:19* *Taken by: SH*

Photo 9 Water at interface of asphalt/sub-base and contaminated fill.

Direction: *Down* *Date: 4/21/15* *Time: 11:19* *Taken by: SH*

Photo 10 Seam from 2012 asphalt repair.

Direction: *Down* *Date: 4/21/15* *Time: 11:22* *Taken by: SH*

Photo 11 Seam from 2012 asphalt repair.

Direction: *Down* *Date: 4/21/15* *Time: 11:24* *Taken by: SH*

Photo 12 ERRS removing asphalt from asphalt repair area.

Direction: *Northwest* *Date: 4/21/15* *Time: 13:06* *Taken by: SH*

Photo 13 Spreading topsoil on dry retention basin.

Direction: *West* *Date: 4/21/15* *Time: 13:06* *Taken by: SH*

Photo 14 ERRS removes asphalt from asphalt repair area; air sampling pump in foreground.

Direction: *East* *Date: 4/21/15* *Time: 14:20* *Taken by: SH*

Photo 15 Close-up of air sampling pump.

Direction: *Northwest* *Date: 4/21/15* *Time: 14:02* *Taken by: SH*

Photo 16 ERRS removes asphalt from asphalt repair area.

Direction: *North* *Date: 4/21/15* *Time: 14:05* *Taken by: SH*

Photo 17 Top soil is spread on a portion of the dry retention basin.

Direction: *West* *Date: 4/21/15* *Time: 14:20* *Taken by: SH*

Photo 18 Dry retention basin with DataRAM #2.

Direction: *West* *Date: 4/21/15* *Time: 14:20* *Taken by: SH*

Photo 19 ERRS lines the back of an off-site haul truck.

Direction: *Northeast* *Date: 4/21/15* *Time: 15:02* *Taken by: SH*

Photo 20 Moisture seep and moss on retaining wall block.

Direction: *Down* *Date: 4/21/15* *Time: 15:08* *Taken by: SH*

Photo 21 Loading waste into lined truck and pup.

Direction: *West* *Date: 4/21/15* *Time: 15:30* *Taken by: SH*

Photo 22 Scratches in asphalt from EPA 2012.

Direction: *Down* *Date: 4/21/15* *Time: 15:30* *Taken by: SH*

Photo 23 Scratches in asphalt from EPA 2012.

Direction: *Down* *Date: 4/21/15* *Time: 15:31* *Taken by: SH*

Photo 24 Loading waste into lined truck and pup.

Direction: *North* *Date: 4/21/15* *Time: 15:40* *Taken by: SH*

Photo 25 Spreading topsoil on dry retention basin.

Direction: *Northwest* *Date: 4/21/15* *Time: 16:09* *Taken by: SH*

Photo 26 Truck activity and excavation at asphalt repair area.

Direction: *East* *Date: 4/22/15* *Time: 08:56* *Taken by: SH*

Photo 27 Bottom of western excavation.

Direction: *Down* *Date: 4/22/15* *Time: 08:57* *Taken by: SH*

Photo 28 Removing asphalt from central asphalt repair area.

Direction: *Northeast* *Date: 4/22/15* *Time: 11:44* *Taken by: SH*

Photo 29 Location of "soft spot" against wall as reported by equipment operator.

Direction: *North* *Date: 4/22/15* *Time: 11:47* *Taken by: SH*

Photo 30 Work begins on corrugated metal pipe (CMP) around dry well.

Direction: *West* *Date: 4/22/15* *Time: 12:36* *Taken by: SH*

Photo 31 Flaps of PVC and fabric liners.

Direction: *Down* *Date: 4/22/15* *Time: 12:37* *Taken by: SH*

Photo 32 Cutting CMP.

Direction: *West* *Date: 4/22/15* *Time: 13:46* *Taken by: SH*

Photo 33 ERRS places PVC liner inside CMP.

Direction: *Northwest* *Date: 4/22/15* *Time: 15:44* *Taken by: SH*

Photo 34 Exposed PVC liner at drain rock apron.

Direction: *Northwest* *Date: 4/22/15* *Time: 17:04* *Taken by: SH*

Photo 35 Spreading topsoil on dry retention basin; DataRAM #3 in foreground.

Direction: *Northwest* *Date: 4/22/15* *Time: 17:05* *Taken by: SH*

Photo 36 Dry well after CMP improvements have been completed.

Direction: *Down* *Date: 4/22/15* *Time: 17:06* *Taken by: SH*

Photo 37 Backfill of asphalt repair area with 3/4-inch minus aggregate on geotextile.

Direction: *West* *Date: 4/23/15* *Time: 10:55* *Taken by: MF*

Photo 38 Washed rock is delivered to the site.

Direction: *West* *Date: 4/23/15* *Time: 11:44* *Taken by: MF*

Photo 39 Stockpile of 3/4-inch minus.

Direction: *North* *Date: 4/23/15* *Time: 11:53* *Taken by: MF*

Photo 40 Backfill of asphalt repair area.

Direction: *Northeast* *Date: 4/23/15* *Time: 11:45* *Taken by: MF*

Photo 41 Geotextile fabric details.

Direction: *Closeup* *Date: 4/23/15* *Time: 12:53* *Taken by: MF*

Photo 42 Geotextile fabric details.

Direction: *Down* *Date: 4/23/15* *Time: 12:54* *Taken by: MF*

Photo 43 Backfill and compaction.

Direction: *West* *Date: 4/23/15* *Time: 13:08* *Taken by: MF*

Photo 44 Remote-controlled mini-compactor.

Direction: *Northwest* *Date: 4/23/15* *Time: 13:11* *Taken by: MF*

Photo 45 PVC liner and anchor trench of dry retention basin.

Direction: *Down* *Date: 4/23/15* *Time: 13:28* *Taken by: MF*

Photo 46 Excavating at drain rock apron.

Direction: *Southwest* *Date: 4/23/15* *Time: 13:29* *Taken by: MF*

Photo 47 Compaction of aggregate.

Direction: *East* *Date: 4/23/15* *Time: 13:29* *Taken by: MF*

Photo 48 ERRS installs washed rock around dry well.

Direction: *East* *Date: 4/23/15* *Time: 15:55* *Taken by: SH*

Photo 49 Completed dry well/CMP upgrade.

Direction: *Northwest* *Date: 4/23/15* *Time: 16:40* *Taken by: SH*

Photo 50 Compaction testing with OSC and ERRS RM.

Direction: *Northeast* *Date: 4/24/15* *Time: 07:30* *Taken by: SH*

Photo 51 Edge of backfill lift with compactor.

Direction: *Down* *Date: 4/24/15* *Time: 08:52* *Taken by: MF*

Photo 52 Backfilling asphalt repair area.

Direction: *West* *Date: 4/24/15* *Time: 09:20* *Taken by: SH*

Photo 53 ERRS sweeps parking lot.

Direction: *North* *Date: 4/24/15* *Time: 12:55* *Taken by: MF*

Photo 54 Excavation in drain rock apron area.

Direction: *North* *Date: 4/24/15* *Time: 16:33* *Taken by: MF*

Photo 55 Displaced top cap along top of retaining wall.

Direction: *Northeast* *Date: 4/25/15* *Time: 10:25* *Taken by: MF*

Photo 56 Placement of geotextile in drain rock apron.

Direction: *Northwest* *Date: 4/25/15* *Time: 10:43* *Taken by: MF*

Photo 57 Placing drain rock in trench.

Direction: *South* *Date: 4/25/15* *Time: 11:01* *Taken by: MF*

Photo 58 Ramp to decrease dropoff angle at southwest corner of asphalt cap.

Direction: *West* *Date: 4/25/15* *Time: 11:08* *Taken by: MF*

Photo 59 Ramp to decrease dropoff angle at southwest corner of asphalt cap.

Direction: *Southeast* *Date: 4/25/15* *Time: 11:09* *Taken by: MF*

Photo 60 Looking down at location of lower access ramp, prior to construction.

Direction: *Northwest* *Date: 4/25/15* *Time: 11:44* *Taken by: MF*

Photo 61 Looking up at location of lower access ramp, prior to construction.

Direction: *East* *Date: 4/25/15* *Time: 11:45* *Taken by: MF*

Photo 62 Looking down along northeastern extent of retaining wall.

Direction: *West* *Date: 4/25/15* *Time: 11:45* *Taken by: MF*

Photo 63 Looking at single pine tree to be removed at location of lower access ramp.

Direction: *South* *Date: 4/25/15* *Time: 11:47* *Taken by: MF*

Photo 64 Backfilling asphalt repair area, placing in 6-inch lifts.

Direction: *West* *Date: 4/25/15* *Time: 12:53* *Taken by: MF*

Photo 65 Overview of site, dry retention basin and west end of asphalt cap.

Direction: *Northwest* *Date: 4/25/15* *Time: 14:41* *Taken by: MF*

Photo 66 Overview of site, looking at asphalt cap.

Direction: *Northeast* *Date: 4/25/15* *Time: 14:41* *Taken by: MF*

Photo 67 Final drain rock apron.

Direction: *South* *Date: 4/25/15* *Time: 16:20* *Taken by: MF*

Photo 68 Placement of backfill lift, and compaction testing.

Direction: *West* *Date: 4/27/15* *Time: 07:48* *Taken by: MF*

Photo 69 Placement of final lift in asphalt repair area.

Direction: *Northeast* *Date: 4/27/15* *Time: 13:27* *Taken by: MF*

Photo 70 Arrival of smaller track excavator.

Direction: *Northwest* *Date: 4/27/15* *Time: 13:31* *Taken by: MF*

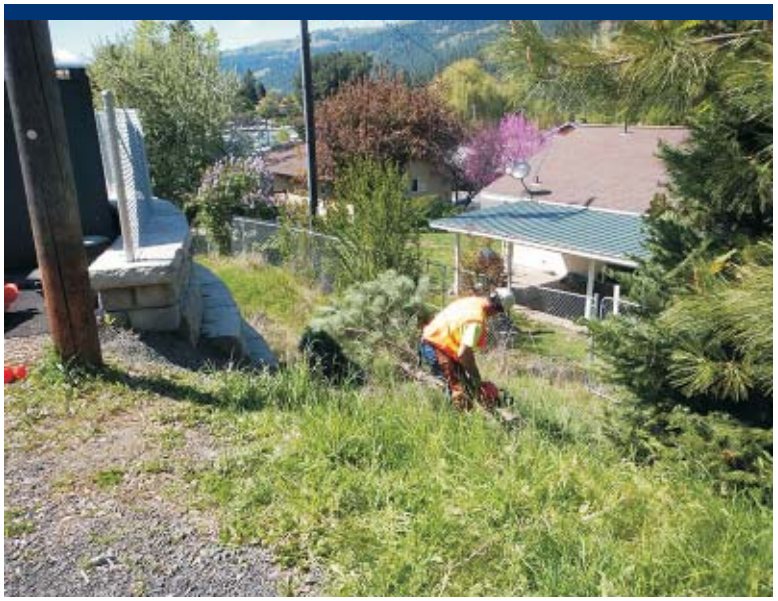


Photo 71 Removal of single pine tree at location of lower access ramp.

Direction: *Northwest* *Date: 4/27/15* *Time: 14:39* *Taken by: MF*

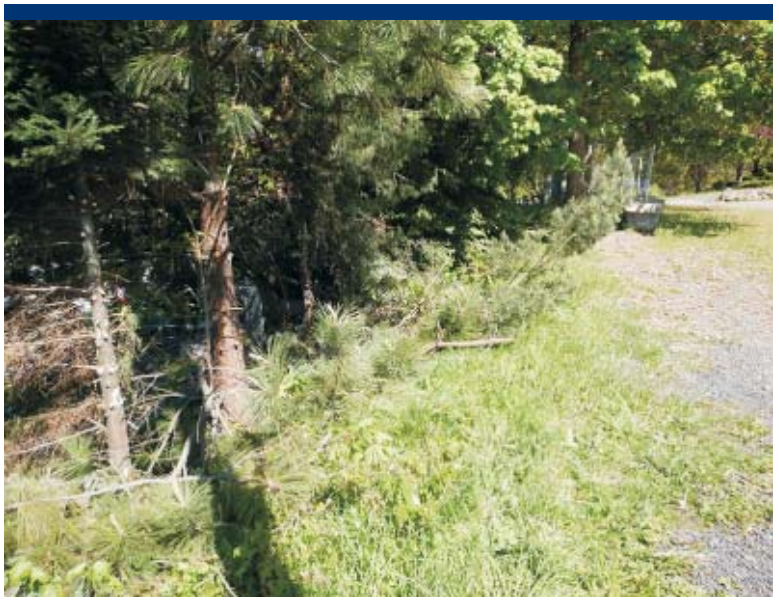


Photo 72 Result of branch trimming along path of lower access ramp.

Direction: *East* *Date: 4/27/15* *Time: 14:51* *Taken by: MF*

Photo 73 Looking along cleared path of lower access ramp.

Direction: *West* *Date: 4/27/15* *Time: 15:17* *Taken by: MF*

Photo 74 Constructing lower access ramp.

Direction: *Northwest* *Date: 4/27/15* *Time: 16:09* *Taken by: MF*

Photo 75 Constructing lower access ramp.

Direction: *Northeast* *Date: 4/27/15* *Time: 16:10* *Taken by: MF*

Photo 76 Backfilled asphalt repair area.

Direction: *West* *Date: 4/27/15* *Time: 16:14* *Taken by: MF*

Photo 77 Marked locations for permanent survey markers.

Direction: *West* *Date: 4/28/15* *Time: 08:38* *Taken by: MF*

Photo 78 Surveying backfill elevation for final grade.

Direction: *West* *Date: 4/28/15* *Time: 09:54* *Taken by: MF*

Photo 79 Adhesive used to set top block along retaining wall and parking space stoppers.

Direction: *Down* *Date: 4/28/15* *Time: 15:42* *Taken by: MF*

Photo 80 Mini compacter for final grade of backfill in asphalt repair area.

Direction: *Down* *Date: 4/29/15* *Time: 09:20* *Taken by: MF*

Photo 81 Seed mix bag and seed spreader for dry retention basin.

Direction: *Down* *Date: 4/29/15* *Time: 10:48* *Taken by: MF*

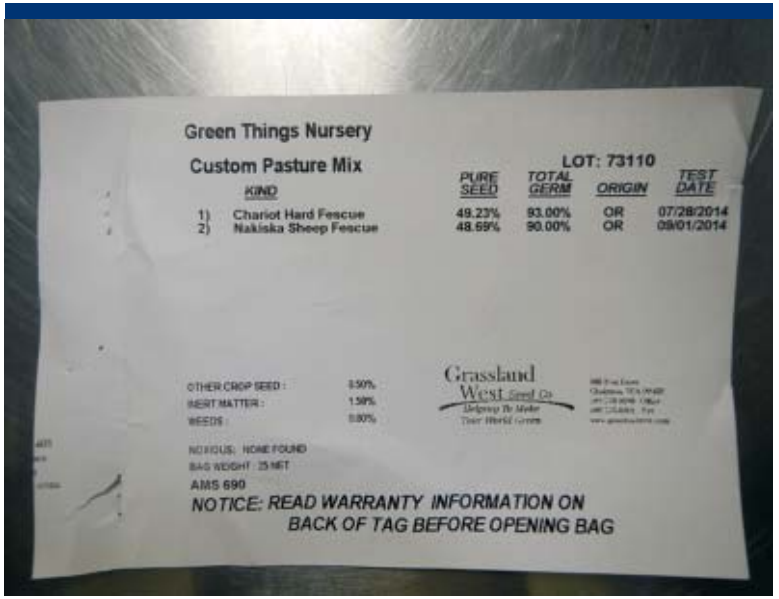


Photo 82 Seed mix bag label.

Direction: *Down* *Date: 4/29/15* *Time: 11:11* *Taken by: MF*

Photo 83 Mulch bag for dry retention basin area.

Direction: *Down* *Date: 4/29/15* *Time: 11:51* *Taken by: MF*

Photo 84 Rolling seed into dry retention basin with water barrel roller.

Direction: *Northwest* *Date: 4/29/15* *Time: 12:55* *Taken by: MF*

Photo 85 Lower access ramp and gravel.

Direction: *Northwest* *Date: 4/29/15* *Time: 12:56* *Taken by: MF*

Photo 86 Bringing access ramp side slopes to grade.

Direction: *Northeast* *Date: 4/29/15* *Time: 13:47* *Taken by: MF*

Photo 87 Final lower access ramp and gravel, compacted.

Direction: *East* *Date: 4/29/15* *Time: 16:06* *Taken by: MF*

Photo 88 Final lower access ramp and gravel, compacted.

Direction: *West* *Date: 4/29/15* *Time: 14:52* *Taken by: MF*

Photo 89 Delivery of concrete parking space stoppers.

Direction: *Southeast* *Date: 4/29/15* *Time: 12:58* *Taken by: MF*

Photo 90 Asphalt repair area ready for paving.

Direction: *West* *Date: 5/1/15* *Time: 11:16* *Taken by: MF*

Photo 91 Paving equipment arrival on site.

Direction: *Northeast* *Date: 5/1/15* *Time: 14:00* *Taken by: MF*

Photo 92 Paving equipment arrival on site.

Direction: *North* *Date: 5/1/15* *Time: 14:00* *Taken by: MF*

Photo 93 Straight edge showing settling of existing west asphalt repair.

Direction: *East* *Date: 5/1/15* *Time: 14:21* *Taken by: MF*

Photo 94 Placement of first asphalt lift.

Direction: *North* *Date: 5/1/15* *Time: 14:35* *Taken by: MF*

Photo 95 Placement of first asphalt lift.

Direction: *Northwest* *Date: 5/1/15* *Time: 14:39* *Taken by: MF*

Photo 96 Compacting first lift of asphalt repair patch.

Direction: *North* *Date: 5/1/15* *Time: 14:43* *Taken by: MF*

Photo 97 Compacting final asphalt lift along edge of retaining wall.

Direction: *Northeast* *Date: 5/1/15* *Time: 15:24* *Taken by: MF*

Photo 98 Photo shows small float coat of asphalt placed in low area of existing west asphalt patch.

Direction: *North* *Date: 5/1/15* *Time: 15:31* *Taken by: MF*

Photo 99 Repaired gouge in asphalt patched by paving contractor.

Direction: *North/Down* *Date: 5/1/15* *Time: 15:34* *Taken by: MF*

Photo 100 Gouge in asphalt to be patched by paving contractor.

Direction: *Northeast/Down* *Date: 5/1/15* *Time: 11:18* *Taken by: MF*

Photo 101 Compaction results for asphalt repair area.

Direction: North/Down *Date*: 5/1/15 *Time*: 15:49 *Taken by*: MF

Photo 102 Compaction gauge.

Direction: Down *Date*: 5/1/15 *Time*: 15:50 *Taken by*: MF

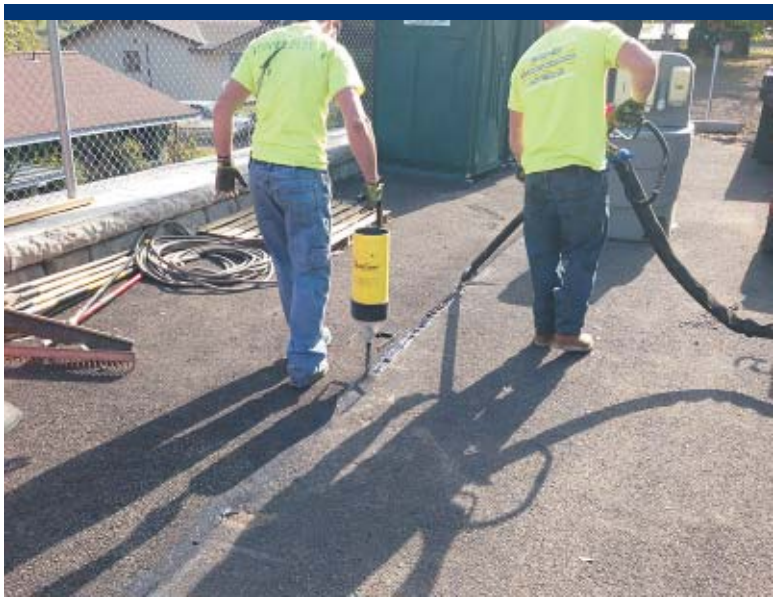


Photo 103 Sealing asphalt repair seams.

Direction: Northeast *Date*: 5/4/15 *Time*: 08:54 *Taken by*: ERRS

Photo 104 Installation of parking space stopper.

Direction: Southeast *Date*: 5/4/15 *Time*: 10:53 *Taken by*: ERRS

Photo 105 Photo shows sealant and rebar anchor for parking space stopper.

Direction: *Down* *Date: 5/4/15* *Time: 10:54* *Taken by: ERRS*

Photo 106 Overview of sealed asphalt repair area and installed parking space stoppers.

Direction: *East* *Date: 5/4/15* *Time: 11:19* *Taken by: ERRS*

Photo 107 Overview of sealed asphalt, installed parking space stoppers, and drainage.

Direction: *West* *Date: 5/4/15* *Time: 11:59* *Taken by: ERRS*

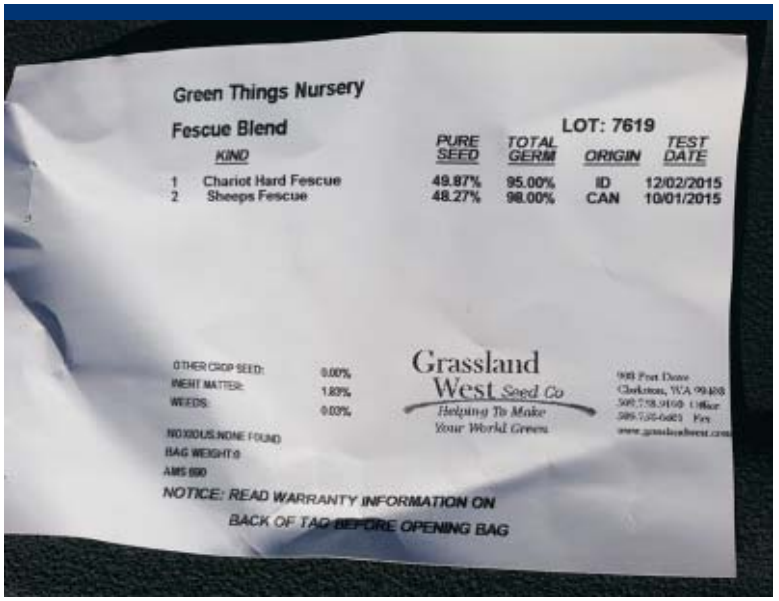


Photo 108 Seed bag label.

Direction: *Down* *Date: 3/4/16* *Time: 09:39* *Taken by: ERRS*

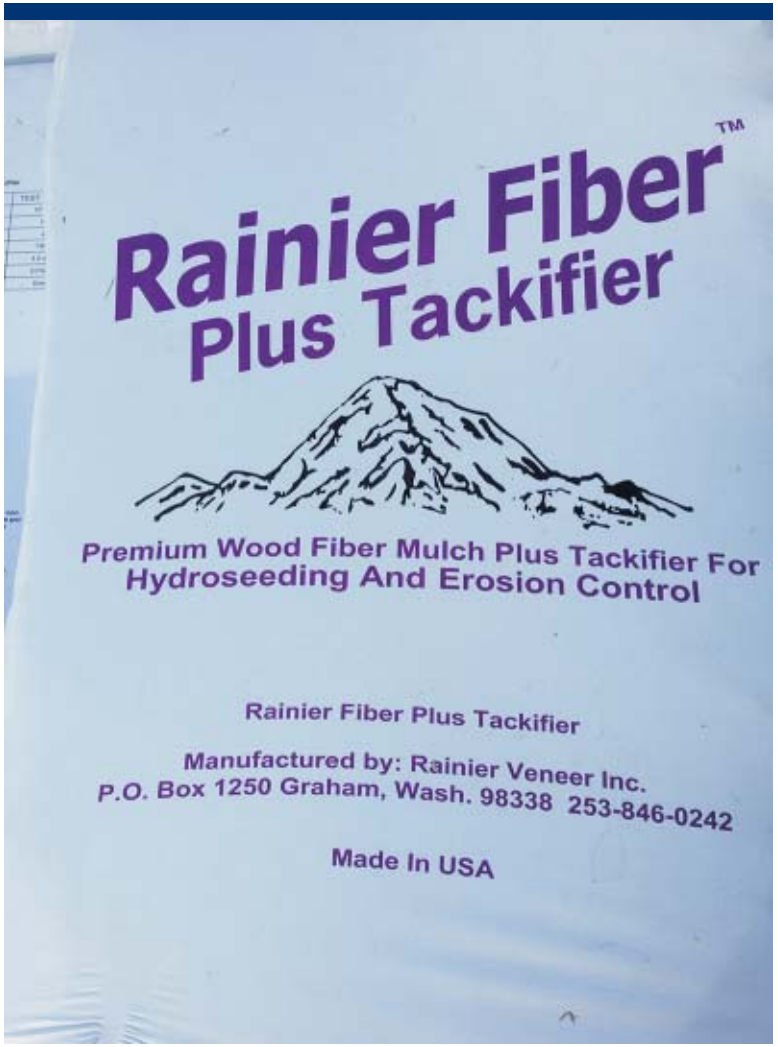


Photo 109 Tackifier bag label for hydroseeding.

Direction: *Down* *Date: 3/4/16* *Time: 09:38* *Taken by: ERRS*

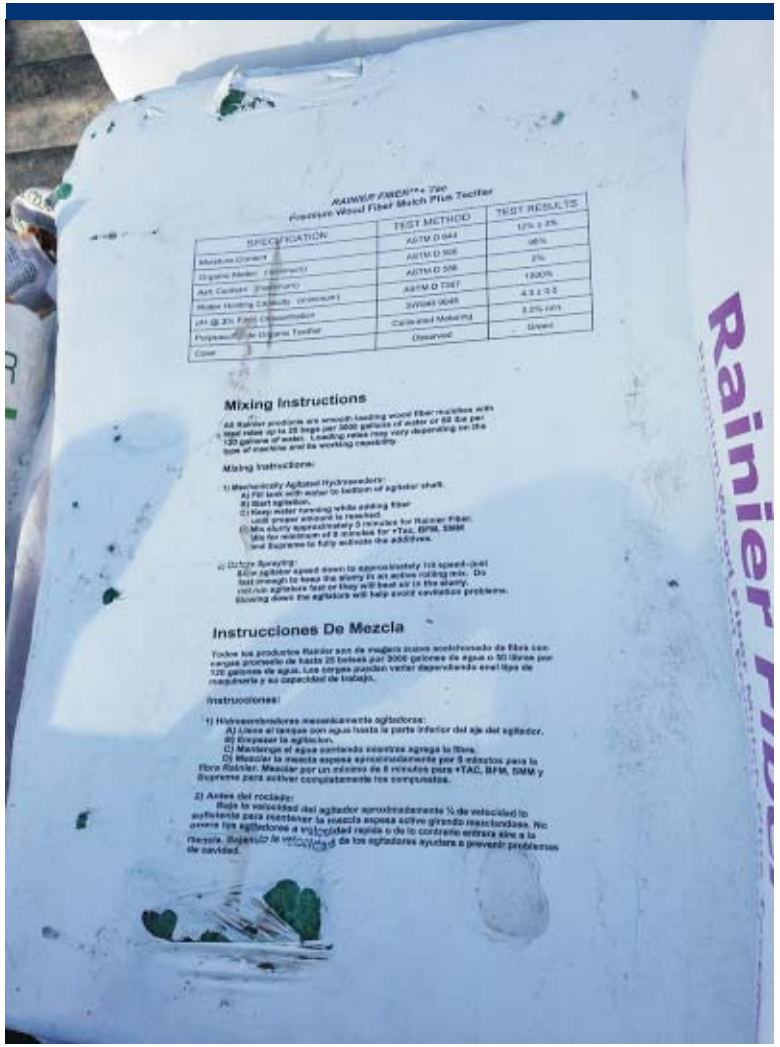


Photo 110 Tackifier bag label for hydroseeding.

Direction: *Down* *Date: 3/4/16* *Time: 09:38* *Taken by: ERRS*

Photo 111 Fertilizer bag label for hydroseeding.

Direction: *Down* *Date: 3/4/16* *Time: 09:38* *Taken by: ERRS*

Photo 112 Dry retention basin with hydroseed and mulch applied.

Direction: *Southwest* *Date: 3/3/16* *Time: 12:26* *Taken by: SH*

Photo 113 Hydroseed and mulch applied to slope on uphill side of northeast access ramp.

Direction: *East* *Date: 3/3/16* *Time: 13:18* *Taken by: SH*

Photo 114 Overview of parking lot drainage and hydroseeded dry retention basin.

Direction: *West* *Date: 3/3/16* *Time: 13:39* *Taken by: SH*

Photo 115 Close-up of drainage swale and hydroseeded dry retention basin.

Direction: *West* *Date: 3/3/16* *Time: 13:41* *Taken by: SH*

Photo 116 Overview of repaired parking lot and visible drainage path.

Direction: *East* *Date: 3/3/16* *Time: 13:42* *Taken by: SH*

B Final Record Drawings

This page intentionally left blank

2015 SITE RESTORATION REPAIRS

OROFINO ASBESTOS SITE
OROFINO, CLEARWATER COUNTY, IDAHO
TDD NO.: 14-07-0012
PAN NO.: 1004530.0004.070.01

SOURCE: USGS

SCALE IN FEET
0 200 400 600

SITE VICINITY MAP

SCALE: 1" = 200'±

SOURCE: GOOGLE EARTH, IMAGERY DATE 8/17/2013

SCALE IN FEET
0 40 80 120

SITE LOCATION MAP

SCALE: 1" = 40'±

LIST OF DRAWINGS

DRAWING NO.	TITLE
1	VICINITY MAP, SITE LOCATION MAP, AND SHEET INDEX
2	FINAL SITE SURVEY
3	DRY RETENTION BASIN DRAINAGE DETAILS
4	DRAINAGE SWALE DETAILS
5	SITE CONTOUR AND ASPHALT REPAIR DETAILS
6	RETAINING WALL MONUMENT DATA

DRAWING NOTES:

1). Existing storm drainage facility details provided by JM Engineering, Spokane, Washington.

RECORD DRAWING

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Symbol	No.	Description	Date	Approved
	1	RECORD DRAWING ISSUED	07-14-15	TC
	0	ISSUED FOR CONSTRUCTION	04-17-15	TC

SIZE D
IF SHEET IS LESS THAN 22"X34" IT IS REDUCED PRINT– SCALE REDUCED ACCORDINGLY
ONE INCH

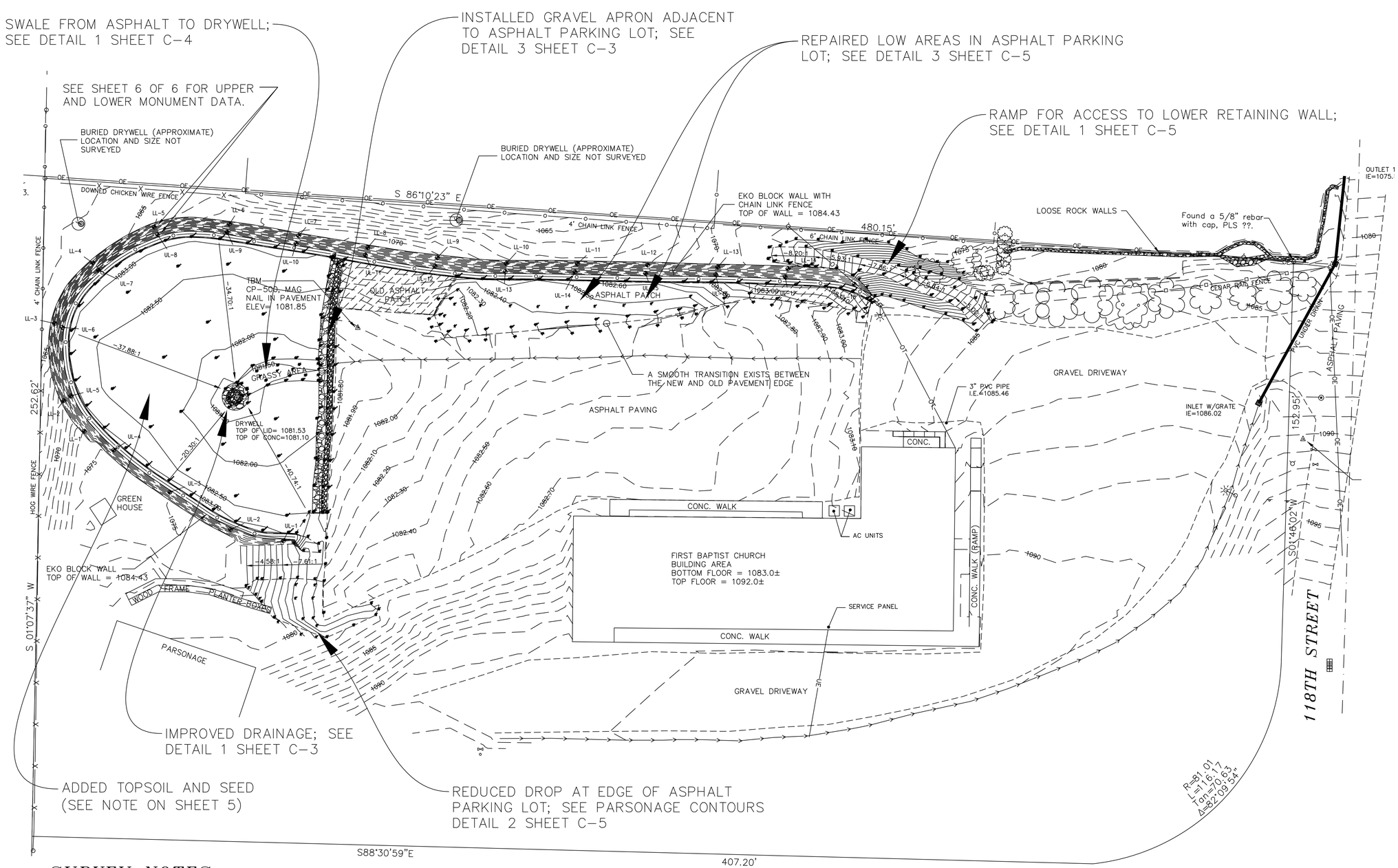
Designed by: M. FULTON
Drawn by: TCC (Spec No.:)
Reviewed by: S. HALL
Approved by: T. CAMPBELL
IDAHO PE REGISTRATION 9013845
Date: 07/2015
TDD No. 14-07-0012
PAN No. 1004530.0004.070.01
File name: Orofino_041715.dwg
Plot date: 04-17-15
Dwg scale: AS SHOWN
Rev. 1

ecology and environment, inc.
Global Environmental Specialists
333 SW Fifth Avenue, Suite 600
Portland, Oregon 97204
(503) 248-5600

CLEARWATER COUNTY IDAHO
2015 SITE RESTORATION REPAIRS
OROFINO, CLEARWATER COUNTY, IDAHO

VICINITY MAP, SITE LOCATION MAP, AND SHEET INDEX

Sheet reference number:
C-1
SHEET 1 OF 6



SURVEY NOTES:

1). The Basis of Bearing for this survey is North American Datum of 1983 (NAD83), Idaho State Plane Coordinate system (SPCS), West Zone, U.S. Feet.

2). This survey was performed using a Nikon DTM-500 series Total Station Theodolite with a TDS Data Collector and a Topcon Hyper-Plus Realtime GPS with a TDS Data Collector.

3). This survey has an unadjusted mathematical error of closure exceeding the required minimum of one (1) part in five thousand (5000).

4). No attempt was made to show all the physical features of the property or prescriptive easements, recorded or unrecorded, written or unwritten.

5). The field work for the base map was performed on 2-10-2015, 3-03-2015 and 3-15-2015. Final survey performed 6-02 through 04, 2015. Monuments were placed and surveyed 6-05-2015.

6). Survey performed by Cuddy and Associates, Orofino, Idaho.

NOTES:

1. APPROXIMATE LOCATIONS OF BURIED UTILITIES AND SUBSURFACE FEATURES, AS WELL AS OVERHEAD POWER LINES WITHIN THE SITE ARE PRESENTED ON THE DRAWINGS FOR ILLUSTRATIVE PURPOSES ONLY. ASSUME OTHER OVERHEAD UTILITIES, BURIED UTILITIES, AND SUBSURFACE FEATURES COULD EXIST.

RECORD DRAWING

1	RECORD DRAWING ISSUED	07-14-15	TC
0	ISSUED FOR CONSTRUCTION	04-17-15	TC
Number	Description	Date	Approved

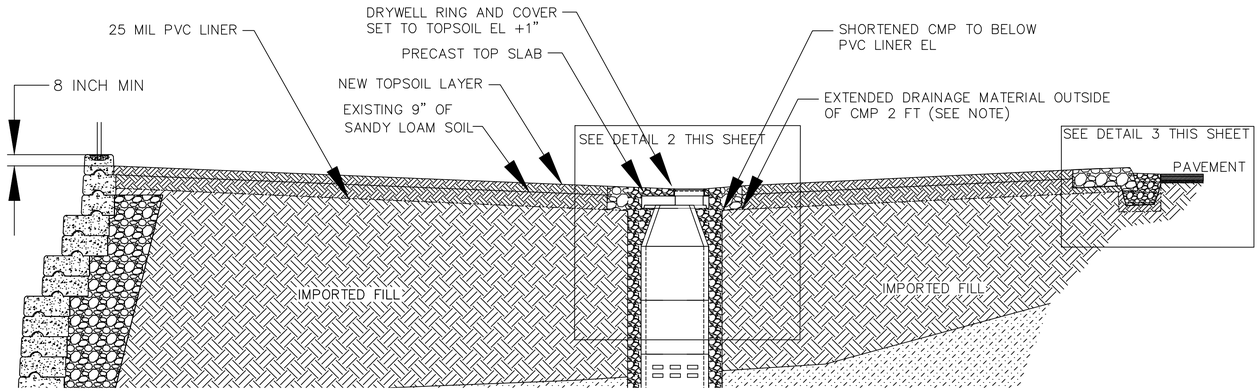
SIZE D
IF SHEET IS LESS THAN 22"X34" IT IS REDUCED PRINT- SCALE REDUCED ACCORDINGLY
ONE INCH

Designed by: M. FULTON
Drawn by: TCC
Reviewed by: S. HALL
Approved by: T. CAMPBELL
Date: 07/2015
Spec No.:
TDD No. 14-07-0012
PAN No. 10045.30.0004.070.01
File name: Orofino_041715.dwg
Plot date: 04-17-15
Dwg scale: AS SHOWN
Rev. 1
IDAHO DEPARTMENT OF WATER RESOURCES

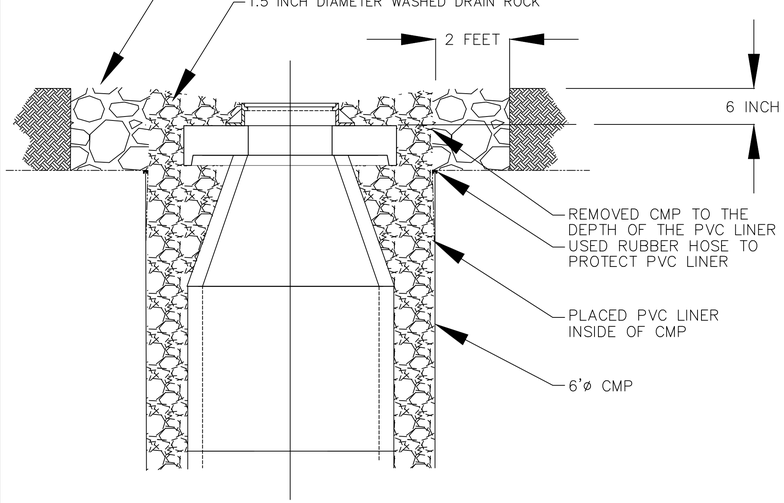
ecology and environment, inc.
Global Environmental Specialists
333 SW Fifth Avenue, Suite 600
Portland, Oregon 97204
(503) 248-5600

CLEARWATER COUNTY IDAHO
2015 SITE RESTORATION REPAIRS
OROFINO, CLEARWATER COUNTY, IDAHO
FINAL SITE SURVEY

Sheet reference number:
C-2
SHEET 2 OF 6



1 / C-2 IMPROVED DRAINAGE DETAIL
NOT TO SCALE



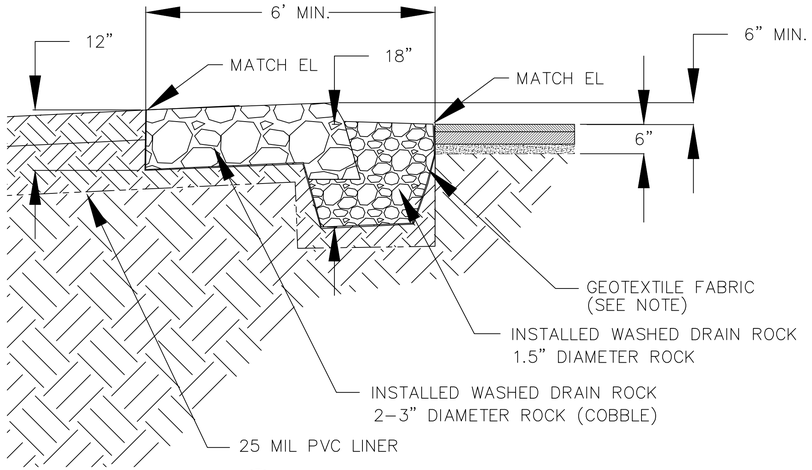
2 / C-3 DRYWELL DRAINAGE DETAIL
NOT TO SCALE

DRAINAGE MATERIAL SPECIFICATION NOTES

1. WASHED ROCK APRON PLACED ALONG PARKING LOT TO EXISTING SANDY LOAM LAYER INTERFACE CONSISTS OF 1.5-INCH WASHED DRAIN ROCK, AND A TRANSITION OF 2 TO 3-INCH WASHED DRAIN ROCK (COBBLE) WAS PLACED AT THE NEW TOPSOIL INTERFACE (SEE DETAIL 3 THIS SHEET). GEOTEXTILE AT THE INTERFACE MATCHES GEOTEXTILE SPECIFICATIONS (SEE NOTE THIS SHEET).
2. DRYWELL DRAINAGE TO BE PLACED AROUND THE DRYWELL UP TO THE GRADE OF THE DRYWELL INLET CONSISTS OF 1.5-INCH WASHED DRAIN ROCK WITH 2 TO 3 INCH WASHED DRAIN ROCK(COBBLE) TO THE GRASS (SEE DETAIL 1 THIS SHEET).

GEOTEXTILE NOTES

1. GEOTEXTILE WAS USED AS A SEPARATION MATERIAL BETWEEN ASBESTOS-CONTAMINATED FILL MATERIALS AND THE RETAINING WALL AGGREGATE DRAINAGE LAYER, BETWEEN ASBESTOS-CONTAMINATED FILL AND CLEAN FILL IN DRY POND AREAS, AND AS NEEDED TO SEPARATE ASBESTOS CONTAMINATED FILL FROM CLEAN FILL OR SOIL LAYERS FROM AGGREGATE LAYERS.



3 / C-2 GRAVEL APRON DETAIL
NOT TO SCALE

RECORD DRAWING

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Symbol	Description	Date	Approved
1	RECORD DRAWING ISSUED	07-14-15	TC
0	ISSUED FOR CONSTRUCTION	04-17-15	TC

SIZE D
IF SHEET IS LESS THAN 22"X34" IT IS REDUCED PRINT– SCALE REDUCED ACCORDINGLY
ONE INCH

Designed by: M. FULTON
Drawn by: TCC
Reviewed by: S. HALL
Approved by: T. CAMPBELL
Date: 07/2015
Spec No.:
TDD No. 14-07-0012
PAN No. 10045330.0004.070.01
File name: Drofino_041715.dwg
Plot date: 04-17-15
Dwg scale: AS SHOWN

ecology and environment, inc.
Global Environmental Specialists
333 SW Fifth Avenue, Suite 600
Portland, Oregon 97204
(503) 248-5600

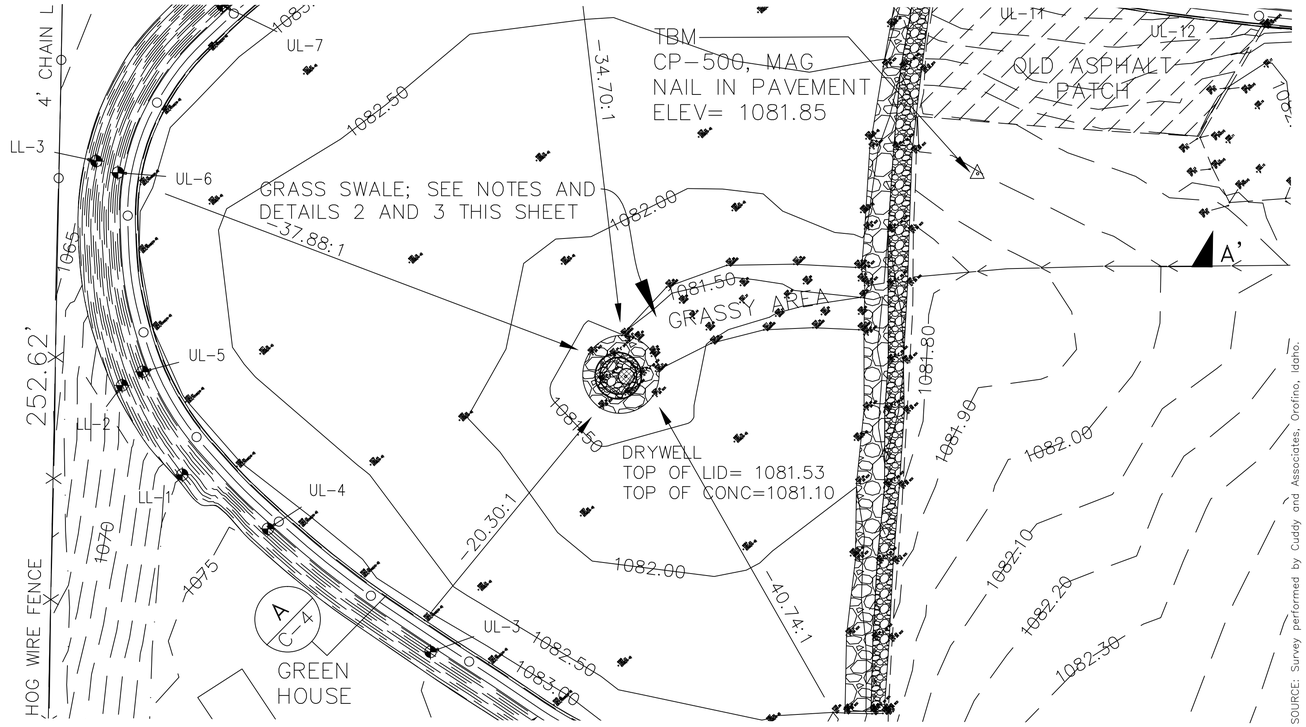
CLEARWATER COUNTY IDAHO
2015 SITE RESTORATION REPAIRS
OROFINO, CLEARWATER COUNTY, IDAHO

DRY RETENTION BASIN
DRAINAGE DETAILS

Sheet reference number:
C-3
SHEET 3 OF 6

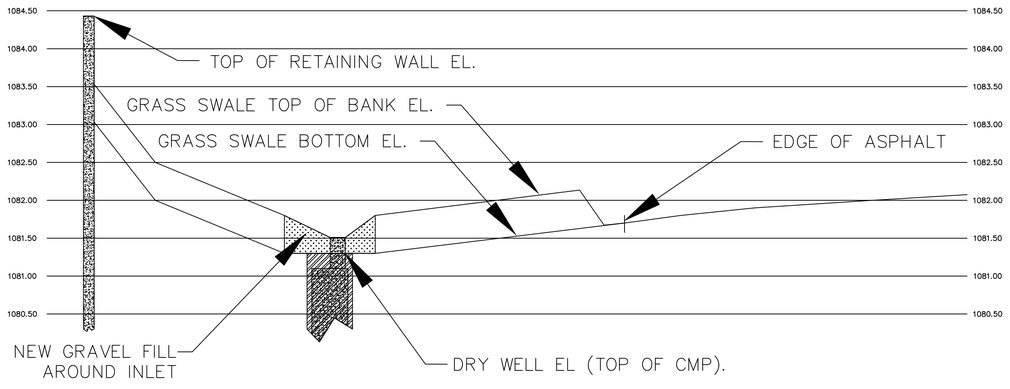
GRASS SWALE NOTES

1. THE GRASS SWALE IS DESIGNED TO CONVEY STORMWATER FROM THE PARKING LOT TO THE GRAVEL SURROUNDING THE INLET FOR THE DRYWELL.
2. THE BOTTOM ELEVATION OF THE GRASS SWALE ALLOWS FOR POSITIVE DRAINAGE.



1 C-2 GRASS SWALE PLAN ALONG LINE A - A'
SCALE: 1" = 10'-0"

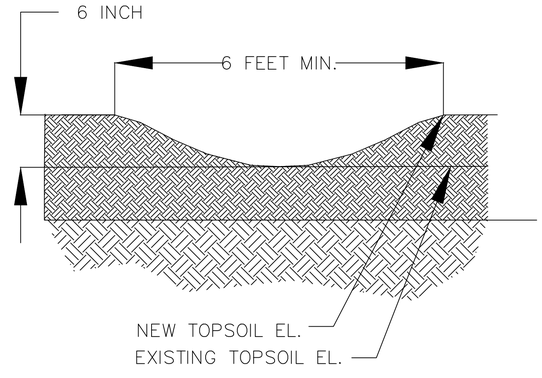
10' 0 10' 20'
SCALE OF FEET



2 C-4 GRASS SWALE PROFILE ALONG LINE A - A'
HORIZONTAL SCALE: 1" = 10'-0" VERTICAL SCALE: 1" = 0'-6"

10' 0 10' 20'
SCALE OF FEET (HORIZONTAL)

0.5' 0 0.5' 1'
SCALE OF FEET (VERTICAL)



3 C-4 GRASS SWALE DETAIL
NOT TO SCALE

RECORD DRAWING

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Symbol	No.	Description	Date	Approved
	1	RECORD DRAWING ISSUED	07-14-15	TC
	0	ISSUED FOR CONSTRUCTION	04-17-15	TC

SIZE D
IF SHEET IS LESS THAN 22"X34" IT IS REDUCED PRINT- SCALE REDUCED ACCORDINGLY
ONE INCH

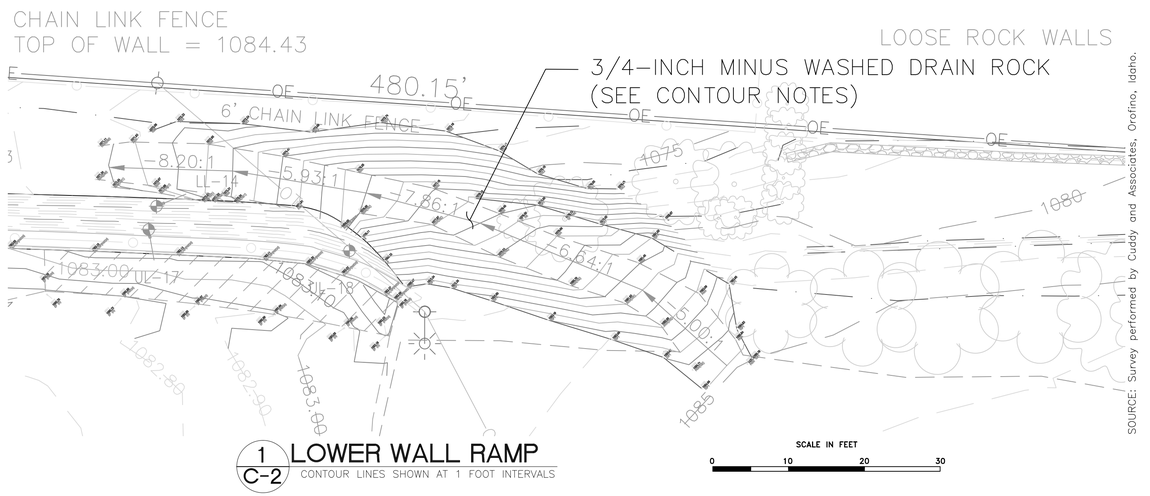
Designed by: M. FULTON
Drawn by: TCC
Reviewed by: S. HALL
Approved by: T. CAMPBELL
Date: 07/2015
Spec No.:
TDD No. 14-07-0012
PAN No. 10045300.0004.070.01
File name: Orofino_G4(1715.dwg
Plot date: 04-17-15
Dwg scale: AS SHOWN
EVAPORATE_REGISTRATION_NOTICE

ecology and environment, inc.
Global Environmental Specialists
333 SW Fifth Avenue, Suite 600
Portland, Oregon 97204
(503) 248-5600

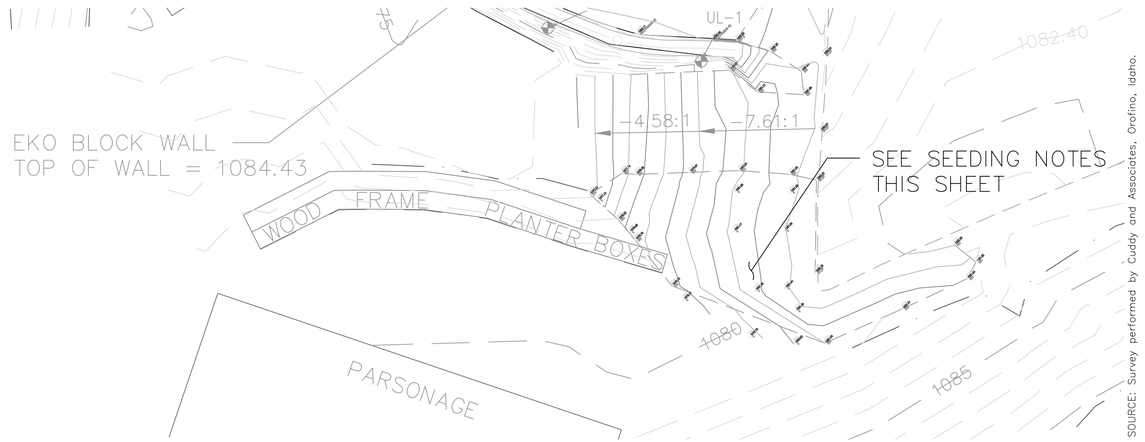
CLEARWATER COUNTY IDAHO
2015 SITE RESTORATION REPAIRS
OROFINO, CLEARWATER COUNTY, IDAHO

DRAINAGE SWALE DETAILS

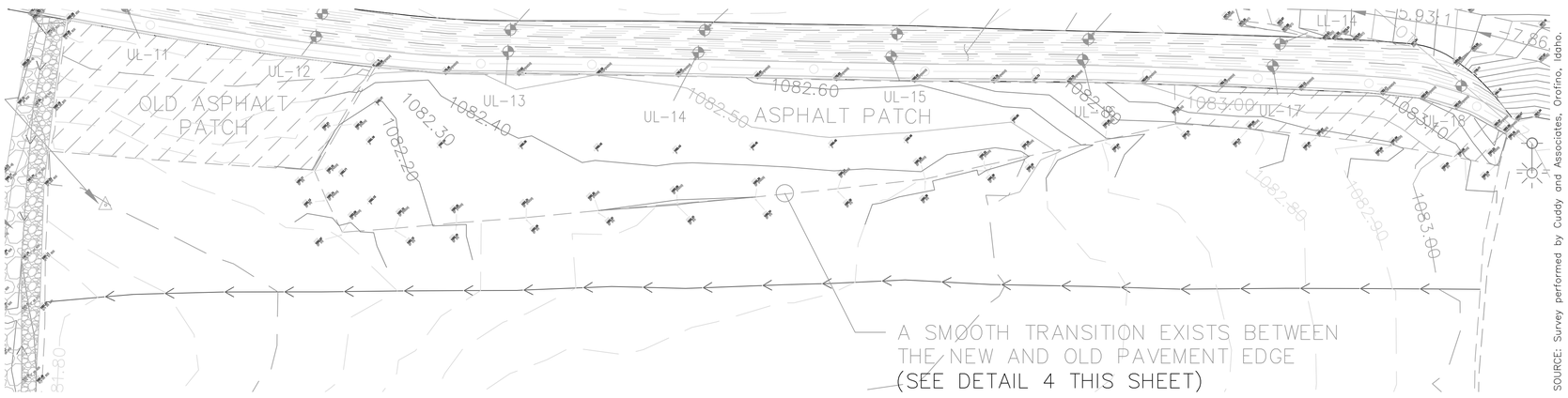
Sheet reference number:
C-4
SHEET 4 OF 6



1 C-2 LOWER WALL RAMP
CONTOUR LINES SHOWN AT 1 FOOT INTERVALS



2 C-2 PARSONAGE CONTOURS
CONTOUR LINES SHOWN AT 0.5 FOOT INTERVALS



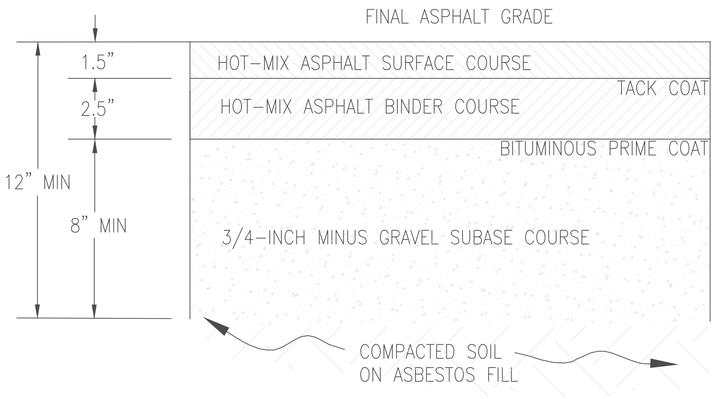
3 C-2 ASPHALT REPAIR AREA
SCALE: 1" = 10'-0"

CONTOUR NOTES

1. THE LOWER WALL RAMP MAXIMUM SLOPE IS 20% (11.3 degrees).

SEEDING NOTES

1. BROADCAST SEED WAS CERTIFIED PURE LIVE SEED (PLS) OF A MINIMUM 4 LBS PER ACRE SHEEP FESCUE AND 4 LBS PER ACRE HARD FESCUE.



4 C-5 ASPHALT REPAIR CROSS-SECTION
NOT TO SCALE

RECORD DRAWING

Symbol	Description	Date	Approved
1	RECORD DRAWING ISSUED	07-14-15	TC
0	ISSUED FOR CONSTRUCTION	04-17-15	TC

SIZE D
IF SHEET IS LESS THAN 22"X34" IT IS REDUCED PRINT– SCALE REDUCED ACCORDINGLY
ONE INCH

Designed by: M. FULTON
Drawn by: TCC
Spec No.:
Reviewed by: S. HALL
Approved by: T. CAMPBELL
IDAHO_FE_REGISTRATION_NOT_SIGNED
Date: 07/2015
TDD No. 14–07–0012
PAN No. 10045.30.0004.070.01
File name: Orofino_C4175.dwg
Plot date: 04–17–15
Dwg scale: AS SHOWN
Rev. 1

ecology and environment, inc.
Global Environmental Specialists
333 SW Fifth Avenue, Suite 600
Portland, Oregon 97204
(503) 248-5600

CLEARWATER COUNTY
2015 SITE RESTORATION REPAIRS
OROFINO, CLEARWATER COUNTY, IDAHO
IDAHO

SITE CONTOUR AND ASPHALT REPAIR DETAILS

Sheet reference number:
C-5
SHEET 5 OF 6

MONUMENT DATA

POINT #	X (FT)	Y (FT)	EL.(FT)	DIAM.	DESCRIPTION	#STAMP
10000	1760353.68	2484857.91	1080.75	1.15	Diam. Brass Monument set in Block stamped	UL-1
10001	1760358.08	2484837.67	1080.74	1.15	Diam. Brass Monument set in Block stamped	UL-2
10002	1760372.37	2484814.34	1080.67	1.15	Diam. Brass Monument set in Block stamped	UL-3
10003	1760388.60	2484792.88	1080.66	1.15	Diam. Brass Monument set in Block stamped	UL-4
10004	1760409.34	2484776.34	1080.56	1.15	Diam. Brass Monument set in Block stamped	UL-5
10005	1760435.61	2484773.09	1080.67	1.15	Diam. Brass Monument set in Block stamped	UL-6
10006	1760457.66	2484786.90	1080.66	1.15	Diam. Brass Monument set in Block stamped	UL-7
10007	1760471.22	2484809.67	1080.79	1.15	Diam. Brass Monument set in Block stamped	UL-8
10008	1760472.21	2484836.33	1080.75	1.15	Diam. Brass Monument set in Block stamped	UL-9
10009	1760467.82	2484862.80	1080.78	1.15	Diam. Brass Monument set in Block stamped	UL-10
10010	1760463.38	2484889.40	1080.77	1.15	Diam. Brass Monument set in Block stamped	UL-11
10011	1760459.15	2484916.11	1080.73	1.15	Diam. Brass Monument set in Block stamped	UL-12
10012	1760457.06	2484943.09	1080.71	1.15	Diam. Brass Monument set in Block stamped	UL-13
10013	1760456.93	2484969.82	1080.50	1.15	Diam. Brass Monument set in Block stamped	UL-14
10014	1760456.35	2484996.90	1080.55	1.15	Diam. Brass Monument set in Block stamped	UL-15
10015	1760455.90	2485023.81	1080.71	1.15	Diam. Brass Monument set in Block stamped	UL-16
10016	1760455.02	2485050.50	1080.83	1.15	Diam. Brass Monument set in Block stamped	UL-17
10017	1760452.22	2485077.00	1080.87	1.15	Diam. Brass Monument set in Block stamped	UL-18
10031	1760395.76	2484781.58	1074.57	1.15	Diam. Brass Monument set in Block stamped	LL-1
10030	1760407.53	2484773.64	1074.60	1.15	Diam. Brass Monument set in Block stamped	LL-2
10029	1760437.13	2484770.22	1074.66	1.15	Diam. Brass Monument set in Block stamped	LL-3
10028	1760460.36	2484784.89	1074.65	1.15	Diam. Brass Monument set in Block stamped	LL-4
10027	1760474.13	2484808.35	1074.77	1.15	Diam. Brass Monument set in Block stamped	LL-5
10026	1760475.25	2484837.21	1074.71	1.15	Diam. Brass Monument set in Block stamped	LL-6
10025	1760470.76	2484863.75	1074.73	1.15	Diam. Brass Monument set in Block stamped	LL-7
10024	1760466.26	2484890.33	1074.66	1.15	Diam. Brass Monument set in Block stamped	LL-8
10023	1760462.40	2484916.99	1074.68	1.15	Diam. Brass Monument set in Block stamped	LL-9
10022	1760460.10	2484943.43	1074.64	1.15	Diam. Brass Monument set in Block stamped	LL-10
10021	1760460.05	2484970.70	1074.41	1.15	Diam. Brass Monument set in Block stamped	LL-11
10020	1760459.50	2484997.73	1074.51	1.15	Diam. Brass Monument set in Block stamped	LL-12
10019	1760458.77	2485024.60	1074.64	1.15	Diam. Brass Monument set in Block stamped	LL-13
10018	1760458.11	2485051.53	1074.76	1.15	Diam. Brass Monument set in Block stamped	LL-14

NOTES

1. REFER TO THE FINAL SURVEY PERFORMED BY CUDDY AND ASSOCIATES ON SHEET C-2 FOR UPPER LEVEL AND LOWER LEVEL WALL MONUMENT LOCATIONS.

RECORD DRAWING

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Symbol	Description	Date	Approved
1	RECORD DRAWING ISSUED	07-14-15	TC
0	ISSUED FOR CONSTRUCTION	04-17-15	TC

SIZE D
IF SHEET IS LESS THAN 22"X34" IT IS REDUCED PRINT— SCALE REDUCED ACCORDINGLY
ONE INCH

Designed by: M. FULTON | Date: 07/2015 | Rev. 1
Drawn by: TCC | Spec No.: | TDD No. 14-07-0012
Reviewed by: S. HALL | PAN No. 1004530.0004.070.01
Approved by: T. CAMPBELL | File name: Drawing_04-17-15.dwg | Plot date: 04-17-15 | Dwg scale: AS SHOWN
IDAHOJE_REGISTRATION_NUMBER

ecology and environment, inc.
Global Environmental Specialists
333 SW Fifth Avenue, Suite 600
Portland, Oregon 97204
(503) 248-5600

CLEARWATER COUNTY IDAHO
2015 SITE RESTORATION REPAIRS
OROFINO, CLEARWATER COUNTY, IDAHO

RETAINING WALL MONUMENT DATA

Sheet reference number:
C-6
SHEET 6 OF 6

C Waste Disposal Records

This page intentionally left blank

FINLEY BUTTES LANDFILL
73221 Bombing Range Road
BOARDMAN, OR 97818
(541) 481-2233

INVOICE

Printed 04/30/15

DATE	PAGE
04/30/15	1

INVOICE NUMBER
4732

AMOUNT DUE	AMOUNT PAID
50739.40	$

E.Q.M.
LAURIE PALMER # 20335
18939 120TH AVE. NE - STE 103
BOTHELL WA 98011

Environmental Quality Mgmt Inc
Received
MAY 04 2015
Seattle

ACCOUNT NO.
10358

A/P stamp pg. 2

DETACH AND RETURN TOP PORTION WITH REMITTANCE

DATE	TICKET	VEHICLE	REFERENCE	DESCRIPTION	QUANTITY	AMOUNT
/ /				Previous amount due		0.00
01/21/15				Last payment received		68871.07
04/22/15	01-00246116	EQM005	8527	Asbestos - Non Friab $45 a ton	30.76	1384.20
04/22/15	01-00246116	EQM005	8527	TRUCKING PER TRIP	1.00	2788.00
04/22/15	01-00246196	EQM005	ACT-150-98	Asbestos - Non Friab	22.77	1024.65
04/22/15	01-00246199	EQM005	ACT-97-04	Asbestos - Non Friab	23.50	1057.50
04/22/15	01-00246206	EQM005	ACT154-97	Asbestos - Non Friab	22.35	1005.75
04/22/15	01-00246206	EQM005	ACT154-97	TRUCKING PER TRIP	1.00	2788.00
04/22/15	01-00246207	EQM005	ACT-75-99	Asbestos - Non Friab	23.66	1064.70
04/22/15	01-00246207	EQM005	ACT-75-99	TRUCKING PER TRIP	1.00	2788.00
04/22/15	01-00246208	EQM005	246196	TRUCKING PER TRIP	1.00	2788.00
04/22/15	01-00246209	EQM005	246199	TRUCKING PER TRIP	1.00	2788.00
04/23/15	01-00246247	EQM005	D&R8527	Asbestos - Non Friab	31.90	1435.50
04/23/15	01-00246247	EQM005	D&R8527	TRUCKING PER TRIP	1.00	2788.00
04/23/15	01-00246317	EQM005	ACT-97-04	Asbestos - Non Friab	24.63	1108.35
04/23/15	01-00246317	EQM005	ACT-97-04	TRUCKING PER TRIP	1.00	2788.00
04/23/15	01-00246331	EQM005	150-98	Asbestos - Non Friab	26.17	1177.65
04/23/15	01-00246331	EQM005	150-98	TRUCKING PER TRIP	1.00	2788.00
04/23/15	01-00246338	EQM005	154-97	Asbestos - Non Friab	25.58	1151.10
04/23/15	01-00246338	EQM005	154-97	TRUCKING PER TRIP	1.00	2788.00
04/23/15	01-00246339	EQM005	75-99	Asbestos - Non Friab	24.33	1094.85
04/23/15	01-00246339	EQM005	75-99	TRUCKING PER TRIP	1.00	2788.00
04/24/15	01-00246348	EQM005	8527	Asbestos - Non Friab	31.14	1401.30
04/24/15	01-00246348	EQM005	8527	TRUCKING PER TRIP	1.00	2788.00
04/24/15	01-00246447	EQM005	75-99	Asbestos - Non Friab	19.13	860.85
04/24/15	01-00246448	EQM005	154-97	Asbestos - Non Friab	16.20	729.00
04/24/15	01-00246448	EQM005	154-97	TRUCKING PER TRIP	1.00	2788.00
04/24/15	01-00246453	EQM005	246447	TRUCKING PER TRIP	1.00	2788.00
	Net weight	322.12				
				Invoice total		50739.40
				Total amount due		50739.40

FORM #WW611

TRANS - $2,088-
LINERS - $ 700-
$2,788-

pg. 2

Inv # 4732

Finley Buttes Landfill

SEATTLE - 1.01.05

PN #: 030309.0021

P.O. #: 20335

ACCT #	AMOUNT
0570-001	$ 50,739.40

INITIALS

5-5-15

DATE

FINLEY BUTTES LANDFILL
73221 Bombing Range Rd;POB 350
BOARDMAN, OR 97818

010358 E.Q.M.
18939 120TH AVE. NE - STE 103
BOTHELL WA 98011

01	00246116		Michelle Dekker		
DATE IN	DATE OUT	TIME IN	TIME OUT	VEHICLE	ROLL OFF
04/22/15	04/22/15	08:17	08:54	EQM005	
REFERENCE		ORIGIN			
8527		OUT-OUT OF STATE			

Scale 1 Gross Wt.	103140	LB	Inbound - Charge ticket
Scale 2 Tare Wt.	41620	LB	
Net Weight	61520	LB	

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	FEE	TOTAL
30.76	TON	Asbestos - Non Friab				
1.00	unit	TRUCKING PER TRIP				

Operating hours 7AM to 3:30PM Monday thru Friday.
Have a nice day!

NET AMOUNT
TENDERED
CHANGE
CHECK NO

SW# 1-15-071 US EPA REGION #10

202.TS TO REORDER CONTACT NORTH STAR FORMS, LLC (877) 499-0492

SIGNATURE Tim Heney

ASN 4 ASBESTOS WASTE SHIPMENT REPORT FORM

PLEASE PRINT OR TYPE! If you have questions, contact your local DEQ Regional Office in Portland at (503) 229-5364, Salem at (503) 378-8240 ext. 272, Medford at (541) 776-6010 ext. 235, or Bend at (541) 388-6146 ext. 226, OR call (800) 452-4011 for the location of your local regional DEQ office.

WASTE GENERATOR: (Contractor, Facility, or Operator)

1. Asbestos removal site name and address: Orofino Asbestos Site
   291 118th Street (Street) Orofino, ID (City/State) Clearwater (County) 83544 (Zip)
   Contact person: Bryan Chernick Phone: 206-799-3508
2. Operator's name and address: U.S. EPA Region 10 Phone: 206-553-2101
   1200 Sixth Ave, Suite 900 (ECL-116) (Street) Seattle, WA (City/State) King (County) 98101 (Zip)
3. Waste disposal site: _____ Phone: _____
   _____ (Street) _____ (City/State) _____ (County) _____ (Zip)
4. Describe asbestos materials: Soil contaminated with crushed ACM water pipe
5. Containers: Number: 14 Type: Dump Truck
6. Total quantity (cubic yards): 300

7. **OPERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packaged, marked and labeled, and are in all respects in proper condition for transport according to all government regulations. All movement of this asbestos-containing material is recorded on this Waste Shipment Record Form.

   Name: Angie Zavala Company: EPA
   Signature: _____ Date: 4/14/15

TRANSPORTER(S):

8. Transporter #1: (Acknowledgment of receipt of materials)
   Agent: Dietrich Trucking Company: Tim Hess
   Address: 7211 NE 43rd Ave Vancouver WA Phone: 360-892-3581
   Signature: Tim Hess Date: 4-22-15
9. Transporter #2: (Acknowledgment of receipt of materials)
   Agent: _____ Company: _____
   Address: _____ Phone: _____
   Signature: _____ Date: _____

DISPOSAL: (Certification of receipt of asbestos materials covered by this manifest, except as noted in item 11 below.)

10. Waste Disposal Site: Finley Buttes Landfill
    Name and Title: Michelle Dekker Scale House Date: 4-22-15
    Signature: Michelle Dekker Phone: 1-541-481-2233
11. **DISCREPANCY SPACE:** (Add attachments as needed) _____

(Revised 6/03)

FINLEY BUTTES LANDFILL
73221 Bombing Range Rd;POB 350
BOARDMAN, OR 97818

010358 E.Q.M.
18939 120TH AVE. NE - STE 103
BOTHELL WA 98011

SITE	TICKET	GRID	WEIGHMASTER
01	00246196		Michelle Dekker

DATE IN	DATE OUT	TIME IN	TIME OUT	VEHICLE	ROLL OFF
04/22/15	04/22/15	13:55	14:38	EQM005	

REFERENCE	ORIGIN
ACT-150-98	OUT-OUT OF STATE

Scale 1 Gross Wt.	84380	LB	Inbound - Charge ticket
Scale 2 Tare Wt.	38840	LB	
Net Weight	45540	LB	

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	FEE	TOTAL
22.77	TON	Asbestos - Non Friab				

Operating hours 7AM to 3:30PM Monday thru Friday.
Have a nice day!

NET AMOUNT
TENDERED
CHANGE
CHECK NO.

SW# 1-15-044 US EPA REGION #10

202.TS TO REORDER CONTACT NORTH STAR FORMS, LLC (877) 499-0492

SIGNATURE

FINLEY BUTTES LANDFILL
73221 Bombing Range Rd;POB 350
BOARDMAN, OR 97818

010358 E.Q.M.
18939 120TH AVE. NE - STE 103
BOTHELL WA 98011

SITE	TICKET	GRID	WEIGHMASTER
01	00246208		Michelle Dekker

DATE IN	DATE OUT	TIME IN	TIME OUT	VEHICLE	ROLL OFF
04/22/15	04/22/15	15:43	15:43	EQM005	

REFERENCE	ORIGIN
246196	OUT-OUT OF STATE

Manual Gross Wt.	84380	LB	Inbound - Charge ticket
Manual Tare Wt.	84380	LB	
Net Weight	0	LB	

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	FEE	TOTAL
1.00	unit	TRUCKING PER TRIP				

Operating hours 7AM to 3:30PM Monday thru Friday.
Have a nice day!

NET AMOUNT
TENDERED
CHANGE
CHECK NO.

PO # ACTION-150.98

ASN 4 ASBESTOS WASTE SHIPMENT REPORT FORM

PLEASE PRINT OR TYPE! If you have questions, contact your local DEQ Regional Office in Portland at (503) 229-5364, Salem at (503) 378-8240 ext. 272, Medford at (541) 776-6010 ext. 235, or Bend at (541) 388-6146 ext. 226, OR call (800) 452-4011 for the location of your local regional DEQ office.

WASTE GENERATOR: (Contractor, Facility, or Operator)

1. Asbestos removal site name and address: Orofino Asbestos Site
   291 118th Street (Street) Orofino, ID (City/State) Clearwater (County) 83544 (Zip)
   Contact person: Bryan Chernick Phone: 206-799-3508
2. Operator's name and address: U.S. EPA Region 10 Phone: 206-553-2101
   1200 Sixth Ave, Suite 900 (ECL-116) (Street) Seattle, WA (City/State) King (County) 98101 (Zip)
3. Waste disposal site: _____ Phone: _____
   _____ (Street) _____ (City/State) _____ (County) _____ (Zip)
4. Describe asbestos materials: Soil contaminated with crushed ACM water pipe
5. Containers: Number: 14 Type: Dump Truck
6. Total quantity (cubic yards): 300

7. OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packaged, marked and labeled, and are in all respects in proper condition for transport according to all government regulations. All movement of this asbestos-containing material is recorded on this Waste Shipment Record Form.

   Name: Angie Zepeda Company: EPA
   Signature: [signature] Date: 4/14/15

TRANSPORTER(S):

8. Transporter #1: (Acknowledgment of receipt of materials)
   Agent: _____ Company: Action Materials
   Address: Spokane WA Phone: 509-443-6230
   Signature: [signature] Date: 4-22-15
9. Transporter #2: (Acknowledgment of receipt of materials)
   Agent: _____ Company: _____
   Address: _____ Phone: _____
   Signature: _____ Date: _____

DISPOSAL: (Certification of receipt of asbestos materials covered by this manifest, except as noted in item 11 below.)

10. Waste Disposal Site: Finley Buttes Land Fill
    Name and Title: Michelle Dekker Scale House Date: 4-22-15
    Signature: [signature] Phone: 541-481-2223
11. DISCREPANCY SPACE: (Add attachments as needed) _____

(Revised 6/03)

FINLEY BUTTES LANDFILL
73221 Bombing Range Rd;POB 350
BOARDMAN, OR 97818

010358 E.Q.M.
18939 120TH AVE. NE - STE 103
BOTHELL WA 98011

SITE	TICKET	GRID	WEIGHMASTER
01	00246199		Michelle Dekker

DATE IN	DATE OUT	TIME IN	TIME OUT	VEHICLE	ROLL OFF
04/22/15	04/22/15	14:01	14:36	EQM005	

REFERENCE	ORIGIN
ACT-97-04	OUT-OUT OF STATE

Scale 1 Gross Wt.	86440	LB	Inbound - Charge ticket
Scale 2 Tare Wt.	39440	LB	
Net Weight	47000	LB	

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	FEE	TOTAL
23.50	TON	Asbestos - Non Friab				

Operating hours 7AM to 3:30PM Monday thru Friday.
Have a nice day!

NET AMOUNT
TENDERED
CHANGE
CHECK NO.

SW# 1-15-071 US EPA REGION #10

202.TS TO REORDER CONTACT NORTH STAR FORMS, LLC (877) 499-0492

SIGNATURE

FINLEY BUTTES LANDFILL
73221 Bombing Range Rd;POB 350
BOARDMAN, OR 97818

010358 E.Q.M.
18939 120TH AVE. NE - STE 103
BOTHELL WA 98011

SITE	TICKET	GRID	WEIGHMASTER
01	00246209		Michelle Dekker

DATE IN	DATE OUT	TIME IN	TIME OUT	VEHICLE	ROLL OFF
04/22/15	04/22/15	15:47	15:47	EQM005	

REFERENCE	ORIGIN
246199	OUT-OUT OF STATE

Manual Gross Wt.	86440	LB	Inbound - Charge ticket
Manual Tare Wt.	86440	LB	
Net Weight	0	LB	

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	FEE	TOTAL
1.00	unit	TRUCKING PER TRIP				

Operating hours 7AM to 3:30PM Monday thru Friday.
Have a nice day!

NET AMOUNT
TENDERED
CHANGE
CHECK NO.

PO # ACTION 97-04

9704

ASN 4 ASBESTOS WASTE SHIPMENT REPORT FORM

PLEASE PRINT OR TYPE! If you have questions, contact your local DEQ Regional Office in Portland at (503) 229-5364, Salem at (503) 378-8240 ext. 272, Medford at (541) 776-6010 ext. 235, or Bend at (541) 388-6146 ext. 226. OR call (800) 452-4011 for the location of your local regional DEQ office.

WASTE GENERATOR: (Contractor, Facility, or Operator)

1. Asbestos removal site name and address: Orofino Asbestos Site
   291 118th Street (Street) Orofino, ID (City/State) Clearwater (County) 83544 (Zip)
   Contact person: Bryan Chernick Phone: 206-799-3508
2. Operator's name and address: U.S. EPA Region 10 Phone: 206-553-2101
   1200 Sixth Ave, Suite 900 (ECL-116) (Street) Seattle, WA (City/State) King (County) 98101 (Zip)
3. Waste disposal site: _____ Phone: _____
   _____ (Street) _____ (City/State) _____ (County) _____ (Zip)
4. Describe asbestos materials: Soil contaminated with crushed ACM water Pipe
5. Containers: Number: 14 Type: Dump Truck
6. Total quantity (cubic yards): 300

7. OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packaged, marked and labeled, and are in all respects in proper condition for transport according to all government regulations. All movement of this asbestos-containing material is recorded on this Waste Shipment Record Form.

   Name: Angie Pewala Company: EPA
   Signature: [signature] Date: 4/14/15

TRANSPORTER(S):

8. Transporter #1: (Acknowledgment of receipt of materials)
   Agent: _____ Company: Action Materials
   Address: 10710 S. Cheney Spokane Rd. Phone: 509 534 7000
   Signature: [signature] Date: 4-22-15
9. Transporter #2: (Acknowledgment of receipt of materials)
   Agent: _____ Company: _____
   Address: _____ Phone: _____
   Signature: _____ Date: _____

DISPOSAL: (Certification of receipt of asbestos materials covered by this manifest, except as noted in item 11 below.)

10. Waste Disposal Site: FINLEY BUTTES LANDFILL
    Name and Title: JOHN CARRAHER SCALE Date: 4/22/15
    Signature: [signature] Phone: 541, 481-2233
11. DISCREPANCY SPACE: (Add attachments as needed) _____

(Revised 8/03)

DUPLICATE TICKET

FINLEY BUTTES LANDFILL
73221 Bombing Range Rd;POB 350
BOARDMAN, OR 97818

010358 E.Q.M.
18939 120TH AVE. NE - STE 103
BOTHELL WA 98011

01	00246206		Michelle Dekker		
DATE IN	DATE OUT	TIME IN	TIME OUT	VEHICLE	ROLL OFF
04/22/15	04/22/15	15:27	15:52	EQM005	
REFERENCE		ORIGIN			
ACT154-97		OUT-OUT OF STATE			

Scale 1 Gross Wt.	83860	LB	Inbound - Charge ticket
Scale 2 Tare Wt.	39160	LB	
Net Weight	44700	LB	

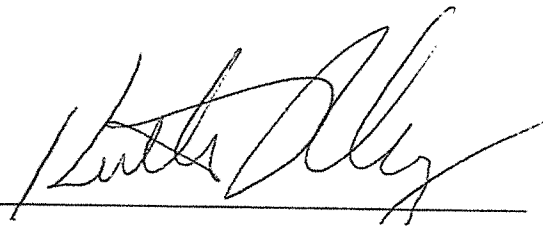
QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	FEE	TOTAL
22.35	TON	Asbestos - Non Friab				
1.00	unit	TRUCKING PER TRIP				

Operating hours 7AM to 3:30PM Monday thru Friday.
Have a nice day!

NET AMOUNT
TENDERED
CHANGE
CHECK NO.

SW# 1-15-071 US EPA REGION #

202.TS TO REORDER CONTACT NORTH STAR FORMS, LLC (877) 499-0492

SIGNATURE 

ASN 4 ASBESTOS WASTE SHIPMENT REPORT FORM

PLEASE PRINT OR TYPE! If you have questions, contact your local DEQ Regional Office in Portland at (503) 229-5364, Salem at (503) 378-8240 ext. 272, Medford at (541) 776-6010 ext. 235, or Bend at (541) 388-6146 ext. 226, OR call (800) 452-4011 for the location of your local regional DEQ office.

WASTE GENERATOR: (Contractor, Facility, or Operator)

1. Asbestos removal site name and address: Orofino Asbestos Site
   291 118th Street (Street) Orofino, ID (City/State) Clearwater (County) 83544 (Zip)
   Contact person: Bryan Chernick Phone: 206-799-3508
2. Operator's name and address: U.S. EPA Region 10 Phone: 206-553-2101
   1200 Sixth Ave, Suite 900 (ECL-116) (Street) Seattle, WA (City/State) King (County) 98101 (Zip)
3. Waste disposal site: _____ Phone: _____
   _____ (Street) _____ (City/State) _____ (County) _____ (Zip)
4. Describe asbestos materials: Soil contaminated with crushed ACM water pipe
5. Containers: Number: 14 Type: Dump Truck
6. Total quantity (cubic yards): 300

7. **OPERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packaged, marked and labeled, and are in all respects in proper condition for transport according to all government regulations. All movement of this asbestos-containing material is recorded on this Waste Shipment Record Form.

   Name: Angie Zavala Company: EPA
   Signature: [signature] Date: 4/14/15

TRANSPORTER(S):

8. Transporter #1: (Acknowledgment of receipt of materials)
   Agent: Keith Rumbo Company: Action Materials
   Address: Spokane, WA 99224 Phone: 509-448-9386
   Signature: [signature] Date: 4-22-15
9. Transporter #2: (Acknowledgment of receipt of materials)
   Agent: _____ Company: _____
   Address: _____ Phone: _____
   Signature: _____ Date: _____

DISPOSAL: (Certification of receipt of asbestos materials covered by this manifest, except as noted in item 11 below.)

10. Waste Disposal Site: Finley Buttes Land Fill
    Name and Title: Michelle DeKker Scale House Date: 4-22-15
    Signature: [signature] Phone: 541-481-2233
11. **DISCREPANCY SPACE:** (Add attachments as needed) _____

(Revised 6/03)

FINLEY BUTTES LANDFILL
73221 Bombing Range Rd;POB 350
BOARDMAN, OR 97818

010358 E.Q.M.
18939 120TH AVE. NE - STE 103
BOTHELL WA 98011

01	00246207		Michelle Dekker

DATE IN	DATE OUT	TIME IN	TIME OUT	VEHICLE	ROLL OF
04/22/15	04/22/15	15:27	15:55	EQM005	

REFERENCE	ORIGIN
ACT-75-99	OUT-OUT OF STATE

Scale 1 Gross Wt.	85320	LB	Inbound - Charge ticket
Scale 2 Tare Wt.	38000	LB	
Net Weight	47320	LB	

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	FEE	TOTAL
23.66	TON	Asbestos - Non Friab				
1.00	unit	TRUCKING PER TRIP				

Operating hours 7AM to 3:30PM Monday thru Friday.
Have a nice day!

NET AMOUN

TENDERED

CHECK NO.

SW# 1-15-071 US EPA REGION #$

202.TS TO REORDER CONTACT NORTH STAR FORMS, LLC (877) 499-0492

SIGNATURE

75-99

ASN 4 ASBESTOS WASTE SHIPMENT REPORT FORM

PLEASE PRINT OR TYPE! If you have questions, contact your local DEQ Regional Office in Portland at (503) 229-5364, Salem at (503) 378-8240 ext. 272, Medford at (541) 776-6010 ext. 235, or Bend at (541) 388-6146 ext. 226, OR call (800) 452-4011 for the location of your local regional DEQ office.

WASTE GENERATOR: (Contractor, Facility, or Operator)

1. Asbestos removal site name and address: Orofino Asbestos Site
   291 118th Street (Street) Orofino, ID (City/State) Clearwater (County) 83544 (Zip)
   Contact person: Bryan Chernick Phone: 206-799-3508
2. Operator's name and address: U.S. EPA Region 10 Phone: 206-553-2101
   1200 Sixth Ave, Suite 900 (ECL-116) (Street) Seattle, WA (City/State) King (County) 98101 (Zip)
3. Waste disposal site: _____ Phone: _____
   _____ (Street) _____ (City/State) _____ (County) _____ (Zip)
4. Describe asbestos materials: Soil contaminated with crushed ACM water pipe
5. Containers: Number: 14 Type: Dump Truck
6. Total quantity (cubic yards): 300

7. **OPERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packaged, marked and labeled, and are in all respects in proper condition for transport according to all government regulations. All movement of this asbestos-containing material is recorded on this Waste Shipment Record Form.

   Name: Angie Acuña Company: EPA
   Signature: _____ Date: 4/14/15

TRANSPORTER(S):

8. Transporter #1: (Acknowledgment of receipt of materials)
   Agent: _____ Company: Action Materials
   Address: 10710 S. Spokane Cheney Phone: _____
   Signature: _____ Date: 4-22-2015
9. Transporter #2: (Acknowledgment of receipt of materials)
   Agent: _____ Company: _____
   Address: _____ Phone: _____
   Signature: _____ Date: _____

DISPOSAL: (Certification of receipt of asbestos materials covered by this manifest, except as noted in item 11 below.)

10. Waste Disposal Site: Finley Buttes Land fill
    Name and Title: Michelle DeKker Scale House Date: 4-22-15
    Signature: Michelle DeKker Phone: 541-481-2233
11. **DISCREPANCY SPACE:** (Add attachments as needed) _____

(Revised 5-03)

FINLEY BUTTES LANDFILL
73221 Bombing Range Rd;POB 350
BOARDMAN, OR 97818

010358 E.Q.M.
18939 120TH AVE. NE - STE 103
BOTHELL WA 98011

01	00246247		Michelle Dekker

DATE IN	DATE OUT	TIME IN	TIME OUT	VEHICLE	ROLL OFF
04/23/15	04/23/15	08:25	08:54	EQM005	

REFERENCE	ORIGIN
D&R8527	OUT-OUT OF STATE

Scale 1 Gross Wt.	105900	LB	Inbound - Charge ticket
Scale 2 Tare Wt.	42100	LB	
Net Weight	63800	LB	

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	FEE	TOTAL
31.90	TON	Asbestos - Non Friab				
1.00	unit	TRUCKING PER TRIP				

Operating hours 7AM to 3:30PM Monday thru Friday.
Have a nice day!

NET AMOUNT
TENDERED
CHECK NO.

SW# 1-15-071 US EPA REGION #10

202.TS TO REORDER CONTACT NORTH STAR FORMS, LLC (877) 499-0492

SIGNATURE Tim Haney

ASN 4 ASBESTOS WASTE SHIPMENT REPORT FORM

PLEASE PRINT OR TYPE! If you have questions, contact your local DEQ Regional Office in Portland at (503) 229-5364, Salem at (503) 378-8240 ext. 272, Medford at (541) 776-6010 ext. 235, or Bend at (541) 388-6146 ext. 226, OR call (800) 452-4011 for the location of your local regional DEQ office.

WASTE GENERATOR: (Contractor, Facility, or Operator)

1. Asbestos removal site name and address: Orofino Asbestos Site
   291 118th Street (Street) Orofino, ID (City/State) Clearwater (County) 83544 (Zip)
   Contact person: Bryan Chernick Phone: 206-799-3508
2. Operator's name and address: U.S. EPA Region 10 Phone: 206-553-2101
   1200 Sixth Ave, Suite 900 (ECL-116) (Street) Seattle, WA (City/State) King (County) 98101 (Zip)
3. Waste disposal site: _____ Phone: _____
   _____ (Street) _____ (City/State) _____ (County) _____ (Zip)
4. Describe asbestos materials: Soil contaminated with crushed ACM water pipe
5. Containers: Number: 14 Type: Dump Truck
6. Total quantity (cubic yards): 300

7. OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packaged, marked and labeled, and are in all respects in proper condition for transport according to all government regulations. All movement of this asbestos-containing material is recorded on this Waste Shipment Record Form.

   Name: Angie Acevedo Company: EPA
   Signature: [signature] Date: 4/14/15

TRANSPORTER(S):

8. Transporter #1: (Acknowledgment of receipt of materials)
   Agent: Tim Harvey Company: Dietrich Trucking
   Address: 7211 NE 43rd Ave Vancouver WA Phone: 360-573-2000
   Signature: Tim Harvey Date: 4-23-15
9. Transporter #2: (Acknowledgment of receipt of materials)
   Agent: _____ Company: _____
   Address: _____ Phone: _____
   Signature _____ Date: _____

DISPOSAL: (Certification of receipt of asbestos materials covered by this manifest, except as noted in item 11 below.)

10. Waste Disposal Site: Finley Buttes Landfill
    Name and Title: Michelle Dekker Scale House Date: 4-23-15
    Signature: Michelle Dekker Phone: 541-481-2233
11. DISCREPANCY SPACE: (Add attachments as needed) _____

(Revised 6/03)

FINLEY BUTTES LANDFILL
73221 Bombing Range Rd;POB 350
BOARDMAN, OR 97818

010358 E.Q.M.
18939 120TH AVE. NE - STE 103
BOTHELL WA 98011

01	00246317		Michelle Dekker		
DATE IN	DATE OUT	TIME IN	TIME OUT	VEHICLE	ROLL OFF
04/23/15	04/23/15	13:23	14:02	EQM005	

REFERENCE	ORIGIN
ACT-97-04	OUT-OUT OF STATE

Scale 1 Gross Wt.	88580	LB	Inbound - Charge ticket
Scale 2 Tare Wt.	39320	LB	
Net Weight	49260	LB	

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	FEE	TOTAL
24.63	TON	Asbestos - Non Friab				
1.00	unit	TRUCKING PER TRIP				

Operating hours 7AM to 3:30PM Monday thru Friday.
Have a nice day!

NET AMOUNT
TENDERED
CHECK NO.

SW# 1-15-071 US EPA REGION #10

202.TS TO REORDER CONTACT NORTH STAR FORMS, LLC (877) 499-0492

SIGNATURE

ASN 4 ASBESTOS WASTE SHIPMENT REPORT FORM

PLEASE PRINT OR TYPE! If you have questions, contact your local DEQ Regional Office in Portland at (503) 229-5364, Salem at (503) 378-8240 ext. 272, Medford at (541) 776-6010 ext. 235, or Bend at (541) 388-6146 ext. 226, OR call (800) 452-4011 for the location of your local regional DEQ office.

WASTE GENERATOR: (Contractor, Facility, or Operator)

1. Asbestos removal site name and address: Orofino Asbestos Site
   291 118th Street (Street) Orofino, ID (City/State) Clearwater (County) 83544 (Zip)
   Contact person: Bryan Chernick Phone: 206-799-3508
2. Operator's name and address: U.S. EPA Region 10 Phone: 206-553-2101
   1200 Sixth Ave, Suite 900 (ECL-116) (Street) Seattle, WA (City/State) King (County) 98101 (Zip)
3. Waste disposal site: _____ Phone: _____
   _____ (Street) _____ (City/State) _____ (County) _____ (Zip)
4. Describe asbestos materials: Soil contaminated with crushed ACM water pipe
5. Containers: Number: 14 Type: Dump Truck
6. Total quantity (cubic yards): 300

7. OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packaged, marked and labeled, and are in all respects in proper condition for transport according to all government regulations. All movement of this asbestos-containing material is recorded on this Waste Shipment Record Form.

   Name: Angie Zavala Company: EPA
   Signature: [signature] Date: 4/14/15

TRANSPORTER(S):

8. Transporter #1: (Acknowledgment of receipt of materials)
   Agent: _____ Company: Action Materials
   Address: 10710 S. Cheney Spokane Rd. 99004 Phone: _____
   Signature: [signature] Date: 4-23-15
9. Transporter #2: (Acknowledgment of receipt of materials)
   Agent: _____ Company: _____
   Address: _____ Phone: _____
   Signature: _____ Date: _____

DISPOSAL: (Certification of receipt of asbestos materials covered by this manifest, except as noted in item 11 below.)

10. Waste Disposal Site: Finley Buttes Landfill
    Name and Title: Michelle Bekker Scale House Date: 4-23-15
    Signature: Michelle Bekker Phone: 541-481-2233
11. DISCREPANCY SPACE: (Add attachments as needed) _____

(Revised 5/03)

FINLEY BUTTES LANDFILL
73221 Bombing Range Rd;POB 350
BOARDMAN, OR 97818

010358 E.Q.M.
18939 120TH AVE. NE - STE 103
BOTHELL WA 98011

01 | 00246331 | Michelle Burns

DATE IN	DATE OUT	TIME IN	TIME OUT	VEHICLE	ROLL OFF
04/23/15	04/23/15	14:24	14:47	EQM005	

REFERENCE	ORIGIN
150-98	OUT-OUT OF STATE

Inbound - Charge ticket

Scale 1 Gross Wt.	91180	LB	
Scale 2 Tare Wt.	38840	LB	
Net Weight	52340	LB	

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	FEE	TOTAL
26.17	TON	Asbestos - Non Friab				
1.00	unit	TRUCKING PER TRIP				

Operating hours 7AM to 3:30PM Monday thru Friday.
Have a nice day!

NET AMOUNT
TENDERED
CHANGE
CHECK NO.

SW# 1-15-071 US EPA REGION#10

SIGNATURE

202.TS TO REORDER CONTACT NORTH STAR FORMS, LLC (877) 499-0492

ASN 4 ASBESTOS WASTE SHIPMENT REPORT FORM

PLEASE PRINT OR TYPE! If you have questions, contact your local DEQ Regional Office in Portland at (503) 229-5364, Salem at (503) 378-8240 ext. 272, Medford at (541) 776-6010 ext. 235, or Bend at (541) 388-6146 ext. 226, OR call (800) 452-4011 for the location of your local regional DEQ office.

WASTE GENERATOR: (Contractor, Facility, or Operator)

1. Asbestos removal site name and address: Oroflino Asbestos Site
   291 118th Street (Street) Orofino, ID (City/State) Clearwater (County) 83544 (Zip)
   Contact person: Bryan Chernick Phone: 206-799-3508
2. Operator's name and address: U.S. EPA Region 10 Phone: 206-553-2101
   1200 Sixth Ave, Suite 900 (ECL-116) (Street) Seattle, WA (City/State) King (County) 98101 (Zip)
3. Waste disposal site: _____ Phone: _____
   _____ (Street) _____ (City/State) _____ (County) _____ (Zip)
4. Describe asbestos materials: Soil contaminated with crushed ACM water pipe
5. Containers: Number: 14 Type: Dump Truck
6. Total quantity (cubic yards): 300

7. **OPERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packaged, marked and labeled, and are in all respects in proper condition for transport according to all government regulations. All movement of this asbestos-containing material is recorded on this Waste Shipment Record Form.

   Name: Angie Zavala Company: EPA
   Signature: [signature] Date: 4/14/15

TRANSPORTER(S):

8. Transporter #1: (Acknowledgment of receipt of materials)
   Agent: _____ Company: Action Materials
   Address: Spokane, WA Phone: 509 443-6230
   Signature: [signature] Date: 4-23-15
9. Transporter #2: (Acknowledgment of receipt of materials)
   Agent: _____ Company: _____
   Address: _____ Phone: _____
   Signature: _____ Date: _____

DISPOSAL: (Certification of receipt of asbestos materials covered by this manifest, except as noted in item 11 below.)

10. Waste Disposal Site: Finley Buttes Landfill
    Name and Title: Michelle Dekker Scale House Date: 4-23-15
    Signature: Michelle Dekker Phone: 541-481-2233
11. **DISCREPANCY SPACE:** (Add attachments as needed) _____

(Revised 6/03)

FINLEY BUTTES LANDFILL
73221 Bombing Range Rd;POB 350
BOARDMAN, OR 97818

010358 E.Q.M.
18939 120TH AVE. NE - STE 103
BOTHELL WA 98011

SITE	TICKET	GRID	WEIGHMASTER
01	00246338		Michelle Dekker

DATE IN	DATE OUT	TIME IN	TIME OUT	VEHICLE	ROLL OFF
04/23/15	04/23/15	15:37	15:59	EQM005	

REFERENCE	ORIGIN
154-97	OUT-OUT OF STATE

Manual Gross Wt.	90380	LB	Inbound - Charge ticket
Scale 2 Tare Wt.	39220	LB	
Net Weight	51160	LB	

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	FEE	TOTAL
25.58	TON	Asbestos - Non Friab				
1.00	unit	TRUCKING PER TRIP				

Operating hours 7AM to 3:30PM Monday thru Friday.
Have a nice day!

NET AMOUNT
TENDERED
CHECK NO.

SW# 1-15-071 US EPA REGION #10

202.TS TO REORDER CONTACT NORTH STAR FORMS, LLC (877) 499-0492

SIGNATURE

ASN 4 ASBESTOS WASTE SHIPMENT REPORT FORM

PLEASE PRINT OR TYPE! If you have questions, contact your local DEQ Regional Office in Portland at (503) 229-5364, Salem at (503) 378-8240 ext. 272, Medford at (541) 776-6010 ext. 235, or Bend at (541) 388-6146 ext. 226, OR call (800) 452-4011 for the location of your local regional DEQ office.

WASTE GENERATOR: (Contractor, Facility, or Operator)

1. Asbestos removal site name and address: Orofino Asbestos Site
   291 11th Street (Street) Orofino, ID (City/State) Clearwater (County) 83544 (Zip)
   Contact person: Bryan Chernick Phone: 206-799-3508
2. Operator's name and address: U.S. EPA Region 10 Phone: 206-553-2101
   1200 Sixth Ave, Suite 900 (ECL-116) (Street) Seattle, WA (City/State) King (County) 98101 (Zip)
3. Waste disposal site: _____ Phone: _____
   _____ (Street) _____ (City/State) _____ (County) _____ (Zip)
4. Describe asbestos materials: Soil contaminated with crushed ACM water pipe
5. Containers: Number: 14 Type: Dump Truck
6. Total quantity (cubic yards): 300

7. **OPERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packaged, marked and labeled, and are in all respects in proper condition for transport according to all government regulations. All movement of this asbestos-containing material is recorded on this Waste Shipment Record Form.

   Name: Angie Zavala Company: EPA
   Signature: [signature] Date: 4/14/15

TRANSPORTER(S):

8. Transporter #1: (Acknowledgment of receipt of materials)
   Agent: Keeley Rhude Company: Action Materials
   Address: Spokane, WA Phone: 509-448-9386
   Signature: [signature] Date: 4-23-15
9. Transporter #2: (Acknowledgment of receipt of materials)
   Agent: _____ Company: _____
   Address: _____ Phone: _____
   Signature: _____ Date: _____

DISPOSAL: (Certification of receipt of asbestos materials covered by this manifest, except as noted in item 11 below.)

10. Waste Disposal Site: Finley Buttes landfill
    Name and Title: Michelle Dekker Scale House Date: 4-23-15
    Signature: Michelle Dekker Phone: 541-481-2233
11. **DISCREPANCY SPACE:** (Add attachments as needed) _____

(Revised 6/03)

FINLEY BUTTES LANDFILL
73221 Bombing Range Rd;POB 350
BOARDMAN, OR 97818

010358 E.Q.M.
18939 120TH AVE. NE - STE 103
BOTHELL WA 98011

		GRID	WEIGHMASTER
01	00246339		Michelle Dekker

DATE IN	DATE OUT	TIME IN	TIME OUT	VEHICLE	ROLL OFF
04/23/15	04/23/15	15:38	15:56	EQM005	

REFERENCE	ORIGIN
75-99	OUT-OUT OF STATE

Manual Gross Wt.	86560	LB	Inbound - Charge ticket
Scale 2 Tare Wt.	37900	LB	
Net Weight	48660	LB	

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	FEE	TOTAL
24.33	TON	Asbestos - Non Friab				
1.00	unit	TRUCKING PER TRIP				

Operating hours 7AM to 3:30PM Monday thru Friday.
Have a nice day!

NET AMOUNT
TENDERED
CHANGE
CHECK NO.

SW# 1-15-071 US EPA REGION #10

202.TS TO REORDER CONTACT NORTH STAR FORMS, LLC (877) 499-0492

SIGNATURE _____

75-93

ASN 4 ASBESTOS WASTE SHIPMENT REPORT FORM

PLEASE PRINT OR TYPE: If you have questions, contact your local DEQ Regional Office in Portland at (503) 229-5364, Salem at (503) 378-8240 ext. 272, Medford at (541) 776-6010 ext. 235, or Bend at (541) 388-6146 ext. 226, OR call (800) 452-4011 for the location of your local regional DEQ office.

WASTE GENERATOR: (Contractor, Facility, or Operator)

1. Asbestos removal site name and address: Orofino Asbestos Site
   291 118th Street (Street) Orofino, ID (City/State) Clearwater (County) 83544 (Zip)
   Contact person: Bryan Chernick Phone: 206-799-3508
2. Operator's name and address: U.S. EPA Region 10 Phone: 206-553-2101
   1200 Sixth Ave, Suite 900 (ECL-116) (Street) Seattle, WA (City/State) King (County) 98101 (Zip)
3. Waste disposal site: _____ Phone: _____
   _____ (Street) _____ (City/State) _____ (County) _____ (Zip)
4. Describe asbestos materials: Soil contaminated with crushed ACM water pipe
5. Containers: Number: 14 Type: Dump Truck
6. Total quantity (cubic yards): 300
7. OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packaged, marked and labeled, and are in all respects in proper condition for transport according to all government regulations. All movement of this asbestos-containing material is recorded on this Waste Shipment Record Form.
   Name: Angie Zavala Company: EPA
   Signature: _____ Date: 4/14/15

TRANSPORTER(S):

8. Transporter #1: (Acknowledgment of receipt of materials)
   Agent: _____ Company: Action Materials
   Address: 10710 S Broadie Cheney Phone: _____
   Signature: _____ Date: 4-23-2015
9. Transporter #2: (Acknowledgment of receipt of materials)
   Agent: _____ Company: _____
   Address: _____ Phone: _____
   Signature: _____ Date: _____

DISPOSAL: (Certification of receipt of asbestos materials covered by this manifest, except as noted in item 11 below.)

10. Waste Disposal Site: Finley Buttes Landfill
    Name and Title: Michelle Dekker Scale House Date: 4-23-15
    Signature: Michelle Dekker Phone: 541-481-2233
11. DISCREPANCY SPACE: (Add attachments as needed) _____

(Revised 6/93)

FINLEY BUTTES LANDFILL
73221 Bombing Range Rd;POB 350
BOARDMAN, OR 97818

010358 E.Q.M.
18939 120TH AVE. NE - STE 103
BOTHELL WA 98011

01	00246348			John Carraher	
DATE IN	DATE OUT	TIME IN	TIME OUT	VEHICLE	ROLL OFF
04/24/15	04/24/15	06:15	06:36	EQM005	
REFERENCE		ORIGIN			
8527		OUT-OUT OF STATE			

Scale 1 Gross Wt.	104160	LB	Inbound - Charge ticket
Scale 2 Tare Wt.	41880	LB	
Net Weight	62280	LB	

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	FEE	TOTAL
31.14	TON	Asbestos - Non Friab				
1.00	unit	TRUCKING PER TRIP				

Operating hours 7AM to 3:30PM Monday thru Friday.
Have a nice day!

NET AMOUNT
TENDERED
CHANGE
CHECK NO

SW# 1-15-071
PO # U S E P A REGION #10

202.TS TO REORDER CONTACT NORTH STAR FORMS, LLC (877) 499-0492

SIGNATURE Jim Hess

ASN 4 ASBESTOS WASTE SHIPMENT REPORT FORM

PLEASE PRINT OR TYPE! If you have questions, contact your local DEQ Regional Office in Portland at (503) 229-5364, Salem at (503) 378-8240 ext. 272, Medford at (541) 776-6010 ext. 235, or Bend at (541) 388-6146 ext. 226, OR call (800) 452-4011 for the location of your local regional DEQ office.

WASTE GENERATOR: (Contractor, Facility, or Operator)

1. Asbestos removal site name and address: Orofino Asbestos Site
   291 118th Street (Street) Orofino, ID (City/State) Clearwater (County) 83544 (Zip)
   Contact person: Bryan Chernick Phone: 206-799-3508
2. Operator's name and address: U.S. EPA Region 10 Phone: 206-553-2101
   1200 Sixth Ave, Suite 900 (ECL-116) (Street) Seattle, WA (City/State) King (County) 98101 (Zip)
3. Waste disposal site: _____ Phone: _____
   _____ (Street) _____ (City/State) _____ (County) _____ (Zip)
4. Describe asbestos materials: Soil contaminated with crushed ACM water pipe
5. Containers: Number: 14 Type: Dump Truck
6. Total quantity (cubic yards): 300
7. **OPERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packaged, marked and labeled, and are in all respects in proper condition for transport according to all government regulations. All movement of this asbestos-containing material is recorded on this Waste Shipment Record Form.
   Name: Angie Zavala Company: EPA
   Signature: [signature] Date: 4/14/15

TRANSPORTER(S):

8. Transporter #1: (Acknowledgment of receipt of materials)
   Agent: Tim Harvey Company: Dietrich Trucking
   Address: 7211 NE 43rd Ave Vancouver WA 98661 Phone: _____
   Signature: Tim Harvey Date: 4-24-15
9. Transporter #2: (Acknowledgment of receipt of materials)
   Agent: _____ Company: _____
   Address: _____ Phone: _____
   Signature: _____ Date: _____

DISPOSAL: (Certification of receipt of asbestos materials covered by this manifest, except as noted in item 11 below.)

10. Waste Disposal Site: FINLEY BUTTES LANDFILL
    Name and Title: SCALE JOHN CARRAHER Date: 4/24/15
    Signature: John Carraher Phone: 541 481 2733
11. DISCREPANCY SPACE: (Add attachments as needed) _____

(Revised 6/03)

FINLEY BUTTES LANDFILL
73221 Bombing Range Rd;POB 350
BOARDMAN, OR 97818

010358 E.Q.M.
18939 120TH AVE. NE - STE 103
BOTHELL WA 98011

SITE	TICKET	GRID	WEIGHMASTER
01	00246447		Michelle Dekker

DATE IN	DATE OUT	TIME IN	TIME OUT	VEHICLE	ROLL OFF
04/24/15	04/24/15	14:09	14:30	EQM005	

REFERENCE	ORIGIN
75-99	OUT-OUT OF STATE

Scale 1 Gross Wt.	76220	LB	Inbound - Charge ticket
Scale 2 Tare Wt.	37960	LB	
Net Weight	38260	LB	

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	FEE	TOTAL
19.13	TON	Asbestos - Non Friab				

Operating hours 7AM to 3:30PM Monday thru Friday.
Have a nice day!

NET AMOUNT
TENDERED
CHECK NO.

SW# 1-15-071 US EPA REGION #10

202.TS TO REORDER CONTACT NORTH STAR FORMS, LLC (877) 499-0492 SIGNATURE

FINLEY BUTTES LANDFILL
73221 Bombing Range Rd;POB 350
BOARDMAN, OR 97818

010358 E.Q.M.
18939 120TH AVE. NE - STE 103
BOTHELL WA 98011

SITE	TICKET	GRID	WEIGHMASTER
01	00246453		Michelle Dekker

DATE IN	DATE OUT	TIME IN	TIME OUT	VEHICLE	ROLL OFF
04/24/15	04/24/15	14:35	14:35	EQM005	

REFERENCE	ORIGIN
246447	OUT-OUT OF STATE

Manual Gross Wt.	76220	LB	Inbound - Charge ticket
Manual Tare Wt.	76220	LB	
Net Weight	0	LB	

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	FEE	TOTAL
1.00	unit	TRUCKING PER TRIP				

Operating hours 7AM to 3:30PM Monday thru Friday.
Have a nice day!

NET AMOUNT
TENDERED
CHANGE
CHECK NO.

PO # 75-99

SIGNATURE

75-99

ASN 4 ASBESTOS WASTE SHIPMENT REPORT FORM

DEQ

PLEASE PRINT OR TYPE! If you have questions, contact your local DEQ Regional Office in Portland at (503) 229-5364, Salem at (503) 378-8240 ext. 272, Medford at (541) 776-6010 ext. 235, or Bend at (541) 388-6146 ext. 226, OR call (800) 452-4011 for the location of your local regional DEQ office.

WASTE GENERATOR: (Contractor, Facility, or Operator)

1. Asbestos removal site name and address: Orofino Asbestos Site
   291 118th Street (Street) Orofino, ID (City/State) Clearwater (County) 83544 (Zip)
   Contact person: Bryan Chernick Phone: 206-799-3508
2. Operator's name and address: U.S. EPA Region 10 Phone: 206-553-2101
   1200 Sixth Ave, Suite 900 (ECL-116) (Street) Seattle, WA (City/State) King (County) 98101 (Zip)
3. Waste disposal site: _____ Phone: _____
   _____ (Street) _____ (City/State) _____ (County) _____ (Zip)
4. Describe asbestos materials: Soil contaminated with crushed ACM water Pipe
5. Containers: Number: 14 Type: Dump Truck
6. Total quantity (cubic yards): 300
7. **OPERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packaged, marked and labeled, and are in all respects in proper condition for transport according to all government regulations. All movement of this asbestos-containing material is recorded on this Waste Shipment Record Form.
   Name: Angie Zavala Company: EPA
   Signature: [signature] Date: 4/14/15

TRANSPORTER(S):

8. Transporter #1: (Acknowledgment of receipt of materials)
   Agent: _____ Company: Action Materials
   Address: 10710 S Cheney Spokane Phone: _____
   Signature: [signature] Date: 4-24-2015
9. Transporter #2: (Acknowledgment of receipt of materials)
   Agent: _____ Company: _____
   Address: _____ Phone: _____
   Signature: _____ Date: _____

DISPOSAL: (Certification of receipt of asbestos materials covered by this manifest, except as noted in item 11 below.)

10. Waste Disposal Site: Finley Buttes Land Fill
    Name and Title: Michelle Dekker Scale House Date: 4-24-15
    Signature: Michelle Dekker Phone: 541-481-2233
11. **DISCREPANCY SPACE:** (Add attachments as needed) _____

(Revised 5-03)

FINLEY BUTTES LANDFILL
73221 Bombing Range Rd;POB 350
BOARDMAN, OR 97818

010358 E.Q.M.
18939 120TH AVE. NE - STE 103
BOTHELL WA 98011

SITE	TICKET	GRID	WEIGHMASTER
01	00246448		Michelle Dekker

DATE IN	DATE OUT	TIME IN	TIME OUT	VEHICLE	ROLL OFF
04/24/15	04/24/15	14:10	14:33	EQM005	

REFERENCE	ORIGIN
154-97	OUT-OUT OF STATE

Scale 1 Gross Wt.	71800	LB	Inbound - Charge ticket
Scale 2 Tare Wt.	39400	LB	
Net Weight	32400	LB	

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	FEE	TOTAL
16.20	TON	Asbestos - Non Friab				
1.00	unit	TRUCKING PER TRIP				

Operating hours 7AM to 3:30PM Monday thru Friday.
Have a nice day!

NET AMOUNT
TENDERED
CHANGE
CHECK NO.

SW# 1-15-071 US EPA REGION 310

202.TS TO REORDER CONTACT NORTH STAR FORMS, LLC (877) 499-0492

SIGNATURE

ASN 4 ASBESTOS WASTE SHIPMENT REPORT FORM

PLEASE PRINT OR TYPE! If you have questions, contact your local DEQ Regional Office in Portland at (503) 229-5364, Salem at (503) 378-8240 ext. 272, Medford at (541) 776-6010 ext. 235, or Bend at (541) 388-6146 ext. 226, OR call (800) 452-4011 for the location of your local regional DEQ office.

WASTE GENERATOR: (Contractor, Facility, or Operator)

1. Asbestos removal site name and address: Orofino Asbestos Site
   291 118th Street (Street) Orofino, ID (City/State) Clearwater (County) 83544 (Zip)
   Contact person: Bryan Chernick Phone: 206-799-3508
2. Operator's name and address: U.S. EPA Region 10 Phone: 206-553-2101
   1200 Sixth Ave, Suite 900 (ECL-116) (Street) Seattle, WA (City/State) King (County) 98101 (Zip)
3. Waste disposal site: _____ Phone: _____
   _____ (Street) _____ (City/State) _____ (County) _____ (Zip)
4. Describe asbestos materials: Soil contaminated with crushed ACM water pipe
5. Containers: Number: 14 Type: Dump Truck
6. Total quantity (cubic yards): 300

7. **OPERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packaged, marked and labeled, and are in all respects in proper condition for transport according to all government regulations. All movement of this asbestos-containing material is recorded on this Waste Shipment Record Form.

   Name: Angie Zavala Company: EPA
   Signature: [signature] Date: 4/14/15

TRANSPORTER(S):

8. Transporter #1: (Acknowledgment of receipt of materials)
   Agent: Keith Rhudy Company: Action Materials
   Address: Spokane, WA Phone: 509 448-9336
   Signature: [signature] Date: 4-24-15
9. Transporter #2: (Acknowledgment of receipt of materials)
   Agent: _____ Company: _____
   Address: _____ Phone: _____
   Signature: _____ Date: _____

DISPOSAL: (Certification of receipt of asbestos materials covered by this manifest, except as noted in item 11 below.)

10. Waste Disposal Site: Finley Buttes Landfill
    Name and Title: Michelle Dekker Scale House Date: 4-29-15
    Signature: [signature] Phone: 541-481-2233
11. DISCREPANCY SPACE: (Add attachments as needed) _____

(Revised 9/03)

D Analytical Results and Data Validation Memoranda

This page intentionally left blank

ecology and environment, inc.
Global Environmental Specialists
720 Third Avenue, Suite 1700, Seattle, WA 98104
Tel: (206) 624-9537, Fax: (206) 621-9832

MEMORANDUM

DATE: May 4, 2015

TO: Steve Hall, START-IV Project Manager, E & E, Seattle, WA

FROM: Mark Woodke, START-IV Chemist, E & E, Seattle, WA MW

SUBJ: **Data Quality Assurance Review, Orofino Asbestos Site, Orofino, Idaho**

REF: TDD: 15-04-0001 PAN: 1004530.0004.106.02

The data quality assurance review of 12 air filter samples collected from the Orofino Asbestos site in Orofino, Idaho, has been completed. Phase contrast microscopy (PCM) asbestos analyses were performed by EMSL Analytical, Inc., Cinnaminson, New Jersey. All sample analyses were evaluated following EPA's Stage 2B Data Validation Manual Process (S2BVM).

The samples were numbered:

15040001	15040002	15040003	15040004	15040005
15040006	15040007	15040008	15040011	15040012
15040013	15040014			

Data Qualifications:

The samples were collected between April 21 and 24, 2015, and were analyzed by April 29, 2015. No discrepancies were noted in the laboratory case narrative.

The overall usefulness of the data is based on the criteria outlined in the Site-Specific Sampling Plan and/or Sampling and Quality Assurance Plan, the OSWER Guidance Document "Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan, and Data Validation Procedures" (EPA/540/G-90/004) and the analytical method. Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

Data Qualifiers and Definitions

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

J - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

JH - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample with a high bias.

recycled paper

JL - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample with a low bias.

JK - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample with an unknown direction of bias.

JQ – The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample with an unknown direction of bias and falls between the MDL and the Minimum (or Practical) Quantitation Limit (MQL, PQL).

N - The analysis indicates the present of an analyte for which there is presumptive evidence to make a "tentative identification".

NJ - The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

UJ - The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R - The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com cinnasblab@EMSL.com

EMSL Order:	041512039
CustomerID:	ECOL44
CustomerPO:	
ProjectID:	BOA

Attn: **Mark Woodke**
Ecology & Environment, Inc.
720 3rd Ave
Suite 1700
Seattle, WA 98104

Phone:	(206) 624-9537
Fax:	(206) 621-9832
Received:	04/27/15 8:36 AM
Analysis Date:	4/29/2015
Collected:	4/24/2015

Project: **Site #: 10-09-0008**

Test Report: Fiber Count by Phase Contrast Microscopy (PCM), NIOSH 7400 Method, Revision 3, Issue 2, 8/15/94

Sample	*Location*	*Sample Date*	*Volume (liters)*	*Fibers*	*Fields*	*LOD (fib/cc)*	*Fibers/ mm²*	*Fibers/ cc*	*Notes*
15040001 *041512039-0001*	PL01PM	4/21/2015	288.25	<5.5	100	0.009	<7.0 U	<0.009 U	
15040002 *041512039-0002*	PL02PM	4/21/2015	265.46	<5.5	100	0.010	<7.0 U	<0.010 U	
15040003 *041512039-0003*	PL03PM	4/21/2015	249.44	<5.5	100	0.011	<7.0 U	<0.011 U	
15040004 *041512039-0004*	FB01	4/21/2015		<5.5	100		<7.0 U		Field Blank
15040005 *041512039-0005*	PL04PM	4/23/2015	1503.18	6	100	0.002	7.64	0.002	
15040006 *041512039-0006*	PL05PM	4/23/2015	1651.65	<5.5	100	0.002	<7.0 U	<0.002 U	
15040007 *041512039-0007*	PL06PM	4/23/2015	1482.32	<5.5	100	0.002	<7.0 U	<0.002 U	
15040008 *041512039-0008*	FB02	4/23/2015		<5.5	100		<7.0 U		Field Blank
15040011 *041512039-0009*	PL07PM	4/24/2015	1358.39	<5.5	100	0.002	<7.0 U	<0.002 U	
15040012 *041512039-0010*	PL08PM	4/24/2015	1539.34	<5.5	100	0.002	<7.0 U	<0.002 U	

Analyst(s)

Susan Muir (12)

Benjamin Ellis, Laboratory Manager
or other approved signatory

Limit of detection is 7 fibers/mm². Intra-laboratory Sr values: 5-20 fibers = 0.31, 21-50 fibers = 0.30, 51-100 fibers = 0.25. Inter-laboratory Sr values (Average of EMSL round robin data) = 0.29. EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. EMSL is not responsible for data reported in fibers/cc, which is dependent on volume collected by non-laboratory personnel. Results have been blank corrected as applicable. The results in this report meet all requirements of the NELAC standards unless otherwise noted. Samples received in good condition unless otherwise noted.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ NYS ELAP 10872, AIHA-LAP, LLC--IHLAP Accredited #100194, NJ DEP 03036, PA ID# 68-00367

Initial report from 04/30/2015 09:32:23

JMW 5-4-15

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com cinnasblab@EMSL.com

EMSL Order:	041512039
CustomerID:	ECOL44
CustomerPO:	
ProjectID:	BOA

Attn: **Mark Woodke**
Ecology & Environment, Inc.
720 3rd Ave
Suite 1700
Seattle, WA 98104

Phone:	(206) 624-9537
Fax:	(206) 621-9832
Received:	04/27/15 8:36 AM
Analysis Date:	4/29/2015
Collected:	4/24/2015

Project: **Site #: 10-09-0008**

Test Report: Fiber Count by Phase Contrast Microscopy (PCM), NIOSH 7400 Method, Revision 3, Issue 2, 8/15/94

Sample	*Location*	*Sample Date*	*Volume (liters)*	*Fibers*	*Fields*	*LOD (fib/cc)*	*Fibers/ mm²*	*Fibers/ cc*	*Notes*
15040013	PL09PM	4/24/2015	1409.26	<5.5	100	0.002	<7.0 U	<0.002 U	
041512039-0011									
15040014	FB03	4/24/2015		<5.5	100		<7.0 U		Field Blank
041512039-0012									

The results reported have been blank corrected as applicable.

Analyst(s)

Susan Muir (12)

Benjamin Ellis, Laboratory Manager
or other approved signatory

Limit of detection is 7 fibers/mm². Intra-laboratory Sr values: 5-20 fibers = 0.31, 21-50 fibers = 0.30, 51-100 fibers = 0.25. Inter-laboratory Sr values (Average of EMSL round robin data) = 0.29. EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. EMSL is not responsible for data reported in fibers/cc, which is dependent on volume collected by non-laboratory personnel. Results have been blank corrected as applicable. The results in this report meet all requirements of the NELAC standards unless otherwise noted. Samples received in good condition unless otherwise noted.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ NYS ELAP 10872, AIHA-LAP, LLC–IHLAP Accredited #100194, NJ DEP 03036, PA ID# 68-00367

Initial report from 04/30/2015 09:32:23

THIS IS THE LAST PAGE OF THE REPORT.

MN 5-4-15

ecology and environment, inc.
Global Environmental Specialists
720 Third Avenue, Suite 1700, Seattle, WA 98104
Tel: (206) 624-9537, Fax: (206) 621-9832

MEMORANDUM

DATE: May 4, 2015

TO: Steve Hall, START-IV Project Manager, E & E, Seattle, WA

FROM: Mark Woodke, START-IV Chemist, E & E, Seattle, WA MW

SUBJ: **Data Quality Assurance Review, Orofino Asbestos Site, Orofino, Idaho**

REF: TDD: 15-04-0001 PAN: 1004530.0004.106.02

The data quality assurance review of 2 soil samples collected from the Orofino Asbestos site in Orofino, Idaho, has been completed. Polarized light microscopy (PLM) asbestos analyses were performed by EMSL Analytical, Inc., Cinnaminson, New Jersey. All sample analyses were evaluated following EPA's Stage 2B Data Validation Manual Process (S2BVM).

The samples were numbered:

15040009 15040010

Data Qualifications:

The samples were collected on April 23, 2015, and were analyzed by April 30, 2015. No discrepancies were noted in the laboratory case narrative.

The overall usefulness of the data is based on the criteria outlined in the Site-Specific Sampling Plan and/or Sampling and Quality Assurance Plan, the OSWER Guidance Document "Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan, and Data Validation Procedures" (EPA/540/G-90/004) and the analytical method. Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

Data Qualifiers and Definitions

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

J - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

JH - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample with a high bias.

JL - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample with a low bias.

recycled paper

JK - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample with an unknown direction of bias.

JQ – The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample with an unknown direction of bias and falls between the MDL and the Minimum (or Practical) Quantitation Limit (MQL, PQL).

N - The analysis indicates the present of an analyte for which there is presumptive evidence to make a "tentative identification".

NJ - The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

UJ - The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R - The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com cinnasblab@EMSL.com

EMSL Order:	041512040
CustomerID:	ECOL44
CustomerPO:	
ProjectID:	BOA

Attn: **Mark Woodke**
Ecology & Environment, Inc.
720 3rd Ave
Suite 1700
Seattle, WA 98104

Phone:	(206) 624-9537
Fax:	(206) 621-9832
Received:	04/27/15 8:36 AM
Analysis Date:	4/30/2015
Collected:	4/23/2015

Project: **Site #: 10-09-0008**

Test Report: PLM Analysis of Bulk Samples for Asbestos via EPA 600/R-93/116 Method with CARB 435 Prep (Milling). Level B for 0.1% Target Analytical Sensitivity

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
15040009 *041512040-0001*	PL01SO	Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	**None Detected**
15040010 *041512040-0002*	PL02SO	Brown Non-Fibrous Homogeneous	4.00% Cellulose	96.00% Non-fibrous (other)	**None Detected**

Analyst(s)

Andrew Castellano (2)

Benjamin Ellis, Laboratory Manager
or other approved signatory

This report relates only to the samples listed above and may not be reproduced except in full, without EMSL's written approval. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government. EMSL is not responsible for sample collection activities or method limitations. Some samples may contain asbestos fibers below the resolution limit of PLM. EMSL recommends that samples reported as none detected or less then the limit of detection undergo additional analysis via TEM. Samples received in good condition unless otherwise noted.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ

Initial report from 04/30/2015 10:53:14

MW 5415

ecology and environment, inc.
Global Environmental Specialists
720 Third Avenue, Suite 1700
Seattle, Washington 98104
Tel: (206) 624-9537, Fax: (206) 621-9832

MEMORANDUM

DATE: May 20, 2015

TO: Steve Hall, START-IV Project Manager, E & E, Seattle, WA

FROM: Mark Woodke, START-IV Chemist, E & E, Seattle, WA MW

SUBJ: **Data Quality Assurance Review, Orofino Asbestos Site, Orofino, Idaho**

REF: TDD: 14-07-00012 PAN: 1004530.0004.070.01

The data quality assurance review of two soil samples collected from the Orofino Asbestos site in Orofino, Idaho, has been completed. Grain size analyses (ASTM Methods D-421/422) were performed by Materials Testing and Consulting, Inc., Tukwila, Washington. All sample analyses were evaluated following EPA's Stage 2B Data Validation Manual Process (S2BVM).

The samples were numbered: 15040009 15040010

Data Qualifications:

The samples were collected on April 23, 2015, and were analyzed by May 8, 2015. No anomalies were noted in the case narrative.

The overall usefulness of the data is based on the criteria outlined in the Site-Specific Sampling Plan and the geotechnical methods. Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

Data Qualifiers and Definitions

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

J - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

UJ - The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R - The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

recycled paper

Materials Testing & Consulting, Inc.

Geotechnical Engineering • Special Inspection • Materials Testing • Environmental Consulting

Project: 10-09-0008-45
Project #: AEZ8
Date Received: April 27, 2015
Date Tested: May 8, 2015

Client: Analytical Resources, Inc
Sampled by: Others
Tested by: A Kinkade, C Laramie

Percent Finer (Passing) Than the Indicated Size

Sieve Size (microns)	3"	2"	1 1/2"	1"	3/4"	1/2"	3/8"	#4 (4750)	#10 (2000)	#20 (850)	#40 (425)	#60 (250)	#100 (150)	#200 (75)	32	22	13	9	7	3 2	1.3
15040010	100 0	100,0	100,0	100,0	100,0	100,0	100,0	97.1	93.1	88 7	83 8	77 2	69 0	56 5	45 9	40.4	29 4	23 9	22 0	18 4	18.4
	100 0	100 0	100.0	100 0	100 0	100 0	100 0	97.9	93 7	88 9	84.5	78.0	69.8	57.0	46.7	41.1	29.9	24.3	22 4	18 7	16.8
	100 0	100 0	100.0	100 0	100 0	100 0	100 0	96 6	92 5	88 0	83.5	77 0	68 9	55 8	46 4	40 8	29 7	24.1	22 3	18 5	14.8
15040009	100 0	100,0	100.0	100 0	100 0	71 1	52 0	29 1	15 9	9 2	6 4	5 2	4.5	3 8	3 6	3.0	2.6	2 3	2 0	1 8	1 5

Testing performed according to ASTM D421/D422
Organics were not removed prior to analysis The grain size distribution reported is the "apparent grain size distribution"

Reviewed by: [signature]

MW 5-20-15

Corporate ~ 777 Chrysler Drive • Burlington, WA 98233 • Phone (360) 755-1990 • Fax (360) 755-1980
Regional Offices: Olympia ~ 360 534 9777 Bellingham ~ 360.647 6111 Silverdale ~ 360 698 6787 Tukwila ~ 206 241 1974
Visit our website www mtc-inc net

Materials Testing & Consulting, Inc.

Geotechnical Engineering • Special Inspection • Materials Testing • Environmental Consulting

Project: 10-09-0008-45
Project #: AEZ8
Date Received: April 27, 2015
Date Tested: May 8, 2015

Client: Analytical Resources, Inc
Sampled by: Others
Tested by: A Kinkade, C Laramie

Percent Retained in Each Size Fraction

Description	% Coarse Gravel				% Gravel			% Coarse Sand	% Medium Sand		% Fine Sand			% Very Coarse Silt	% Coarse Silt	% Medium Silt	% Fine Silt	% Fine Silt	% Very Fine Silt	% Clay	
Particle Size (microns)	3-2"	2-1 1/2"	1 1/2"-1"	1-3/4"	3/4-1/2"	1/2-3/8"	3/8"-4750	4750-2000	2000-850	850-425	425-250	250-150	150-75	75-32	32-22	22-13	13-9	9-7	7-3 2	3 2-1 3	<1 3
15040010	0 0	0 0	0 0	0 0	0 0	0,0	2 9	4 0	4 4	4 9	6 6	8 2	12 8	10 5	5 5	11 0	5 5	1 8	3 7	0 0	18 4
	0 0	0,0	0 0	0 0	0 0	0 0	2,1	4 1	4 8	4 4	6 5	8 2	12 8	10 3	5 6	11 2	5 6	1 9	3 7	1 9	16 8
	0 0	0 0	0 0	0 0	0 0	0 0	3 4	4 1	4 5	4 5	6 4	8 1	13 1	9 4	5 6	11 1	5 8	1 9	3,7	3 7	14 8
15040009	0 0	0 0	0 0	0 0	28,9	19 1	22 9	13,2	6 7	2 7	1 2	0,8	0 7	0 1	0 6	0,5	0 3	0 3	0 2	0 3	1 5

Testing performed according to ASTM D421/D422
Organics were not removed prior to analysis, The grain size distribution reported is the "apparent grain size distribution"

Reviewed by: H Barry Jr

Corporate ~ 777 Chrysler Drive • **Burlington, WA 98233** • **Phone (360) 755-1990** • **Fax (360) 755-1980**
Regional Offices: Olympia ~ 360 534 9777 Bellingham ~ 360 647 6111 Silverdale ~ 360 698 6787 Tukwila ~ 206 241 1974
Visit our website www mtc-inc net

5/8/15 MW

Materials Testing & Consulting, Inc.

Geotechnical Engineering • Special Inspection • Materials Testing • Environmental Consulting

Project: 10-09-0008-45
Project #: AEZ8
Date Received: April 27, 2015
Date Tested: May 8, 2015

Client: Analytical Resources, Inc
Sampled by: Others
Tested by: A. Kinkade, C. Laramie

Relative Standard Deviation, By Size

Sample ID	75000	50000	37500	25000	19000	12500	9500	4750	2000	850	425	250	150	75	32	22	13	9	7	3.2	1.3
15040010	100.0	100.0	100.0	100.0	100.0	100.0	100.0	97.1	93.1	88.7	83.8	77.2	69.0	56.5	45.9	40.4	29.4	23.9	22.0	18.4	18.4
15040010	100.0	100.0	100.0	100.0	100.0	100.0	100.0	97.9	93.7	88.9	84.5	78.0	69.8	57.0	46.7	41.1	29.9	24.3	22.4	18.7	16.8
15040010	100.0	100.0	100.0	100.0	100.0	100.0	100.0	96.6	92.5	88.0	83.5	77.0	68.9	55.8	46.4	40.8	29.7	24.1	22.3	18.5	14.8
AVE	100.0	100.0	100.0	100.0	100.0	100.0	100.0	97.2	93.1	88.5	83.9	77.4	69.3	56.4	46.3	40.8	29.7	24.1	22.2	18.5	16.7
STDEV	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.4	0.4	0.4	0.4	0.5	0.3	0.3	0.2	0.2	0.2	0.1	1.4
%RSD	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.6	0.5	0.5	0.5	0.6	0.9	0.7	0.7	0.7	0.7	0.7	0.7	8.7

This Triplicate applies to the Batch Containing the Following Samples

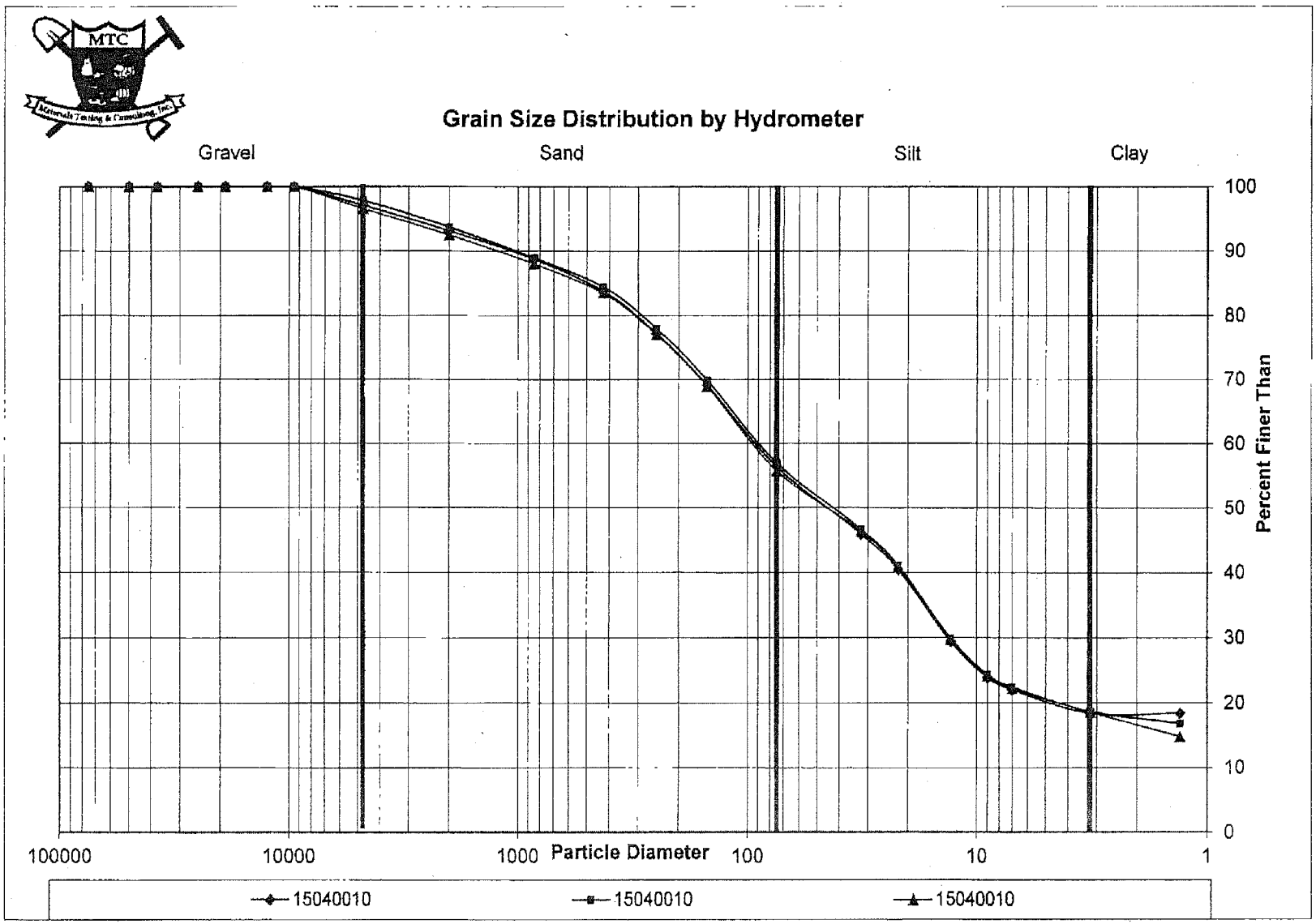
Sample ID	Date Sampled	Date Set up	Date Started	Date Complete	Data Qualifiers
15040010	4/23/2015	4/30/2015	5/4/2015	5/8/2015	
	4/23/2015	4/30/2015	5/4/2015	5/8/2015	
	4/23/2015	4/30/2015	5/4/2015	5/8/2015	
15040009	4/23/2015	4/30/2015	5/4/2015	5/8/2015	

Testing performed according to ASTM D421/D422
Organics were not removed prior to analysis. The grain size distribution reported is the "apparent grain size distribution"

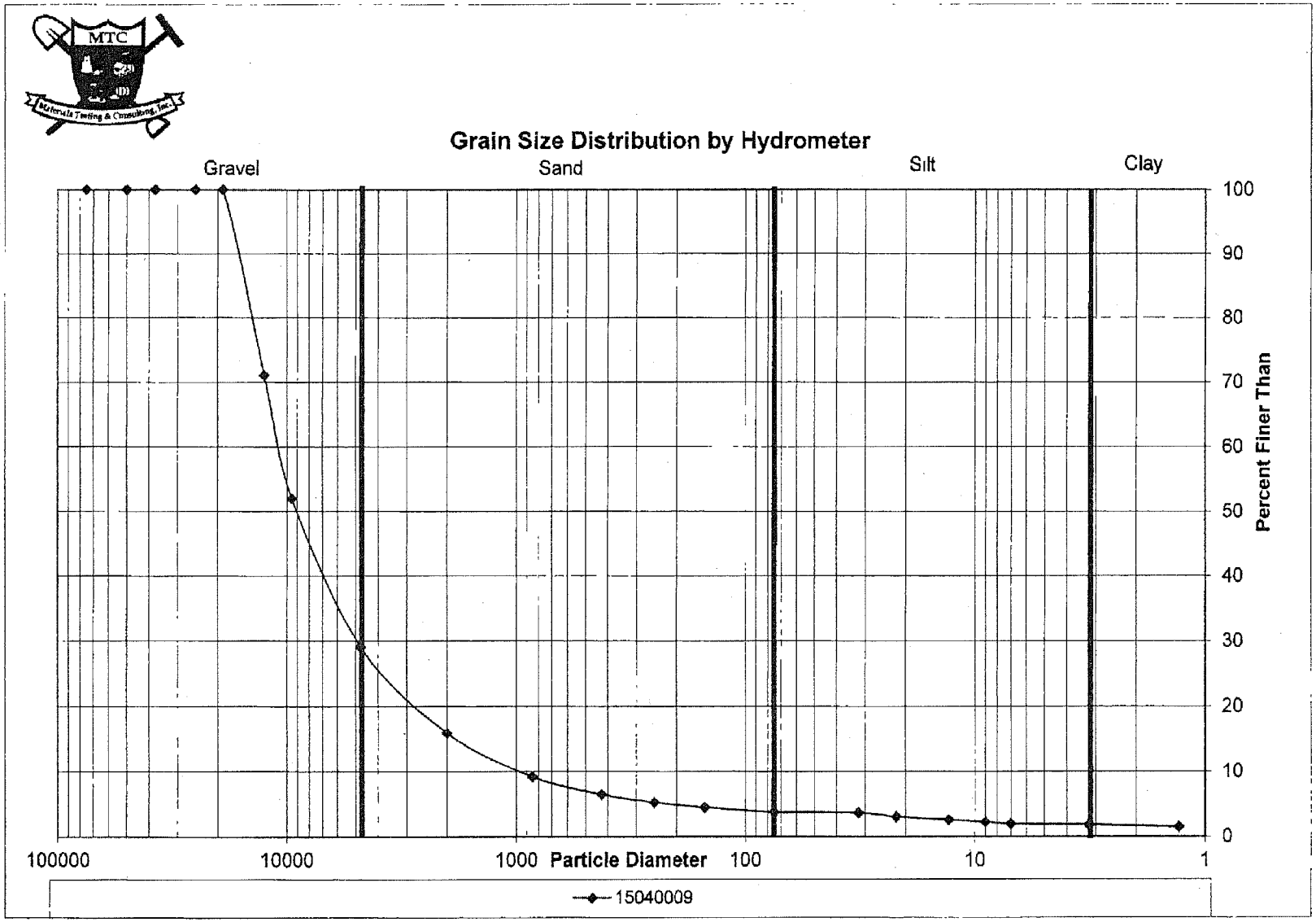
Reviewed by:

Corporate ~ 777 Chrysler Drive • **Burlington, WA 98233** • **Phone (360) 755-1990** • **Fax (360) 755-1980**
Regional Offices: Olympia ~ 360 534 9777 Bellingham ~ 360 647 6111 Silverdale ~ 360 698 6787 Tukwila ~ 206 241 1974
Visit our website www.mtc-inc.net

MW 5-20-15


MTC
Materials Testing & Consulting, Inc.
Grain Size Distribution by Hydrometer
Gravel
Sand
Silt
Clay
100
90
80
70
60
50
40
30
20
10
0
Percent Finer Than
100000
10000
1000
Particle Diameter
100
10
1
15040010
15040010
15040010

SW-526


MTC
Materials Testing & Consulting, Inc.
Grain Size Distribution by Hydrometer
Gravel
Sand
Silt
Clay
100
90
80
70
60
50
40
30
20
10
0
Percent Finer Than
100000
10000
1000
Particle Diameter
100
10
1
15040009

This page intentionally left blank.

E Geotechnical Testing Results

This page intentionally left blank.

Sheet #

ALLWEST Testing & Engineering

DAILY PROJECT FIELD REPORT

Project: First Baptist Church		Project #: 315-069T	
Project Address: Orofino, ID		Weather: Cloudy	
Permit #	Date: 24-Apr-15	Page 1 of 3	
Report #	Technician Kevin Funke		
Type of Testing / Inspection: In Place Density			
Deficiencies Noted: ☐ NO	☑ YES	If yes, explain below	
Reported To: Brian	of EQM		

Narrative:

On site as requested for in place density testing of 3/4" base aggregate being placed as fill for patch area on north end of First Baptist Church parking lot where settling had previously occured. Contractor had excavated approximately 3' of existing material, placed fabric, and were compacting the first 6" lift of aggregate when ALLWEST arrived. Brian of EQM informed ALLWEST that density testing was to be performed every 100 square feet for every other lift placed. Contractor was placing material in approximate 6" lifts and compacting with a vibratory sheepsfoot trench roller. Density testing was performed on the first lift to verify that the highest densities possible were being achieved directly above the wall backfill. Density testing was then performed as specified on the second lift to meet the 98% minimum requirement. Density testing on the second lift indicated compaction was between 95 to 99 percent. Areas which were below the 98% requirement were recompacted several times to verify that maximum densities were being achieved with the equipment provided (small portable compactors specified). Density results were reported to EQM and EPA representatives on site and EPA personnel indicated that the compaction results would be adequate. Results of density testing are shown on the following field density report.

*Test locations estimated from the west and north edges of the excavation.

Representative: Kevin Funke				Received By:				
This report shall be considered preliminary until reviewed and countersigned by the ALLWEST Project Manager				Reviewed By:				
Codes	**Activity**	**Hours**	**Miles**	**Equipment**				
ST	COMPT	11.5	75	☑	**Nuke**	☐	**Coring Machine**	☐ **Generator**
				☐	**Other Type:**			**Quantity**
Field Samples Obtained								

This report shall not be reproduced except in full without the permission of ALLWEST Testing & Engineering, LLC.

2705 E. Main St. • Lewiston, ID 83501 • (208) 743-5710 • (208) 743-8270

www.allwesttesting.com

ALLWEST Testing & Engineering

Sheet #

Field Density Test Report for Soils

ASTM D 6938 / AASHTO T 310

Report # _____ Page 2 of 3

Project Name: First Baptist Church		Project No.: 315-069T	
Date: 24-Apr-15	Weather: Cloudy	Test Method: Nuke	Gauge: 20825
Location: Orofino, ID		Technician: Kevin Funke	M.S.: 582
Client/Contractor: EQM			D.S.: 1579

	Proctor Number	Soil Description	Optimum Moisture	Maximum Density	Standard/Modified
1	A315-142	3/4" Base Aggregate - Tripco	9.4	137.9	Modified
2					
3					

Test Number	Test Location	Elevation	Proctor Number	Probe Depth	% Moisture	Dry Density	% Compaction	Required Compaction	Re-Test of Test No.
1	25'E of W end, 10' S of N end	2.5' BG	1	2"	5.5	123.2	89	-	
2	Retest #1	2.5' BG	1	2"	6.2	130.4	95	-	1
3	35'E of W end, 15' S of N end	2.5' BG	1	2"	7.9	121.9	88	-	
4	Retest #3	2.5' BG	1	2"	7.3	130.8	95	-	3
5	50'E of W end, 5' S of N end	2.5' BG	1	2"	4.7	125.1	91	-	
6	Retest #5	2.5' BG	1	2"	6.3	131.7	96	-	5
7	80'E of W end, 5' S of N end	2.5' BG	1	2"	6.5	125.3	91	-	
8	Retest #7	2.5' BG	1	2"	6.7	130.4	95	-	7
9	5'E of W end, 10' S of N end	2' BG	1	8"	5.3	130.4	95	98	
10	10'E of W end, 4' S of N end	2' BG	1	8"	5.5	133.8	97	98	
11	15'E of W end, 16' S of N end	2' BG	1	8"	5.9	132.8	96	98	
12	20'E of W end, 10' S of N end	2' BG	1	8"	5.8	134.4	98	98	
13	25'E of W end, 14' S of N end	2' BG	1	8"	6.2	133.1	97	98	
14	30'E of W end, 6' S of N end	2' BG	1	8"	5.8	134.5	98	98	
15	35'E of W end, 15' S of N end	2' BG	1	8"	6.8	135.2	98	98	
16	40'E of W end, 17' S of N end	2' BG	1	8"	5.5	135.6	98	98	
17	45'E of W end, 5' S of N end	2' BG	1	8"	5.3	133.6	97	98	

This test report shall not be reproduced except in full without the permission of ALLWEST Testing & Engineering, LLC.

2705 E. Main St. • Lewiston, ID 83501 • Phone (208) 743-5710 • Fax (208) 743-8270

www.allwesttesting.com

ALLWEST Testing & Engineering

Sheet #

Field Density Test Report for Soils

ASTM D 6938 / AASHTO T 310

Report # _____ Page 3 of 3

Project Name: First Baptist Church		Project No.: 315-069T	
Date: 24-Apr-15	Weather: Cloudy	Test Method: Nuke	Gauge: 20825
Location: Orofino, ID		Technician: Kevin Funke	M.S.: 582
Client/Contractor: EQM			D.S.: 1579

	Proctor Number	Soil Description	Optimum Moisture	Maximum Density	Standard/Modified
1	A315-142	3/4" Base Aggregate - Tripco	9.4	137.9	Modified
2					
3					

Test Number	Test Location	Elevation	Proctor Number	Probe Depth	% Moisture	Dry Density	% Compaction	Required Compaction	Re-Test of Test No.
18	50'E of W end, 15' S of N end	2' BG	1	8"	4.6	134.9	98	98	
19	55'E of W end, 12' S of N end	2' BG	1	8"	5.3	135.2	98	98	
20	60'E of W end, 6' S of N end	2' BG	1	8"	4.9	134.4	98	98	
21	65'E of W end, 5' S of N end	2' BG	1	8"	5.5	133.0	97	98	
22	70'E of W end, 10' S of N end	2' BG	1	8"	4.7	135.2	98	98	
23	75'E of W end, 4' S of N end	2' BG	1	8"	4.8	134.6	98	98	
24	80'E of W end, 8' S of N end	2' BG	1	8"	6.9	134.4	98	98	
25	90'E of W end, 5' S of N end	2' BG	1	8"	7.9	136.0	99	98	
26	95'E of W end, 3' S of N end	2' BG	1	8"	5.0	132.4	96	98	
27	100'E of W end, 4' S of N end	2' BG	1	8"	4.5	132.8	96	98	

This test report shall not be reproduced except in full without the permission of ALLWEST Testing & Engineering, LLC.

2705 E. Main St. • Lewiston, ID 83501 • Phone (208) 743-5710 • Fax (208) 743-8270

www.allwesttesting.com

Sheet #

ALLWEST Testing & Engineering

DAILY PROJECT FIELD REPORT

Project: First Baptist Church		Project #: 315-069T	
Project Address: Orofino, ID		Weather: Clear	
Permit #	Date: 27-Apr-15	Page 1 of 4	
Report #	Technician Kevin Funke		
Type of Testing / Inspection: In Place Density			
Deficiencies Noted:	☑ NO	☐ YES	If yes, explain below
Reported To: Brian	of EQM		

Narrative:

On site as requested for in place density testing of 3/4" base aggregate being placed as fill for the patch area on the north end of First Baptist Church parking lot where settling had previously occured. Contractor had placed and compacted two additional lifts since ALLWEST was last on site for density testing using a vibratory sheepsfoot trench roller. ALLWEST performed density testing on the prepared aggregate upon arrival and contractor proceeded to place two more 6" lifts after testing. Density testing was performed on every other lift as described in the previous report dated 4/24/15. Initial density testing indicated some areas were below the 98% minimum compaction requirement and after further compactive effort density testing indicated compaction met the 98% minimum requirement at locations tested. Results of density testing are shown on the following field density reports.

* Test locations estimated from the west and north ends of the excavation.

Representative: Kevin Funke	Received By:
This report shall be considered preliminary until reviewed and countersigned by the ALLWEST Project Manager	Reviewed By:

Codes	Activity	Hours	Miles	Equipment
ST	COMPT	13	77	☑ Nuke ☐ Coring Machine ☐ Generator
				☐ Other Type: Quantity

Field Samples Obtained

This report shall not be reproduced except in full without the permission of ALLWEST Testing & Engineering, LLC.

2705 E. Main St. • Lewiston, ID 83501 • (208) 743-5710 • (208) 743-8270

www.allwesttesting.com

ALLWEST Testing & Engineering

Sheet #

Field Density Test Report for Soils

ASTM D 6938 / AASHTO T 310

Report # _____ Page 2 of 4

Project Name: First Baptist Church		Project No.: 315-069T	
Date: 27-Apr-15	Weather: Clear	Test Method: Nuke	Gauge: 14079
Location: Orofino, ID		Technician: Kevin Funke	M.S.: 619
Client/Contractor: EQM			D.S.: 2082

	Proctor Number	Soil Description	Optimum Moisture	Maximum Density	Standard/Modified
1	A315-142	3/4" Base Aggregate	9.4	137.9	Modified
2					
3					

Test Number	Test Location	Elevation	Proctor Number	Probe Depth	% Moisture	Dry Density	% Compaction	Required Compaction	Re-Test of Test No.
1	5' E of W end, 15' S of N end	1.5' BG	1	12"	3.5	137.1	99	98	
2	10' E of W end, 8' S of N end	1.5' BG	1	12"	3.2	137.2	99	98	
3	15' E of W end, 10' S of N end	1.5' BG	1	12"	3.1	137.6	100	98	
4	20' E of W end, 12' S of N end	1.5' BG	1	12"	4.6	137.5	99	98	
5	25' E of W end, 3' S of N end	1'BG	1	12"	3.3	134.4	97	98	
6	Retest #5	1'BG	1	12"	6.2	134.7	98	98	#5
7	30' E of W end, 15' S of N end	1'BG	1	12"	4.0	132.8	96	98	
8	Retest #7	1'BG	1	12"	5.0	136.3	99	98	#7
9	35' E of W end, 5' S of N end	1'BG	1	12"	4.7	133.7	97	98	
10	Retest #9	1'BG	1	12"	4.7	134.6	98	98	#9
11	40' E of W end, 3' S of N end	1'BG	1	12"	3.5	135.7	98	98	
12	50' E of W end, 15' S of N end	1'BG	1	12"	4.0	137.7	100	98	
13	55' E of W end, 9' S of N end	1'BG	1	12"	3.8	137.8	100	98	
14	60' E of W end, 5' S of N end	1'BG	1	12"	3.6	136.1	99	98	
15	65' E of W end, 10' S of N end	1'BG	1	12"	4.0	134.8	98	98	
16	70' E of W end, 8' S of N end	1'BG	1	12"	4.1	135.9	99	98	
17	75' E of W end, 3' S of N end	1'BG	1	12"	3.3	136.3	99	98	

This test report shall not be reproduced except in full without the permission of ALLWEST Testing & Engineering, LLC.

2705 E. Main St. • Lewiston, ID 83501 • Phone (208) 743-5710 • Fax (208) 743-8270

www.allwesttesting.com

ALLWEST Testing & Engineering

Sheet #

Field Density Test Report for Soils

ASTM D 6938 / AASHTO T 310

Report # _____ Page 3 of 4

Project Name: First Baptist Church		Project No.: 315-069T	
Date: 27-Apr-15	Weather: Clear	Test Method: Nuke	Gauge: 14079
Location: Orofino, ID		Technician: Kevin Funke	M.S.: 619
Client/Contractor: EQM			D.S.: 2082

Proctor Number		Soil Description	Optimum Moisture	Maximum Density	Standard/Modified
1	A315-142	3/4" Base Aggregate	9.4	137.9	Modified
2					
3					

Test Number	Test Location	Elevation	Proctor Number	Probe Depth	% Moisture	Dry Density	% Compaction	Required Compaction	Re-Test of Test No.
18	80' E of W end, 10' S of N end	1' BG	1	12"	3.1	137.7	100	98	
19	85' E of W end, 6' S of N end	1' BG	1	12"	3.0	136.8	99	98	
20	90' E of W end, 2' S of N end	1' BG	1	12"	4.3	137.8	100	98	
21	95' E of W end, 6' S of N end	1' BG	1	12"	3.1	137.6	100	98	
22	100' E of W end, 4' S of N end	1' BG	1	12"	4.3	137.5	100	98	
23	5' E of W end, 12' S of N end	1' BG	1	12"	6.5	136.4	99	98	
24	10' E of W end, 10' S of N end	1'BG	1	12"	6.6	134.8	98	98	
25	15' E of W end, 5' S of N end	1'BG	1	12"	8.0	135.2	98	98	
26	20' E of W end, 15' S of N end	1'BG	1	12"	8.0	135.3	98	98	
27	100' E of W end, 4' S of N end	0.5'BG	1	12"	5.4	137.5	100	98	
28	70' E of W end, 10' S of N end	0.5'BG	1	12"	6.1	137.7	100	98	
29	50' E of W end, 6' S of N end	0.5'BG	1	12"	4.1	136.6	99	98	
30	35' E of W end, 15' S of N end	0.5'BG	1	12"	6.9	134.9	98	98	
31	105' E of W end, 4' S of N end	FG	1	12"	6.4	137.8	100	98	
32	100' E of W end, 6' S of N end	FG	1	12"	4.8	137.7	100	98	
33	95' E of W end, 3' S of N end	FG	1	12"	6.4	135.7	98	98	
34	90' E of W end, 8' S of N end	FG	1	12"	6.2	138.0	100	98	

This test report shall not be reproduced except in full without the permission of ALLWEST Testing & Engineering, LLC.

2705 E. Main St. • Lewiston, ID 83501 • Phone (208) 743-5710 • Fax (208) 743-8270

www.allwesttesting.com

ALLWEST Testing & Engineering

Sheet #

Field Density Test Report for Soils

ASTM D 6938 / AASHTO T 310

Report # _____ Page 4 of 4

Project Name: First Baptist Church		Project No.: 315-069T	
Date: 27-Apr-15	Weather: Clear	Test Method: Nuke	Gauge: 14079
Location: Orofino, ID		Technician: Kevin Funke	M.S.: 619
Client/Contractor: EQM			D.S.: 2082

Proctor Number		Soil Description	Optimum Moisture	Maximum Density	Standard/Modified
1	A315-142	3/4" Base Aggregate	9.4	137.9	Modified
2					
3					

Test Number	Test Location	Elevation	Proctor Number	Probe Depth	% Moisture	Dry Density	% Compaction	Required Compaction	Re-Test of Test No.
35	85' E of W end, 7' S of N end	FG	1	12"	4.6	134.4	98	98	
36	80' E of W end, 5' S of N end	FG	1	12"	4.3	135.6	98	98	
37	75' E of W end, 3' S of N end	FG	1	12"	3.9	136.6	99	98	
38	70' E of W end, 6' S of N end	FG	1	12"	4.0	135.3	98	98	
39	65' E of W end, 12' S of N end	FG	1	12"	4.5	136.2	99	98	
40	60' E of W end, 15' S of N end	FG	1	12"	4.9	134.7	98	98	
41	50' E of W end, 10' S of N end	FG	1	12"	4.2	135.3	98	98	
42	45' E of W end, 5' S of N end	FG	1	12"	4.6	134.6	98	98	
43	40' E of W end, 3' S of N end	FG	1	12"	5.2	135.1	98	98	
44	35' E of W end, 15' S of N end	FG	1	12"	5.9	135.7	98	98	
45	30' E of W end, 12' S of N end	FG	1	12"	5.3	136.0	99	98	
46	25' E of W end, 6' S of N end	FG	1	12"	6.1	134.8	98	98	
47	20' E of W end, 4' S of N end	FG	1	12"	5.5	135.2	98	98	
48	15' E of W end, 15' S of N end	FG	1	12"	4.4	137.6	100	98	
49	5' E of W end, 10' S of N end	FG	1	12"	5.0	134.9	98	98	

This test report shall not be reproduced except in full without the permission of ALLWEST Testing & Engineering, LLC.

2705 E. Main St. • Lewiston, ID 83501 • Phone (208) 743-5710 • Fax (208) 743-8270

www.allwesttesting.com

This page intentionally left blank.

F Pollution Reports

This page intentionally left blank.

U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
Orofino Asbestos Site - Removal Polrep
Final Removal Polrep

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region X

Subject: **POLREP #8**
Final - Orofino Asbestos Site 2015
Orofino Asbestos Site
IDN001002885
Orofino, Clearwater County, ID
Latitude: 46.4793470 Longitude: -116.2551395

To: Chris Field, EPA Region 10 (POLREP List)
James Werntz, EPA Region 10 (POLREP List)
Calvin Terada, EPA Region 10 (POLREP List)
Wally Moon, EPA Region 10 (POLREP List)
Sheila Fleming, EPA Region 10 (PolRep List)

From: Angie Zavala, On-Scene Coordinator
Date: 5/4/2015
Reporting Period: April 29, 2015 through May 4, 2015

1. Introduction

1.1 Background

Site Number:	IDN001002885	**Contract Number:**	
D.O. Number:		**Action Memo Date:**	4/7/2015
Response Authority:	CERCLA	**Response Type:**	Emergency
Response Lead:	EPA	**Incident Category:**	Removal Action
NPL Status:	Non NPL	**Operable Unit:**	
Mobilization Date:	4/20/2015	**Start Date:**	4/21/2015
Demob Date:	5/4/2015	**Completion Date:**	5/4/2015
CERCLIS ID:	IDN001002885	**RCRIS ID:**	
ERNS No.:		**State Notification:**	09/30/2010
FPN#:		**Reimbursable Account #:**	

1.1.1 Incident Category
Fund Lead Removal Action.

1.1.2 Site Description
In 2011, EPA removed asbestos-contaminated soil from several properties in and around Orofino and combined that soil with the existing asbestos-contaminated soil at the First Baptist Church (FBC), creating a repository. The asbestos-contaminated soil repository is behind a gravity-based retaining wall. The retaining wall is located along the north and west boundaries of the FBC's parking area. The repository consists of two areas, including an asphalt parking area and a vegetated dry retention area. Work on the retaining wall and repository was completed by EPA in 2012.

In 2014, representatives from the FBC notified EPA about several issues related to the integrity of the repository cap. Specifically, areas of the asphalt parking area were settling, and vegetation had not been well established in the dry retention basin.

1.1.2.1 Location
The repository site is located at the FBC, Orofino, Clearwater County, Idaho.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative
ERRS and START contractors and EPA OSC mobilized to the site on Monday April 20, 2015. START drove the EPA Region 10 communications rig to be used as the site's command post. Equipment was also delivered on Monday to the site and set to promptly start the planned repairs (described below) on the repository on Tuesday morning.

- Repair the settled areas of the asphalt to allow for proper surface water drainage and to prevent surface water from ponding on the asphalt near the engineered retaining wall;
- Establish vegetation in the dry retention basin by adding additional top soil and adding a new seed mix optimized for local climate conditions;
- Reconstruct the surface details of the corrugated metal pipe around the dry well to allow for better drainage of surface water in the dry retention basin;
- Add a gravel apron at the eastern edge of the dry retention basin to allow for better drainage of surface water from the asphalt parking area;
- Construct ramps at the northeastern and southwestern edges of the retaining wall to allow for better access to the lower sections of the wall for inspections and maintenance.

2.1.2 Response Actions to Date

See POLREP #6 for activities conducted April 20 through April 23, 2015. See POLREP #7 for activities conducted April 24, 2015 through April 28, 2015. This POLREP covers the operational period from April 29, 2015 through May 4, 2015.

Wednesday, April 29

1. ERRS surveyed the asphalt repair area and performed final grading of subbase to receive asphalt cap.
2. ERRS completed the dry retention basin. The basin was graded, watered, seeded, and mulched. NRCS conducted a site visit to observe seeding and mulch, and discuss site needs for successful revegetation on basin.
3. START performed dust monitoring with the DataRAMs, and the results were all less than the site action limit. No air sampling was conducted.
4. ERRS completed the lower access ramp. The ramp was graded, surfaced with ¾"-minus aggregate and compacted. Side slopes of the ramp were seeded.
5. Southwest access ramp was seeded.
6. START marked locations along upper and lower levels of retaining wall placement of permanent survey markers, to be conducted by survey contractor.
7. All work was completed except for the paving of the asphalt repair area, and installation of the parking space stoppers.
8. ERRS decontaminated rental equipment, removed site solid waste, performed final parking lot sweeping and cleaning, and demobilized from the site. START and one ERRS to remain for final paving to be conducted on May 1, 2015.

Thursday, April 30

No work was conducted at the site.

Friday, May 1

1. START and ERRS on site to observe paving of asphalt repair area.
2. ERRS subcontractor arrived on site to perform in-situ compaction testing of the asphalt in the asphalt repair area. Initial tests indicated low compaction (88-91%), and the asphalt was compacted and tested again. All results met or exceeded the 92% compaction standard, and ranged from 92% to 94.8%.
3. Pavement contractors noted a low area in the existing western asphalt patch. They placed a small float of asphalt, approximately 2 feet by 4 feet, to fill in some of the low area extending from the western edge of the new asphalt repair area.

Monday, May 4

1. Subcontractor installed sealer on asphalt joints.
2. Parking bumpers were installed on the asphalt parking area along the top of the retaining wall.
3. Concrete blocks were placed along the slope above the access ramp to the lower part of the wall on the east side of the pavement.
4. ERRS checked the drainage of new asphalt surface by spraying it with a garden hose.
5. ERRS completed demobilization of crew and equipment, including removing tools and trash.

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

Addressed in Confidential Enforcement Addendum to Action Memorandum.

2.1.4 Progress Metrics

Waste Stream	*Medium*	*Quantity*	*Manifest #*	*Treatment*	*Disposal*
Asbestos Contaminated Soil and Asphalt	Soil	330 cubic yards			Finley Buttes Landfill, Boardman, Oregon

2.2 Planning Section

2.2.1 Anticipated Activities

2.2.1.1 Planned Response Activities

Final As-Built survey will be conducted. Survey work will also include placement of non-destructive, permanent, benchmarks located along upper and lower levels of retaining wall. Benchmarks will be surveyed for x-, y-, and z-coordinates for the purpose of future monitoring of wall stability.

2.2.2 Outstanding Issues

None

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

ERRS-3
START-1
EPA-2

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.

U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
Orofino Asbestos Site - Removal Polrep

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region X

Subject: **POLREP #9**
Orofino Asbestos Site- Re-Seeding the Retention Area
Orofino Asbestos Site
IDN001002885
Orofino, Clearwater County, ID
Latitude: 46.4793470 Longitude: -116.2551395

To: Chris Field, EPA Region 10 (POLREP List)
James Werntz, EPA Region 10 (POLREP List)
Calvin Terada, EPA Region 10 (POLREP List)
Wally Moon, EPA Region 10 (POLREP List)
Sheila Fleming, EPA Region 10 (PolRep List)

From: Angie Zavala, On-Scene Coordinator
Date: 3/7/2016
Reporting Period: 3/02/2016 to 3/03/2016

1. Introduction

1.1 Background

Site Number:	IDN001002885	**Contract Number:**	
D.O. Number:		**Action Memo Date:**	4/7/2015
Response Authority:	CERCLA	**Response Type:**	Time-Critical
Response Lead:	EPA	**Incident Category:**	Removal Action
NPL Status:	Non NPL	**Operable Unit:**	
Mobilization Date:	3/2/2016	**Start Date:**	3/2/2016
Demob Date:	3/3/2016	**Completion Date:**	3/3/2016
CERCLIS ID:	IDN001002885	**RCRIS ID:**	
ERNS No.:		**State Notification:**	09/30/2010
FPN#:		**Reimbursable Account #:**	

1.1.1 Incident Category
Fund Lead Removal Action.

1.1.2 Site Description
Please see previous pollution reports.

1.1.2.1 Location
The repository site is located at the FBC, Orofino, Clearwater County, Idaho.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative
ERRS and START contractors and the EPA OSC mobilized to the site on the morning of Wednesday, March 2, 2016. ERRS contractors and the EPA OSC arrived at the site in the early afternoon, and ERRS promptly set up the equipment and proceeded to hydroseed the retention area.

2.1.2 Response Actions to Date

This POLREP covers the operational period from March 2, 2016 through March 3, 2016.

Wednesday, March 2

1. ERRS loaded 6 bags of mulch, 1/2 bag of fertilizer, seed, and 1,000 gallons of water into a towable 1,000-gallon Hydroseeder.

2. ERRS hydraulically applied all 1,000 gallons of the hydroseed mixture to the retention area. They mixed a second batch and applied it as well. A small portion of the second batch was hydraulically applied to the slope above the new access ramp to the north side of the wall that had been built in April 2015.

3. While the hydroseed was applied, OSCs Zavala and Weigel talked to the church representative, the pastor, about the effort to have the grass grow in the retention area and the possibility of coming back to apply gravel if the grass didn't grow this time. All parties agreed to wait until July to see if the grass would grow.

4. The ERRS response manager and OCSs Zavala and Weigel inspected the retention wall. No issues were noted.

5. ERRS cleaned the equipment (hydroseeder) and demobilized from the site.

Thursday, March 3

1. START and the EPA OSC conducted an inspection of the site and at the same time trained one of the representatives, the pastor, so that he understood what needs to be done during the inspection. He agreed to conduct the inspections and gave EPA some feedback about it. The pastor asked about the frequency of asphalt maintenance, which EPA will look into. The Pastor also asked for the names of contractors that could provide this work. OSC Zavala will contact the pastor to provide this information in addition to a draft of the Post Removal Site Controls documents including the inspection and maintenance sheets.

2.1.4 Progress Metrics

Waste Stream	*Medium*	*Quantity*	*Manifest #*	*Treatment*	*Disposal*

2.2 Planning Section

2.2.1 Anticipated Activities

The representative of the church will irrigate the retention area as needed.

2.2.1.1 Planned Response Activities

EPA is planning to conduct a second inspection in August or September, 2016.

2.2.1.2 Next Steps

EPA will contact the pastor to find out if the grass is growing in the retention area to determine the next course of action.

2.2.2 Issues

This is the second time EPA has seeded the retention area. If the grass doesn't grow by July, EPA may replace the grass in the retention area with gravel.

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

ERRS-3
START-1
EPA-2

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.

This page intentionally left blank.