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May 20, 2013

Greg Weigel, On-Scene Coordinator
United States Environmental Protection Agency, Region 10
Idaho Operations Office
950 West Bannock Street, Suite 900
Boise, Idaho 85702

RE: Contract No. EP-S7-06-02; Technical Direction Document No. 10-09-0008
Final 2012 Removal Action Report, Orofino Asbestos Site
Orofino, Clearwater County, Idaho

Dear Mr. Weigel:

Enclosed please find the final 2012 Removal Action Report for the Orofino Asbestos Site in Orofino, Idaho. If you have any questions, please call Eric Lindeman at (206) 624-9537 or me at (206) 920-1739.

Sincerely,

ECOLOGY AND ENVIRONMENT, INC.

Steven G. Hall
START-3 Project Leader

enclosure

cc: Eric Lindeman, START-3 Site Manager, E & E, Seattle, Washington

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2012 REMOVAL ACTION REPORT

Orofino Asbestos Site
Orofino, Clearwater County, Idaho
TDD: 10-09-0008

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 2013

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List of Abbreviations and Acronyms

Abbreviation	Definition
µm	micrometer
%	percent
%R	percent recovery
ACP	asbestos-cement pipe
AHERA	Asbestos Hazard Emergency Response Act
BMPs	Best Management Practices
CARB	California Air Resources Board
Church	First Baptist Church
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
ISO	International Organization for Standardization
L/min	liters per minute
MCE	mixed-cellulose ester
McGillivray	McGillivray Environmental
mg/L	milligrams per liter
MS	matrix spike
MSD	matrix spike duplicate
M&R	maintenance and repair
NIOSH	National Institute for Occupational Safety and Health
OSC	On-Scene Coordinator
OSHA	Occupational Safety and Health Administration
PCM	phase contrast microscopy
PEL	permissible exposure limit
PLM	polarized light microscopy
PPE	personal protective equipment
RA	removal action
RCRA	Resource Conservation and Recovery Act
QA	quality assurance
QC	quality control
RPD	relative percent difference
Site	Orofino Asbestos Site
SPAF	Sample Plan Alteration Form
SSSP	Site-Specific Sampling Plan
START	Superfund Technical Assessment and Response Team
TCLP	toxicity characteristic leaching procedure
TDD	Technical Direction Document
TEM	transmission electron microscopy

List of Abbreviations and Acronyms (cont.)

Vacant Lot	vacant lot at 12976 Highway 12
Wilbert Precast	Wilbert Precast, Inc.
yd^3	cubic yards

Executive Summary

In the late summer and fall of 2012, the United States Environmental Protection Agency (EPA) performed a removal action (RA) at the Orofino Asbestos Site (Site) in Orofino, Idaho. The RA was performed to repair the engineered retaining wall that is part of the asbestos-contaminated soil repository constructed by EPA at the First Baptist Church (Church at 291 118th Street in Orofino in 2011). The asbestos-contaminated soil had been placed in the repository behind the retaining wall and underneath a protective soil and asphalt cover to mitigate potential human health risks from exposure to the asbestos-contaminated soil.

In early 2012, representatives from the Church reported that some of the blocks in the curved, west section of the retaining wall had shifted. EPA investigated and determined that the likely cause of the shift in the blocks was settling of the backfilled soil. This settling caused large gaps between the individual wall blocks that, if not repaired, could potentially lead to the failure of the wall and allow the release of the asbestos-contaminated soil.

The objective of the 2012 RA was to repair the retaining wall by temporarily removing some of the asbestos-contaminated soil, disassembling the retaining wall from the western third of the north leg around to the southwest end of the wall, and reconstructing the wall. 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, drain rock and perforated drainage pipes were placed between the wall and the compacted asbestos-contaminated soil. A drywell was also installed in the middle of the dry basin area of the repository to minimize surface water from infiltrating into the compacted asbestos-contaminated soil behind the wall. 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 RA. 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.

During the 20112 RA, air sampling and dust monitoring were conducted to ensure that the work was performed in accordance with best management practices. The results of air sampling and dust monitoring indicated that the Site activities were performed in a manner that was safe for Site personnel, nearby residents, and passers-by.

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1 Introduction

In August of 2010, the United States Environmental Protection Agency (EPA) initiated a removal action (RA) to excavate asbestos-contaminated soil from multiple sites around Orofino, Idaho. The source of the asbestos-contaminated soil was asbestos-cement pipes (ACP) that had been used as underground water lines for the Riverside Water and Sewer 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 allegedly given away to area property owners as fill material.

EPA performed the 2010 RA in the fall of 2010. By the end of the 2010 RA, EPA had learned of 21 properties that had received the asbestos-contaminated soil as fill material, and EPA was not able to address all properties in 2010 because of weather and access issues. During the 2010 RA, 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 RA. During the 2011 RA, EPA finished removing the ACP and asbestos-contaminated soil from all but one of the remaining properties. Recovered ACP was disposed of off Site at the licensed landfill. During the 2011 RA, instead of sending the asbestos-contaminated soil off Site for disposal, it was consolidated at the First Baptist Church (Church) property located at 291 118th Street, which had also received a large quantity of the asbestos-contaminated soil as fill material. The asbestos-contaminated soil from the other properties and the Church was consolidated behind an engineered retaining wall and underneath a protective asphalt and soil cover. The results of the 2010 RA are summarized in the report dated June 22, 2011 (E & E 2011), and the results of the 2011 RA are summarized in the report dated March 8, 2012 (E & E 2012b).

In early 2012, during an inspection of the wall by a representative of the Church, 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.

EPA tasked Ecology and Environment, Inc. (E & E), under Superfund Technical Assessment and Response Team (START)-3 contract number EP-S7-06-02, Technical Direction Document (TDD) number 10-09-0008, to provide technical, sampling, and documentation support for the Orofino Asbestos Site (Site) RA. The wall repair work was performed by Environmental Quality Management, Inc. (EQM) under the EPA Region 10 Emergency Response and Removal Services (ERRS) contract. During the 2012 RA, EPA repaired the wall by removing the protective soil cover, temporarily removing some of the asbestos-contaminated soil, disassembling the affected portion of the retaining wall, adding additional drainage features including a dry well, and reconstructing the wall. Additionally, two areas of the asphalt cover were repaired.

This 2012 RA 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 2012 RA are presented in Appendix A.

2 Site Description and Background

2.1 Site Location and Layout

Site Name	Orofino Asbestos Site
Owner	First Baptist Church[1]
SSID #	10JN
CERCLIS #	IDN001002885
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 3,300 and the City is the county seat for Clearwater County. The 2012 RA involved a repository constructed during the 2011 RA on Church property located at 291 118th Street (Figure 2-2). A Site plan of the repository, the retaining wall, and the drywell is included in Appendix B.

2.2 Surrounding Land Uses

Information related to surrounding land uses is unchanged from the 2010 RA report (E & E 2011).

2.3 Site History, Operations, and Ownership

Information related to Site history, operations, and ownership is unchanged from the 2010 RA report (E & E 2011).

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 RA report (E & E 2011).

[1] Throughout the 2010 and 2011 RAs, the Orofino Asbestos Site encompassed multiple properties in and near the city of Orofino, Idaho. During the 2012 RA, work was only performed at one property, the First Baptist Church.

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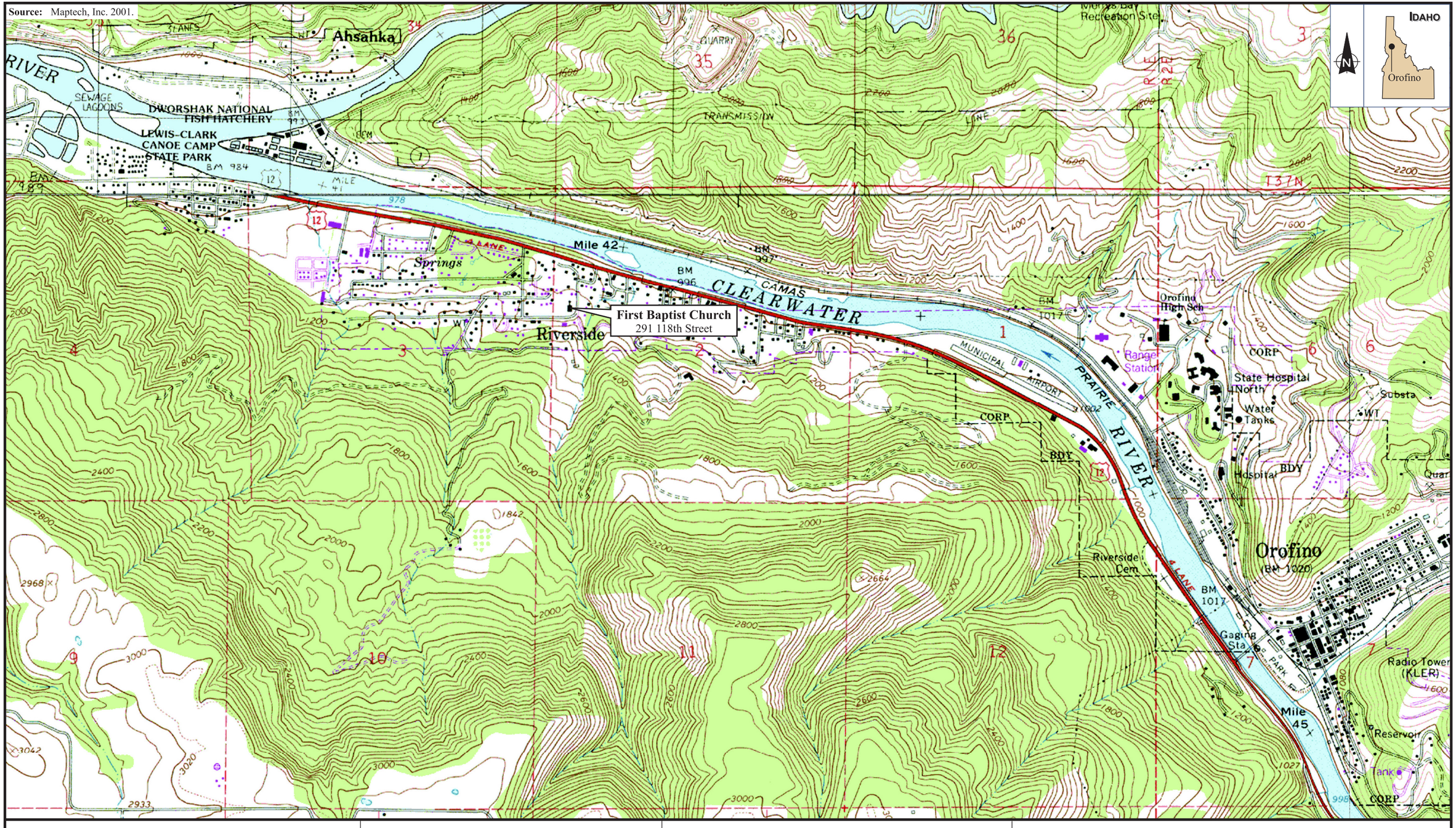

ecology and environment, inc.
Global Specialists in the Environment
Seattle, Washington

0 1600 3200
Approximate Scale in Feet

OROFINO ASBESTOS SITE
Orofino, Idaho

Figure 2-1
2012 REMOVAL ACTION SITE LOCATION

Date:	Drawn by:	
12/31/12	AES	10:START-3\10080001\fig 2-1

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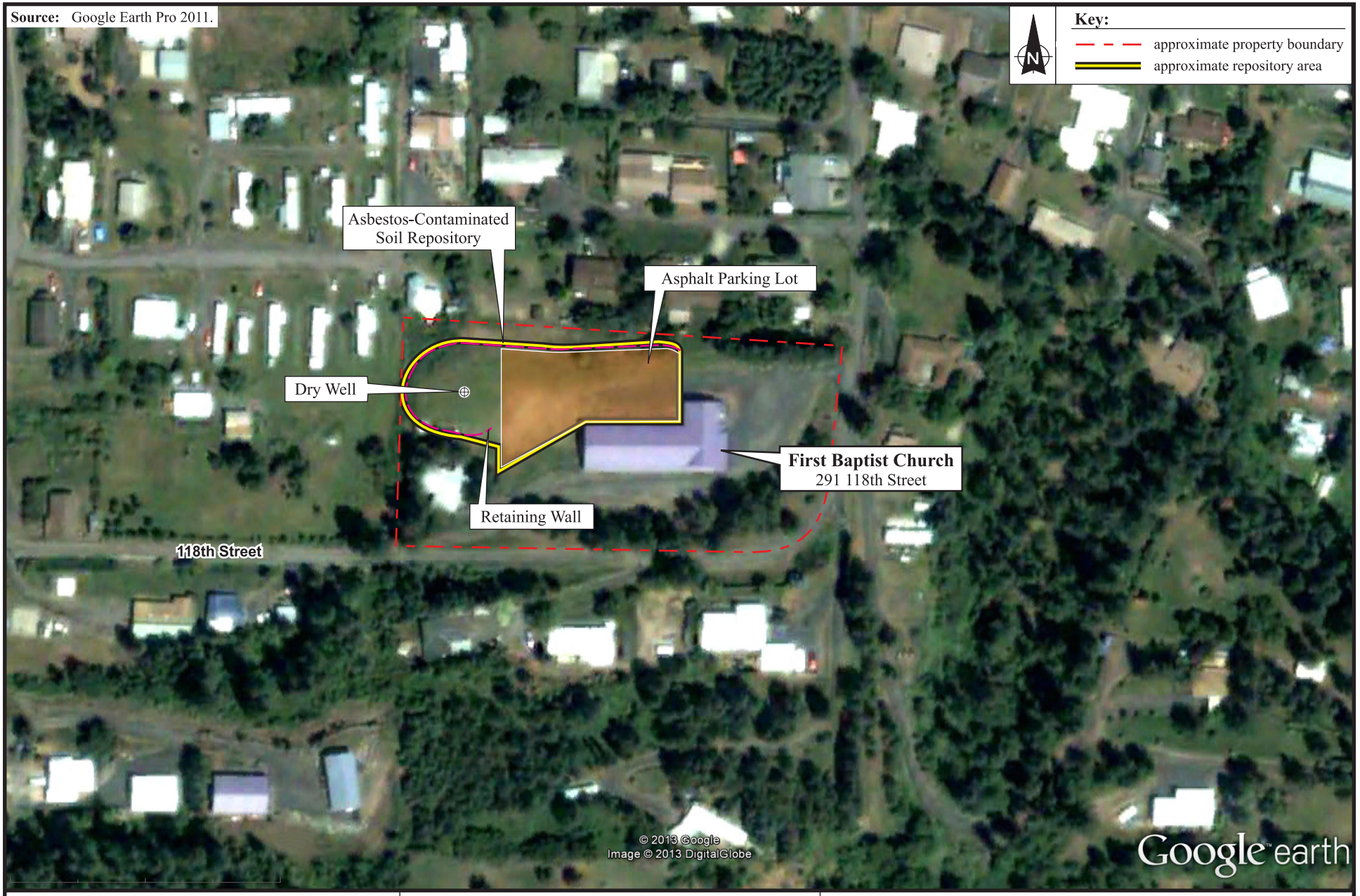

ecology and environment, inc. Global Specialists in the Environment Seattle, Washington	OROFINO ASBESTOS SITE Orofino, Idaho	Figure 2-2 2012 REMOVAL ACTION SITE LAYOUT		
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3 Removal Action Description

EPA performed the 2012 RA at the Site to repair the repository retaining wall that had been constructed during the 2011 RA to correct settling and compaction issues and to prevent the release of the asbestos-contaminated soil contained in the repository.

3.1 Removal Action Objectives

The 2012 RA work was performed in accordance with plans designed by ERRS subcontractor JM Engineering, who is the engineer affiliated with the designer and supplier of the retaining wall blocks, Wilbert Precast, Inc. (Wilbert Precast) of Spokane, Washington. The construction plans and drawings for the repository repairs and improvements are included in Appendix C.

The objectives of the 2012 RA were to:

- Remove asbestos-contaminated soil from behind the damaged portion of the wall.
- Disassemble and re-assemble the retaining wall while re-compacting the asbestos-contaminated soil behind the wall during reconstruction.
- Modify the existing dry retention pond with the installation of a new drywell in the center as presented in the Site construction drawings in Appendix C. The purpose of the drywell is to convey excess surface water (i.e., precipitation, snow melt, etc.) away from the retaining wall to an existing natural draining loam layer, which is located at about 20 to 25 feet below the top of the repository. The location of this draining loam layer was identified by an ERRS investigation in May 2012, and an infiltration test was performed to ensure that this layer was sufficient for the drainage area on the repository and church parking lot. This report is included in Appendix D.
- Any remaining asbestos-contaminated soil displaced by the dry well that could not be re-incorporated behind the re-built wall would be transported off- Site to an appropriate landfill for asbestos waste.

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4 Project Organization and Schedule

EPA performed the 2012 RA from August 27, 2012, through October 5, 2012. A return trip to the Site was made on November 22, 2012, to complete asphalt repairs of two areas of the parking lot. This section describes the participating organizations, project costs, and schedule.

4.1 Key Organizations and Roles

The 2012 RA was performed by EPA and its contractors:

On-Scene Coordinator (OSC): The RA was 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: RA construction activities were performed under the EPA Region 10 ERRS contract by EQM and its subcontractor McGillivray Environmental (McGillivray).

4.2 Final Project Schedule

Table 4-1 summarizes the project schedule during the 2012 removal activities.

Table 4-1 Project Schedule

Activity	Date
EPA, ERRS, and START mobilized to the Site to begin the RA.	August 27, 2012
ERRS completed reconstruction of the Church retaining wall. START demobilized from the Site.	October 3, 2012
Protective chain-link fence rebuilt on top of the wall. ERRS demobilizes from the Site.	October 5, 2012
An ERRS subcontractor repaired the asphalt on the Church parking lot.	November 22, 2012

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5 Removal Activities

The following sections describe the activities that EPA and its contractors performed during the 2012 RA to obtain the objectives described in Section 3.

5.1 Mobilization and Site Layout

EPA, ERRS, and START personnel arrived at the Site on August 27, 2012. ERRS equipment included two excavators, a front end loader, two dump trucks, and one water truck. Additionally, a large excavator was used for one week during the middle of the RA to excavate soil for the placement of the dry well. START brought air sampling equipment, dust monitors, sampling supplies, and a twenty-foot trailer for equipment storage and office space.

The trailer and other equipment were staged at the Church. The asphalt parking lot was fenced off to limit public access, but a protected pathway was maintained so that churchgoers could access the Church as needed.

5.2 Protective Barrier Construction

The retaining wall was constructed with blocks specially manufactured by Wilbert Precast of Spokane, Washington (JM Engineering 2011). The western portion of the wall was disassembled by removing the individual blocks from the portion of the wall that was slumping and shifting, and the blocks were then staged by size on the adjoining asphalt parking lot. As the wall was disassembled, the asbestos-contaminated soil was excavated from behind the wall and stockpiled on polyethylene sheeting on the asphalt parking lot and covered to prevent the soil from being blown away. Much of the existing drain rock was separated so that it could be reused during the reconstruction phase, although some additional drain rock was transported to the Site to complete the reconstruction of the wall.

Two areas in the parking lot near the north wall were damaged because of settling in the underlying soil. The asphalt in these areas was cut out and the asbestos-contaminated soil was excavated down to native soil, and then both areas were backfilled and compacted with the stockpiled asbestos-contaminated soil in preparation for new asphalt covers.

Before the reconstruction of the wall, a representative from Wilbert Precast inspected the blocks that had been removed and marked those that needed to be replaced and those blocks that could be used again. Wilbert Precast also provided new blocks for any blocks that needed to be replaced. As the wall was reconstructed, the drain rock and replacement perforated drainage pipes were placed behind the wall and separated from the soil with an 8-ounce nonwoven filter fiber barrier. As the wall was reconstructed, the asbestos-contaminated soil was placed and compacted behind the wall. Allwest Geotechnical, a subcontractor of ERRS, was on Site to test for and document the compaction during each soil lift. Throughout the construction process, JM Engineering and a consulting civil engineer from an E & E subsidiary visited the Site and participated in phone conferences to monitor the reconstruction process and to ensure that it was performed in accordance with the reconstruction plans.

Before the 2012 RA, ERRS had determined that a loam soil layer was located approximately 20 to 25 feet below the repository that would provide good drainage for the dry well. An excavation 20 feet on each side and 25 feet deep was completed into this loam soil layer in preparation for the installation of the pre-fabricated concrete drywell. Engineered safety shoring was used during the excavation and installation of the drywell to maintain the excavation and protect workers who entered the excavation. Any worker who entered the dry well excavation wore a full body harness and was attached to a retrieval system.

Asbestos-contaminated soil removed during the excavation for the drywell was added to the contaminated soil stockpile. Below the asbestos-contaminated soil, ERRS encountered the native loam layer of soil, which was visually distinctive from the asbestos-contaminated soil and assumed to not contain asbestos. The excavated native loam soil was placed into its own stockpile away from the stockpiled asbestos-contaminated soil. START collected multiple composite samples from this native soil stockpile for asbestos analysis at an off-Site laboratory, and the results indicated that no asbestos was present (see Section 8). Based on these laboratory results, the soil was later used as part of the nine-inch topsoil layer cap (see below).

When excavation was completed, an 8-ounce nonwoven fiber liner was placed in the bottom of the excavation and then covered with drain rock. The base section of the drywell was then placed on the drain rock and the drywell was constructed towards the surface. The bottom two 4-foot sections of the drywell were perforated for drainage. As the drywell was constructed, a four-foot diameter corrugated metal pipe was placed vertically around the drywell, and drain rock was used to fill the area between them. The remainder of the drywell excavation area outside the corrugated metal pipe was filled and compacted with contaminated soil from the stockpile.

Once all the asbestos-contaminated soil that could be placed behind the wall was re-deposited and compacted, ERRS constructed a topsoil cap for the repository using the native loam soil that had been excavated for the drywell. There was not enough of the native loam soil to complete the topsoil cap, so additional topsoil from a local quarry was obtained after the results of sampling and off-Site laboratory analysis indicated that it did not contain asbestos (see Section 8).

The nine-inch clean topsoil cap was designed to provide for minor moisture evaporation and drainage into the drywell during extreme precipitation events, and to minimize the amount of water infiltrating through the compacted asbestos-contaminated soil in the repository. To construct the topsoil cap, a subcontractor for ERRS placed a 20-ounce nonwoven fabric layer and then a 25 mil PVC liner over the asbestos-contaminated soil and under the topsoil. The liner was anchored under the last row of wall blocks and anchored with a metal band to the four-foot corrugated pipe around the drywell. The liner was also anchored at the asphalt parking lot edge with a shallow trench and compacted with soil to retain the PVC liner. The nine-inch topsoil cap was placed onto the liner. The topsoil cap was initially graded at 3% for approximately three feet away from the wall and then graded to an overall 1 percent (%) to 2% drainage slope from the end of the 3% grade towards the drywell.

After it was completed and graded, an ERRS subcontractor hydro-seeded the soil cap on the west end of the repository and around the drywell.

On October 5, 2012, the chain-link fence was re-installed at the top of the retaining wall for public safety, and on November 22, 2012, an ERRS subcontractor replaced the asphalt over the two areas of the Church parking lot that had been re-excavated and re-compacted.

5.4 Best Management Practices and Air Monitoring

Throughout the 2012 RA, EPA used similar best management practices (BMPs) and air monitoring as during the 2011 RA (E & E 2012b). The results of the air monitoring are discussed in Section 8.

5.5 Off-Site Disposal

Because of the amount of asbestos-contaminated soil that was displaced by the drywell installation, not all of it could be replaced behind the reconstructed wall. Therefore, approximately 378 cubic yards (yd^3) of soil was transported off Site to the Graham Road landfill located in Medical Lake, Washington. Additional disposal details are provided in Section 7.

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6 Post-Removal Site Controls

Because asbestos-contaminated soil was left at the Site, EPA is currently developing a restrictive covenant and a maintenance and repair (M&R) plan for the Church property.

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7 Waste Management, Transportation, and Disposal Activities

The wastes generated from the 2012 Orofino Asbestos Site RA 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.

Asbestos-contaminated soil remains on Site under protective barriers at the Church property. Additionally, asbestos-contaminated soil remains under a protective gravel barrier at the Vacant Lot at 12976 Highway 12 (Vacant Lot). The protective barrier was placed over the asbestos-contaminated soil at the Vacant Lot by one of the responsible parties in 2010 pursuant to an Administrative Settlement Agreement and Order on Consent with EPA, and in 2011 EPA determined that the gravel barrier was sufficient as a final protective barrier (E & E 2012b). EPA performed no work at the Vacant Lot during the 2012 RA. A summary of these waste streams and final disposition locations is provided below. Copies of applicable waste disposal records are provided in Appendix E.

Waste Stream	Quantity	Final Waste Destination
Asbestos-contaminated soil	Approximately 378 yd^3 transported off Site in 2012	Waste Management Graham Road Landfill Medical Lake, Washington
Asbestos-contaminated soil	Approximately 11,722 yd^3	Contained under protective barrier and behind the retaining wall at the Church at 291 118^{th} Street
Asbestos-contaminated soil	Approximately 16,860 yd^3	Covered by protective gravel barrier at the Vacant Lot at 12976 Highway 12

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8 Sampling and Monitoring Activities

START collected air and soil samples throughout the 2012 RA to support removal decisions. Summaries of the samples and matrices 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;
- Air samples (perimeter and personal monitoring) were analyzed for asbestos by transmission electron microscopy (TEM) in accordance with International Organization for Standardization (ISO) Method 10312;
- Soil samples were analyzed for asbestos by polarized light microscopy (PLM) in accordance with California Air Resources Board (CARB) Method 435;
- One soil sample was analyzed for Resource Conservation and Recovery Act (RCRA) TCLP metals analyses (EPA Methods 1311, 6010C, and 7470A)
- Geotechnical testing for compact and moisture content of the asbestos-contaminated soil backfilled was performed by Allwest Geotechnical, a subcontractor of ERRS.

Table 8-1 describes the samples collected during the 2012 RA 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) (E & E 2010) and the 2012 RA Sampling Plan Alteration Form (SPAF) (E & E 2012a). Data generated during the 2012 RA was managed in accordance with the Site-Specific Data Management Plan (E & E 2012a). Off-Site asbestos analyses, including PLM, PCM, and TEM, were performed by EMSL Analytical, Inc. (EMSL) of Cinnaminson, New Jersey, as a subcontractor to E & E. The soil sample that was collected for TCLP metals was analyzed by GEL Laboratories, Inc., Charleston, South Carolina, as a subcontractor to E & E. The analytical data reports and validation memoranda are included in Tables 8-2 through 8-6 and Appendix F.

8.1 Air Samples

Air samples were collected throughout the RA as the wall was taken down and reconstructed. 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 21 personal samples (not including blanks) were collected and analyzed using PCM to measure potential asbestos exposures to workers and heavy equipment operators in the work zones. The data are presented in Table 8-2. Site workers initially wore Level C personal protective equipment (PPE), including respirators with high efficiency particulate air cartridges, while removing asbestos-contaminated soil from behind the wall. Upon receiving analytical results from the PCM samples that documented that the potential exposures to fibers was below acceptable levels, Site workers downgraded to Level D PPE (hard hats, safety glasses, and steel-toed safety shoes with no respiratory protection).

Personal samples were collected in accordance with NIOSH method 7400 from multiple workers to measure a range of potential exposure scenarios. Personal samples were collected by placing a personal air sampling pump on the worker and/or in the breathing zone of an equipment operator to be monitored. 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 generally 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 2 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 ranged from non-detect (less than 0.001) to 0.009 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. According to NIOSH method 7400, the PCM analysis measures asbestos as well as other fibers; therefore, the PCM results may include non-asbestos fibers.

8.1.2 Perimeter Samples by PCM

A total of 22 perimeter samples were collected for PCM analyses, although six PCM samples could not be analyzed because of overloading. The data are presented in Table 8-3. The samples were collected at the perimeter of the work zone of the Church parking lot property during removal activities to monitor asbestos and fiber concentrations. Additionally, daily blank filter cassettes were collected and held at the laboratory for blank analyses, if necessary.

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 using Gast pumps at flow rates of approximately 10 L/min. Samples for PCM testing were collected on 0.8 μm MCE filter cassettes hung at approximately 4 to 6 feet above the ground to represent a person's breathing zone.

Most of the samples were collected and analyzed for PCM because of the quicker turnaround times and lower analytical costs. PCM samples were collected daily during RA activities around the excavation areas behind the wall and downwind of the work area. A subset of the samples was analyzed for asbestos by TEM in accordance with ISO method 10312 (see Section 8.1.3). While more costly and time consuming, the ISO TEM method has several advantages over PCM, including greater sensitivity, the ability to positively identify asbestos (PCM measures asbestos and other fibers and therefore cannot positively identify asbestos), and the ability to differentiate between different asbestos fiber types and sizes. Despite the difference in turnaround time and sensitivity, PCM is an approved method for asbestos analysis, and no data quality was lost due to the use of the PCM analyses.

The results of the PCM analyses performed on the perimeter samples are summarized in Table 8-3. The PCM results ranged from non-detect (less than 0.0001) to 0.004 f/cc. The perimeter

monitoring action limit for the RA was 0.01 f/cc, which is based on the Asbestos Hazard Emergency Response Act (AHERA) clearance limit for asbestos projects. None of the PCM field samples exceeded this action level or the OSHA PEL of 0.1 f/cc. This data also supported the downgrading of Site workers PPE to level D.

8.1.3 Perimeter and Personal Samples by TEM

A subset of the personal and perimeter monitoring samples were submitted for TEM analyses as described above. TEM samples were collected in a similar manner as the PCM samples, with the only difference that TEM samples were generally collected on 0.8 μm MCE filter cassettes. A total of six samples, including five perimeter and one personal, were submitted for TEM analyses, and the results are presented in Table 8-4. With the ISO 10312 TEM method, all individual asbestos structures/fibers detected in the sample field are analyzed, and the length, width, aspect ratio (ratio of length to width), and asbestos species (e.g., chrysotile, amosite, etc.) are recorded. The results indicated that no asbestos fibers were detected in any of the samples submitted for TEM analyses, with reporting limits less than 0.001 structures per cubic centimeter.

8.2 Soil Samples for PLM and TCLP Metals

START collected four composite soil samples for asbestos analysis during the 2012 RA. All four samples were collected from soil in preparation to be used as topsoil over the dry basin around the drywell.

The first soil sample (12080126) was a composite sample collected from soil from a local quarry. This sample was collected in anticipation of using the soil to cover the repository around the drywell. The soil sample was analyzed for asbestos using PLM following the CARB Method 435 sample preparation technique, and the result indicated that the sample was non-detect for asbestos (less than 0.1%), and these results are included in Table 8-5. A second composite sample (12080127) was also collected from this off-Site quarry soil for TCLP RCRA metals analysis. The results indicated that seven of the RCRA metals (arsenic, cadmium, chromium, lead, mercury, selenium, and silver) were not detected in the TCLP leaching fluid. The result for barium was 0.324 milligrams per liter (mg/L), which is well below the TCLP regulatory limit for barium of 100 mg/L. The data are presented in Table 8-6.

Three composite samples were collected from the on-Site stockpile of native loam soil excavated from the bottom of the drywell excavation. These three samples consisted of composite samples collected from the surface of the stockpile (12080128) and from one-third (12080129) and two-thirds (12080130) into and around the stockpile. An ERRS excavator was used to collect the composites for each of the three samples. These composite samples were collected to confirm that the native loam soil did not contain asbestos. The soil samples were analyzed for asbestos using PLM following the CARB Method 435 sample preparation technique, and the results are summarized in Table 8-5. The results for all soil samples were less than the detection limit of 0.1%.

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 G.

Table 8-1

Summary of Samples
Orofino Asbestos Site, 2012 Removal Action
Orofino, Idaho

EPA Sample ID	Property Address	Sample Date	Matrix	Sample Matrix and Analysis Method					
				Air Samples				Soil Samples	
				NIOSH 7400 PCM (Perimeter)	NIOSH 7400 PCM (Personal)	ISO 10312 TEM (Perimeter)	ISO 10312 TEM (Personal)	TCLP Metals	CARB 435 PLM
12080001	291 118th Street	8/27/2012	Air		X				
12080002	291 118th Street	8/27/2012	Air	X (overloaded)					
12080003	291 118th Street	8/27/2012	Air	X (overloaded)					
12080004	291 118th Street	8/28/2012	Air	X					
12080005	291 118th Street	8/29/2012	Air		X				
12080006	291 118th Street	8/29/2012	Air	X					
12080007	291 118th Street	8/29/2012	Air	X					
12080008	291 118th Street	8/30/2012	Air		X				
12080009	291 118th Street	8/30/2012	Air	X					
12080010	291 118th Street	8/30/2012	Air			X			
12080011	291 118th Street	8/30/2012	Air	X					
12080012	291 118th Street	8/31/2012	Air		X				
12080013	291 118th Street	8/31/2012	Air	X					
12080014	291 118th Street	8/31/2012	Air	X					
12080015	291 118th Street	9/10/2012	Air		X				
12080016	291 118th Street	9/10/2012	Air	X					
12080017	291 118th Street	9/13/2012	Air		X				
12080018	291 118th Street	9/13/2012	Air	X					
12080019	291 118th Street	9/13/2012	Air	X					
12080020	291 118th Street	9/13/2012	Air		X				
12080021	291 118th Street	9/13/2012	Air	X					
12080022	291 118th Street	9/13/2012	Air			X			
12080023	291 118th Street	9/14/2012	Air	X (overloaded)					
12080024	291 118th Street	9/17/2012	Air		X				
12080025	291 118th Street	9/17/2012	Air		X (overloaded)				
12080026	291 118th Street	9/18/2012	Air		X (overloaded)				
12080027	291 118th Street	9/18/2012	Air		X				
12080028	291 118th Street	9/18/2012	Air			X			
12080029	291 118th Street	9/18/2012	Air	X (overloaded)					
12080030	291 118th Street	9/19/2012	Air		X				
12080031	291 118th Street	9/19/2012	Air		X				
12080032	291 118th Street	9/19/2012	Air	X					
12080033	291 118th Street	9/20/2012	Air		X				
12080034	291 118th Street	9/20/2012	Air		X (overloaded)				
12080035	291 118th Street	9/20/2012	Air	X (overloaded)					
12080036	291 118th Street	9/20/2012	Air	X					
12080037	291 118th Street	9/21/2012	Air		X				
12080038	291 118th Street	9/21/2012	Air	X (overloaded)					
12080039	291 118th Street	9/24/2012	Air		X				
12080040	291 118th Street	9/25/2012	Air			X			
12080041	291 118th Street	9/26/2012	Air		X				
12080042	291 118th Street	9/25/2012	Air	X					

Table 8-1

Summary of Samples
Orofino Asbestos Site, 2012 Removal Action
Orofino, Idaho

EPA Sample ID	Property Address	Sample Date	Matrix	Sample Matrix and Analysis Method					
				Air Samples				Soil Samples	
				NIOSH 7400 PCM (Perimeter)	NIOSH 7400 PCM (Personal)	ISO 10312 TEM (Perimeter)	ISO 10312 TEM (Personal)	TCLP Metals	CARB 435 PLM
12080043	291 118th Street	9/27/2012	Air		X				
12080044	291 118th Street	9/27/2012	Air	X					
12080045	291 118th Street	9/28/2012	Air		X				
12080046	291 118th Street	9/28/2012	Air			X			
12080047	291 118th Street	10/2/2012	Air				X		
12080048	291 118th Street	10/2/2012	Air	X					
12080049	291 118th Street	10/3/2012	Air		X				
12080050	291 118th Street	10/3/2012	Air	X					
12080150	Blank	8/27/2012	Air	X(not analyzed)					
12080151	Blank	8/29/2012	Air	X(not analyzed)					
12080152	Blank	8/30/2012	Air	X(not analyzed)					
12080153	Blank	8/31/2012	Air	X(not analyzed)					
12080154	Blank	9/10/2012	Air	X(not analyzed)					
12080155	Blank	9/13/2012	Air	X(not analyzed)					
12080156	Blank	9/13/2012	Air	X(not analyzed)					
12080157	Blank	9/17/2012	Air	X(not analyzed)					
12080158	Blank	9/18/2012	Air			X(not analyzed)			
12080159	Blank	9/19/2012	Air	X(not analyzed)					
12080160	Blank	9/20/2012	Air	X(not analyzed)					
12080161	Blank	9/21/2012	Air	X(not analyzed)					
12080162	Blank	9/25/2012	Air			X(not analyzed)			
12080163	Blank	9/26/2012	Air	X(not analyzed)					
12080164	Blank	9/27/2012	Air	X(not analyzed)					
12080165	Blank	9/28/2012	Air			X(not analyzed)			
12080166	Blank	10/2/2012	Air			X(not analyzed)			
12080167	Blank	10/2/2012	Air	X(not analyzed)					
12080168	Blank	10/3/2012	Air	X(not analyzed)					
12080126	TripCo Quarry	9/11/2012	Soil						X
12080127	TripCo Quarry	9/11/2012	Soil					X	
12080128	291 118th Street	9/19/2012	Soil						X
12080129	292 118th Street	9/19/2012	Soil						X
12080130	293 118th Street	9/19/2012	Soil						X

Key:
CARB = California Air Resources Board
EPA = United States Environmental Protection Agency
ID = Identification
ISO = International Organization for Standardization
NIOSH = National Institute for Occupational Safety and Health
PCM = Phase Contrast Microscopy
PLM = Polarized Light Microscopy
TEM = Transmission Electron Microscopy
TCLP = Toxicity Characteristic Leaching Procedure

Table 8-2

Personal Air Sample Results - Phase Contrast Microscopy
Orofino Asbestos Site, 2012 Removal Action
Orofino, Idaho

EPA Sample ID	Property Address	Sample Date	Asbestos and Other Fibers NIOSH Method 7400 PCM (f/cc)
Action Limit (OSHA PEL)			0.1
12080001	291 118th Street	8/27/2012	**0.005**
12080005	291 118th Street	8/29/2012	**0.006**
12080008	291 118th Street	8/30/2012	<0.002
12080012	291 118th Street	8/31/2012	<0.003
12080015	291 118th Street	9/10/2012	**0.009**
12080017	291 118th Street	9/13/2012	**0.003**
12080020	291 118th Street	9/13/2012	**0.005**
12080024	291 118th Street	9/17/2012	**0.003**
12080025	291 118th Street	9/17/2012	Overloaded
12080026	291 118th Street	9/18/2012	Overloaded
12080027	291 118th Street	9/18/2012	**0.003**
12080030	291 118th Street	9/19/2012	**0.004**
12080031	291 118th Street	9/19/2012	**0.002**
12080033	291 118th Street	9/20/2012	**0.004**
12080034	291 118th Street	9/20/2012	Overloaded
12080037	291 118th Street	9/21/2012	**0.006**
12080039	291 118th Street	9/24/2012	<0.001
12080041	291 118th Street	9/26/2012	<0.002
12080043	291 118th Street	9/27/2012	<0.002
12080045	291 118th Street	9/28/2012	<0.005
12080049	291 118th Street	10/3/2012	<0.003

Note: A **BOLD** result indicates asbestos and other fibers were detected.

Key:

EPA = United States Environmental Protection Agency
f/cc = fibers per cubic centimeter
ID = Identification
ND = Not detected
NIOSH = National Institute for Occupational Safety and Health
OSHA = Occupational Safety and Health Administration
PCM = Phase Contrast Microscopy
PEL = Permissible Exposure Limit
TEM = Transmission electron microscopy

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Table 8-3

Perimeter Air Sample Results - Phase Contrast Microscopy
Orofino Asbestos Site, 2012 Removal Action
Orofino, Idaho

EPA Sample ID	Property Address	Sample Date	Asbestos and Other Fibers NIOSH Method 7400 PCM (f/cc)
Action Limit (Clearance Limit)			0.01
12080002	291 118th Street	8/27/2012	Overloaded
12080003	291 118th Street	8/27/2012	Overloaded
12080004	291 118th Street	8/28/2012	**0.001**
12080006	291 118th Street	8/29/2012	**0.002**
12080007	291 118th Street	8/29/2012	**0.001**
12080009	291 118th Street	8/30/2012	<0.0004
12080011	291 118th Street	8/30/2012	<0.0003
12080013	291 118th Street	8/31/2012	<0.001
12080014	291 118th Street	8/31/2012	<0.001
12080016	291 118th Street	9/10/2012	**0.004**
12080018	291 118th Street	9/13/2012	<0.0005
12080019	291 118th Street	9/13/2012	<0.0005
12080021	291 118th Street	9/13/2012	**0.0005**
12080023	291 118th Street	9/14/2012	Overloaded
12080029	291 118th Street	9/18/2012	Overloaded
12080032	291 118th Street	9/19/2012	<0.0001
12080035	291 118th Street	9/20/2012	Overloaded
12080036	291 118th Street	9/20/2012	**0.001**
12080038	291 118th Street	9/21/2012	Overloaded
12080042	291 118th Street	9/25/2012	<0.0004
12080044	291 118th Street	9/27/2012	<0.0004
12080048	291 118th Street	10/2/2012	<0.0004
12080050	291 118th Street	10/3/2012	<0.001

Note: A **BOLD** result indicates asbestos and other fibers were detected.

Key:

EPA = United States Environmental Protection Agency
f/cc = fibers per cubic centimeter
ID = Identification
NAD = no asbestos detected
NIOSH = National Institute for Occupational Safety and Health
PCM = Phase Contrast Microscopy

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Table 8-4

Perimeter and Personal Air Sample Results - Transmission Electron Microscopy
Orofino Asbestos Site, 2012 Removal Action
Orofino, Idaho

EPA Sample ID	Property Address	Sample Date	Sample Type	Asbestos ISO 10312 TEM Results (s/cc)	
				Total Asbestos Structures	PCM-Equivalent Structures
Action Level (Clearance Limit)				0.01	0.01
12080010	291 118th Street	8/30/2012	Perimeter	< 0.0009311	< 0.0009311
12080022	291 118th Street	9/13/2012	Perimeter	< 0.0009981	< 0.0009981
12080028	291 118th Street	9/18/2012	Perimeter	< 0.0009281	< 0.0009281
12080040	291 118th Street	9/25/2012	Perimeter	< 0.0009612	< 0.0009612
12080046	292 118th Street	9/28/2012	Perimeter	< 0.0009968	< 0.0009968
12080047	293 118th Street	10/2/2012	Personal	< 0.0009823	< 0.0009823

Note: A **BOLD** result indicates asbestos and other fibers were detected.

Key:

EPA = United States Environmental Protection Agency
ID = Identification
ISO = International Organization for Standardization
NAD = no asbestos detected
PCM = Phase Contrast Microscopy
s/cc = structures per cubic centimeter
TEM = Transmission Electron Microscopy

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Table 8-5

Soil Sample Asbestos Results
Orofino Asbestos Site, 2012 Removal Action
Orofino, Idaho

EPA Sample ID	Property Address	Purpose	Sample Date	Asbestos CARB Method 435 PLM Results (%)
12080126	TripCo Quarry	Pre-Top Soil Confirmation	9/11/2012	NAD (< 0.1%)
12080128	291 118th Street	Pre-Top Soil Confirmation	9/19/2012	NAD (< 0.1%)
12080129	291 118th Street	Pre-Top Soil Confirmation	9/19/2012	NAD (< 0.1%)
12080130	291 118th Street	Pre-Top Soil Confirmation	9/19/2012	NAD (< 0.1%)

Key:

CARB = California Air Resources Board
EPA = United States Environmental Protection Agency
ID = Identification
NAD = No Asbestos Detected
PLM = Polarized Light Microscopy

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Table 8-6

Soil Sample TCLP Metals Results
Orofino Asbestos Site, 2012 Removal Action
Orofino, Idaho

EPA Sample Identification	Property Address	Sample Date	Analyte	Result (milligrams per liter)	Qualifier	RCRA Limit
12080127	TripCo Quarry	9/11/2012	Arsenic	0.3	UJL	5
12080127	TripCo Quarry	9/11/2012	Barium	**0.324**		100
12080127	TripCo Quarry	9/11/2012	Cadmium	0.05	U	1
12080127	TripCo Quarry	9/11/2012	Chromium	0.05	U	5
12080127	TripCo Quarry	9/11/2012	Lead	0.1	U	5
12080127	TripCo Quarry	9/11/2012	Mercury	0.002	U	0.2
12080127	TripCo Quarry	9/11/2012	Selenium	0.3	U	1
12080127	TripCo Quarry	9/11/2012	Silver	0.05	U	5

Bold results are greater than the sample quantitation limit.

Key:

EPA = United States Environmental Protection Agency

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

UJL = The analyte was not detected above the reported sample quantitation limit. However, the reported sample quantitation limit is approximate with a low bias and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

RCRA = Resource Conservation and Recovery Act

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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 *Contract Laboratory Program Statement of Work for Inorganic Analyses* (EPA 2007). These QC requirements or equivalent requirements found in the analytical methods 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 commercial laboratory were reviewed and validated 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.*
- EPA (2010) *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review*.

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

9.1 Satisfaction of Data Quality Objectives

The following EPA (EPA 2000) guidance document was used to establish data quality objectives (DQOs) for this project:

- *Guidance for the Data Quality Objectives Process* (EPA QA/G-4), EPA/600/R-96/055.

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 2012a). A detailed discussion of accomplished project objectives is presented in the following sections.

9.2 QA/QC Samples

Rinsate blank and trip blank QA samples were not collected. Rinsate blank samples were not required as all samples were collected using dedicated sampling equipment. Trip blank samples are only required for volatile organic compound analysis. Nineteen air field blank samples were collected and held at the laboratory pending the results of the sample analyses; because no anomalous sample results were obtained, the blank samples were not analyzed. QC sample (matrix spike [MS], MS duplicate [MSD] and laboratory duplicate samples) analyses were performed for the TCLP metals sample.

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' 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 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 duplicate sample analyses. Laboratory duplicate analyses were performed for the TCLP metals sample; no qualifiers were applied based on the one duplicate outlier. The project DQO for precision of 90% 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 MS/MSD %Rs for all laboratory analyses. Surrogates are not applicable to asbestos and metals analyses. A total of one sample result (approximately 9.5% of the results) was qualified as an estimated quantity based on MS and MSD outliers; the project DQO for accuracy of 90% was met.

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; 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, interference check sample, serial dilution, and field blank samples. This QA/QC parameter is summarized below.

9.4.1 Holding Times

All samples were analyzed within holding time QC limits.

9.4.2 Interference Check Sample

All interference check sample results were within QC limits.

9.4.3 Serial Dilution

All serial dilution results were within QC limits.

9.4.4 Field Blanks

Asbestos air filter field blank collection met the frequency criteria of greater than one per ten field samples; however, analyses were not performed on these samples because past sampling history during the last two years of the RA indicated that the integrity of the sampling protocol was successful.

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10 Community Relations

Throughout the RA, the OSC maintained communications with the minister of the Church and several members of their board of Elders. The OSC was also available to answer any questions about the RA from any party that was interested in the project. The City of Orofino Codes Official visited the Site September 7, 2012, and requested information about the Site activities. The OSC provided an update of the RA activity as well as the projected completion date.

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11 Health and Safety

The OSC maintained ultimate authority and responsibility for Site safety during the RA. 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 2012 RA 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. After the initial data from air sampling was received, the minimum level of PPE for the Site was Level D, including safety glasses, hard hat, safety vest, and steel-toed safety shoes.

The chemical hazard associated with the Site was asbestos. EPA established an exclusion work zone around the west end of the Church 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. Perimeter and personal monitoring confirmed that Site personnel could wear Level D in the exclusion work zone; see Section 8. 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.

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12 Difficulties Encountered/ Recommendations

There were no issues that adversely affected the conduct of the RA. 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.

Due to wild land fires in Washington and Idaho, the Clearwater River Valley filled with smoke during several days of the RA, causing the National Weather Service to issue a weather advisory for individuals that were sensitive or had existing respiratory problems. None of the Site personnel had any complaints or exhibited any clinical symptoms due to the smoke.

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13 Summary and Conclusions

In the late summer and fall of 2012, EPA performed an RA at the Orofino Asbestos Site in Orofino, Idaho, to complete the repair and re-construction of the repository wall at the First Baptist Church where asbestos-contaminated soil had been placed during the 2011 RA.

During the 2012 RA, the western portion of the wall was completely disassembled and reconstructed, and the asbestos-contaminated soil that has been backfilled behind the wall was temporarily removed and stockpiled on Site. As part of the RA, a drywell was installed in the middle of the western portion of the repository to drain surface water and to minimize excessive compaction of the asbestos-contaminated soil behind the retaining wall. The topsoil cover was graded to direct the water toward the drywell, which was installed to a depth of approximately 25 feet below the surface in a loam soil layer that would naturally drain the water.

Because of the addition of the drywell, approximately 378 yd^3 of asbestos-contaminated soil was disposed off-Site at the Graham Road landfill in Medical Lake, Washington, which is licensed to accept asbestos waste.

Two small areas of the asphalt church parking lot were also excavated and re-compacted, and then the asphalt was replaced. The protective chain-link fence that had been removed to facilitate the re-construction of the wall during the 2012 RA was also replaced.

Asbestos-contaminated soil remains on-Site under protective barriers at two properties: the Church at 291 118^{th} Street, which was the subject of the 2012 RA, and the Vacant Lot at 12976 Highway 12, where no removal work was performed in 2012. Restrictive covenants will be imposed on both properties as long as the asbestos-contaminated soil is present, and EPA is developing M&R plans to be implemented by each property owner.

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14 References

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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.

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

_____, 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.

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A Photographs

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Photo 1 View of dry retention pond and wall before 2012 removal action.

Direction: *Southwest* *Date: 8/26/12* *Time: 16:12* *Taken by: PH*

Photo 2 Heavy equipment is used to disassemble the wall by removing individual precast blocks.

Direction: *Northwest* *Date: 8/27/12* *Time: 14:25* *Taken by: EL*

Photo 3 Shifted blocks of the western section of the retaining wall.

Direction: *Northwest* *Date: 8/28/12* *Time: 14:29* *Taken by: EL*

Photo 4 Close-up of retaining wall with shifted blocks before 2012 removal action.

Direction: *Northwest* *Date: 8/26/12* *Time: 16:14* *Taken by: EL*

Photo 5 Dis-assembling of the west wall shifted blocks.

Direction: Southwest Date: 8/30/12 Time: 11:46 Taken by: EL

Photo 6 Base Blocks replaced with fabric liner.

Direction: West Date: 9/7/12 Time: 09:27 Taken by: EL

Photo 7 West wall being re-built.

Direction: Northwest Date: 9/8/12 Time: 17:39 Taken by: EL

Photo 8 Compaction of asbestos-contaminated soil behind the wall.

Direction: East Date: 9/8/12 Time: 10:32 Taken by: EL

Photo 9 Measuring the base height for the southwest section of the wall.

Direction: *Northwest* *Date: 9/20/12* *Time: 13:56* *Taken by: EL*

Photo 10 Compaction of base in preparation for the rebuilding of the southwest section of wall.

Direction: *Northwest* *Date: 9/20/12* *Time: 07:56* *Taken by: EL*

Photo 11 View of the rebuilding of the wall from the southwest.

Direction: *Northeast* *Date: 9/20/12* *Time: 13:55* *Taken by: EL*

Photo 12 Southwest end of the wall.

Direction: *Northwest* *Date: 9/26/12* *Time: 17:26* *Taken by: MW*

Photo 13 Air monitoring for asbestos and other fibers at perimeter of work zone.

Direction: *Southwest* *Date: 8/27/12* *Time: 14:26* *Taken by: EL*

Photo 14 Personnel air monitoring for asbestos and other fibers on excavator.

Direction: *Southwest* *Date: 8/28/12* *Time: 07:45* *Taken by: EL*

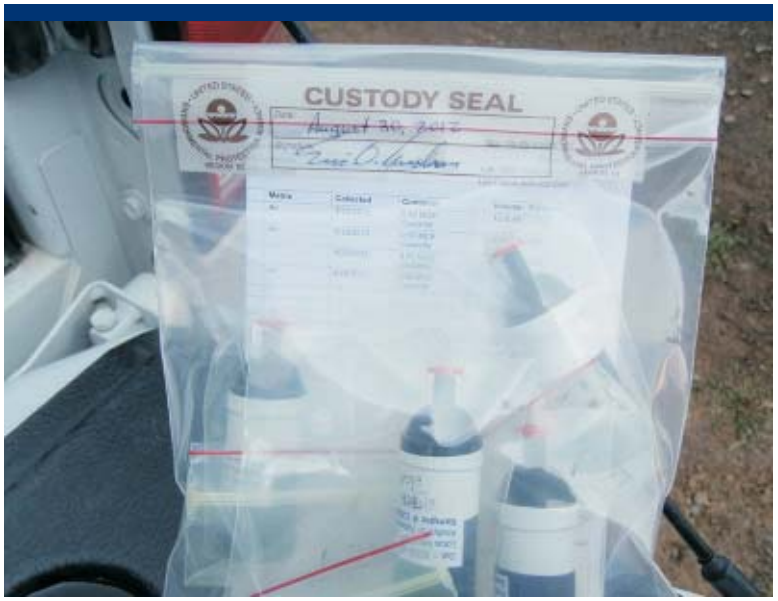

Photo 15 Air monitoring cassette samples packaged under custody seal for shipment to off-site laboratory.

Direction: *Down* *Date: 8/30/12* *Time: 10:50* *Taken by: EL*

Photo 16 Asbestos-contaminated soil excavated from behind wall stockpile on-site with cover.

Direction: *Northeast* *Date: 8/31/12* *Time: 14:26* *Taken by: EL*

Photo 17 Excavation of drywell in background, with stockpile of asbestos-contaminated soil in foreground.

Direction: *Northwest* *Date: 9/12/12* *Time: 15:27* *Taken by: EL*

Photo 18 Close-up of dry will excavation and shoring.

Direction: *Northeast* *Date: 9/12/12* *Time: 15:40* *Taken by: EL*

Photo 19 ERRS worker in safety harness assembles temporary sheet pile wall supports.

Direction: *Down* *Date: 9/13/12* *Time: 11:50* *Taken by: EL*

Photo 20 Lower portion of dry well with slots for drainage, surrounded by drainage rock fill.

Direction: *Down* *Date: 9/14/12* *Time: 07:14* *Taken by: EL*

Photo 21 Upper portion of dry well.

Direction: *Down* *Date: 9/17/12* *Time: 11:54* *Taken by: EL*

Photo 22 Installation of fabric liner around drain rock and dry well.

Direction: *Northwest* *Date: 9/17/12* *Time: 11:55* *Taken by: EL*

Photo 23 Installation of galvanized culvert around dry well for drain rock.

Direction: *Northwest* *Date: 9/17/12* *Time: 17:14* *Taken by: EL*

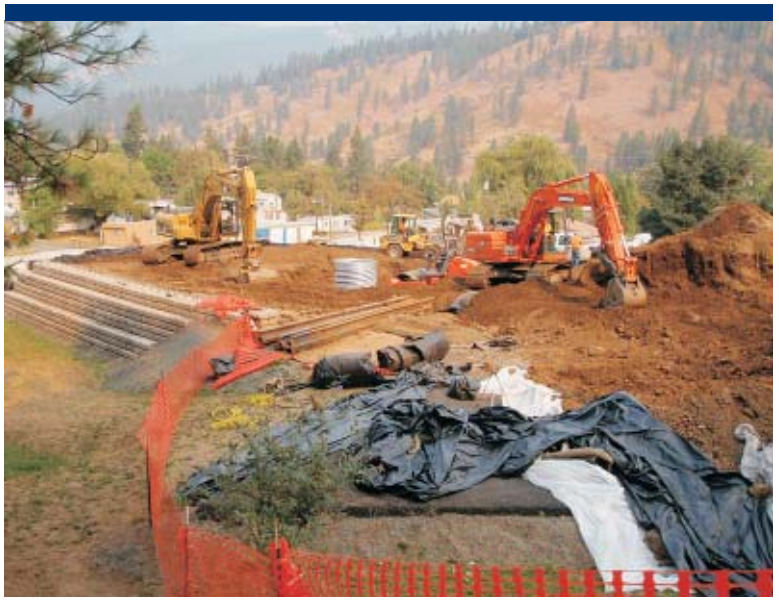

Photo 24 Placement and compaction of asbestos-contaminated soil around dry well.

Direction: *Northwest* *Date: 9/24/12* *Time: 09:54* *Taken by: EL*

Photo 25 Dry well completed to the surface level.

Direction: *Northwest* *Date: 10/3/12* *Time: 12:05* *Taken by: EL*

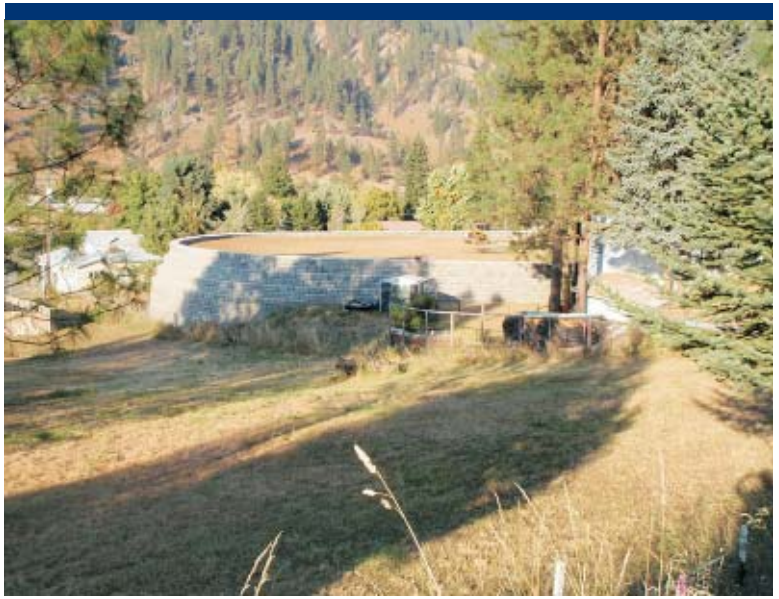

Photo 26 Completed grading of top soil from the southwest.

Direction: *Northeast* *Date: 10/3/12* *Time: 16:33* *Taken by: MW*

Photo 27 Completed grading of top soil from the southeast.

Direction: *Northwest* *Date: 10/3/12* *Time: 18:10* *Taken by: MW*

Photo 28 Installation of liner material over compacted and graded asbestos-contaminated soil.

Direction: *Northeast* *Date: 9/28/12* *Time: 08:39* *Taken by: MW*

Photo 29 Installation of liner material at edge of soil retention basin and at the edge of the asphalt parking lot.

Direction: *Down* *Date: 9/28/12* *Time: 09:15* *Taken by: MW*

Photo 30 Liner material around surface of dry well.

Direction: *Down* *Date: 9/28/12* *Time: 10:59* *Taken by: MW*

Photo 31 Final view of liner over asbestos-contaminated material before installation of asphalt and top soil.

Direction: *Northwest* *Date: 9/28/12* *Time: 08:08* *Taken by: MW*

Photo 32 Completed retaining wall and chain-link fence with asphalt for parking area.

Direction: *Northwest* *Date: 12/27/12* *Time: 06:54* *Taken by: PH*

Photo 33 Completed retaining wall and chain-link fence with asphalt for parking area.

Direction: *East* *Date: 12/27/12* *Time: 06:55* *Taken by: PH*

Photo 34 Loading of asbestos-contaminated soil into trucks for off-site disposal.

Direction: *North* *Date: 9/28/12* *Time: N/A* *Taken by: PH*

Photo 35 Completed asphalt parking area and grass dry retention basin.

Direction: *West* *Date: 12/27/12* *Time: 06:55* *Taken by: PH*

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B Site Plan

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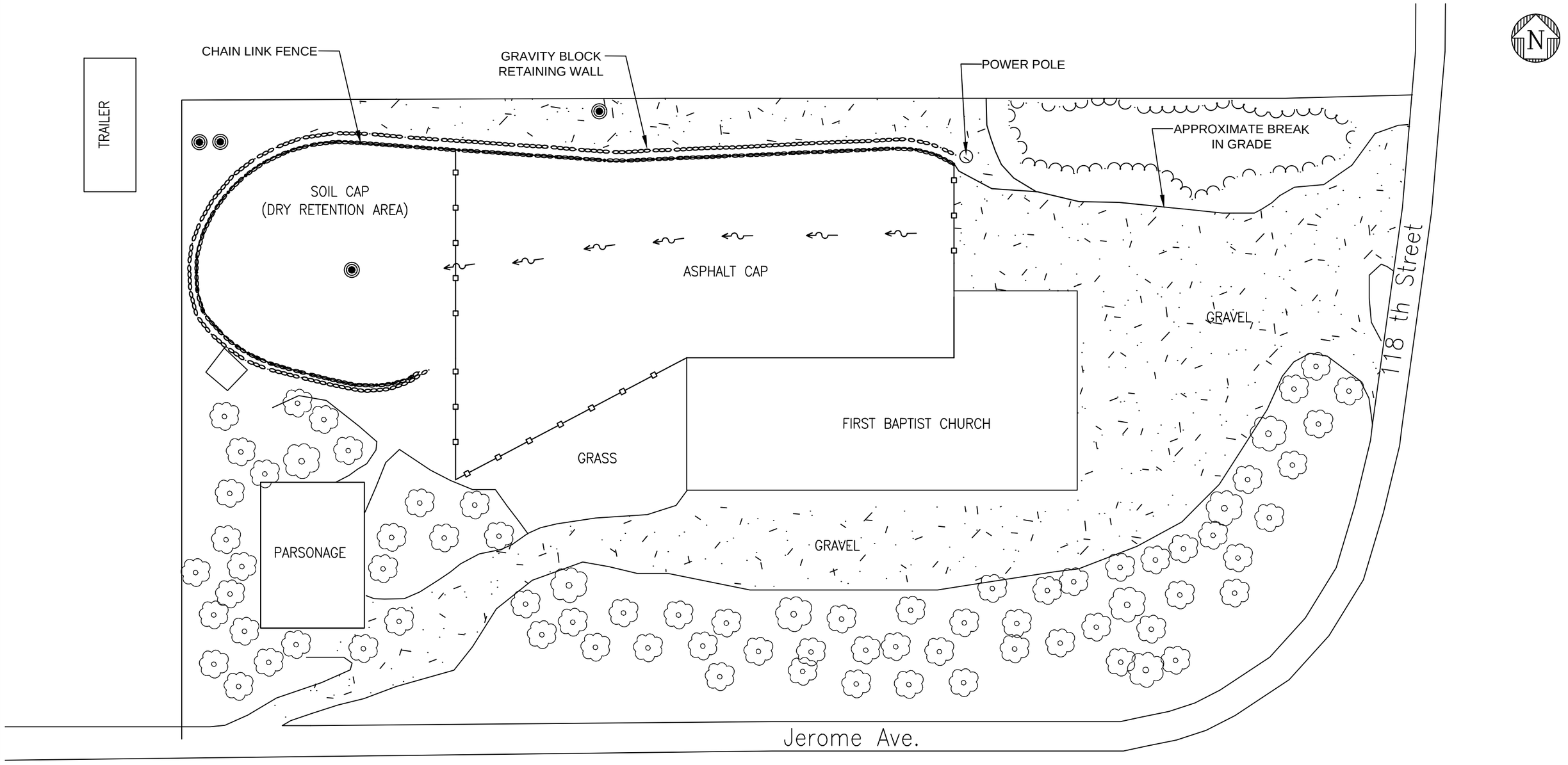

NOTES

1. RETAINING WALL AND ASPHALT LOCATIONS AS SHOWN ARE APPROXIMATE. FIELD LOCATION IS REQUIRED.
2. SOME MEASUREMENTS AND FEATURE LOCATIONS ARE APPROXIMATE BASED ON AERIAL PHOTOGRAMMETRY.

LEGEND

- – EXISTING BREAK IN GRADE
- – RETAINING WALL
- – DRAINAGE SWALE
- – EDGE OF ASPHALT
- – DRY WELL
- – CHAIN–LINK FENCE ON WALL

SCALE IN FEET

0 40 80 120

ATTACHMENT 1
SITE FIGURE

MAINTENANCE AND REPAIR PLAN
OROFINO ASBESTOS SITE, CLEARWATER COUNTY, IDAHO

SCALE	DATE ISSUED	C.A.D. FILE
NOTED	10–18–12	\\CHIBDL1\PROJECT\STARTI\CAD\OROFINO.DWG

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C Site Construction Drawings

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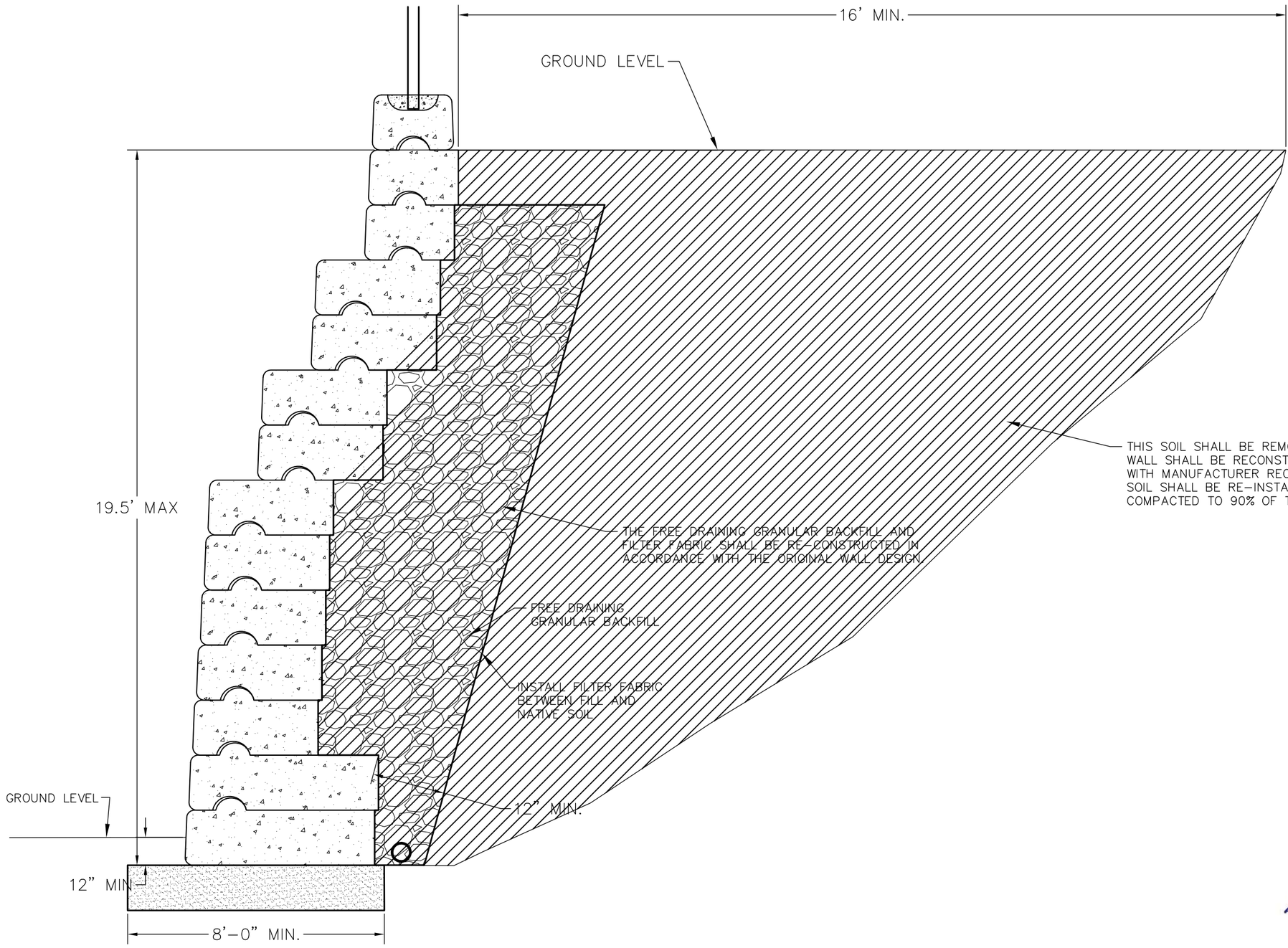

JM ENGINEERING
W. 8306 TRAILS ROAD
SPOKANE, WASHINGTON 99224
(509) 455-8760 / CELL (509) 953-9771

JOB TITLE: OROFINO CONTAMINATED SOIL CONTAINMENT PROJECT — OROFINO IDAHO

SHEET TITLE: WALL REPAIR DETAIL

PROFESSIONAL ENGINEER LICENSED 12530 STATE OF IDAHO JOHN E. MCKERVEY 5/25/12

DATE	APRIL 2012
DRAWN BY	JEM
DESIGN BY	JEM
JOB NO.	12-131
SHEET NO.	1

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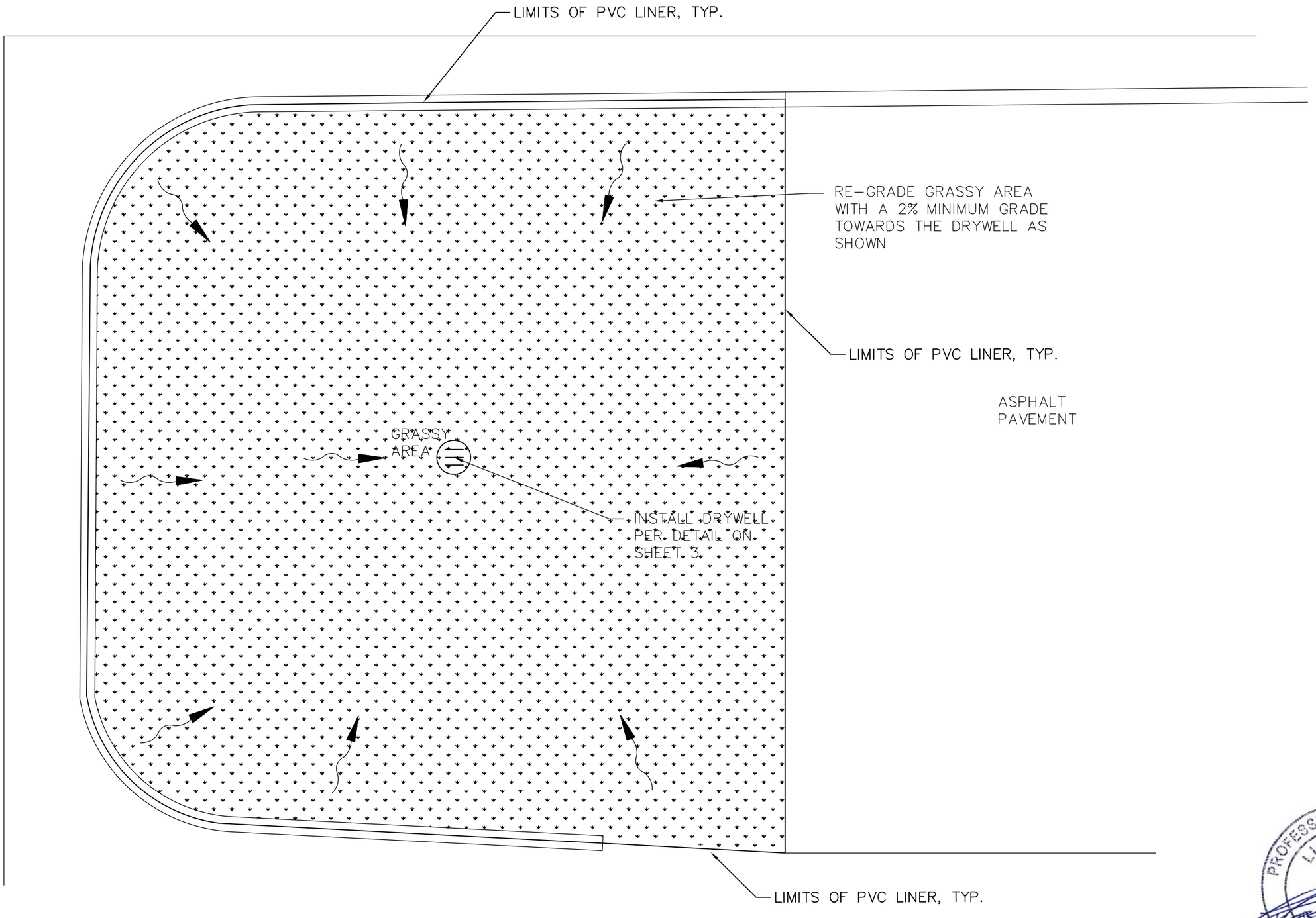

PROFESSIONAL ENGINEER LICENSED 12530 STATE OF IDAHO JOHN E. MCKERVEY

5/25/12

JM ENGINEERING
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SPOKANE, WASHINGTON 99224
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JOB TITLE: OROFINO CONTAMINATED SOIL CONTAINMENT PROJECT — OROFINO, IDAHO

SHEET TITLE: GRADING PLAN

DATE: APRIL 2012
DRAWN BY: JEM
DESIGN BY: JEM
JOB NO.: 12-131
SHEET NO.: 2

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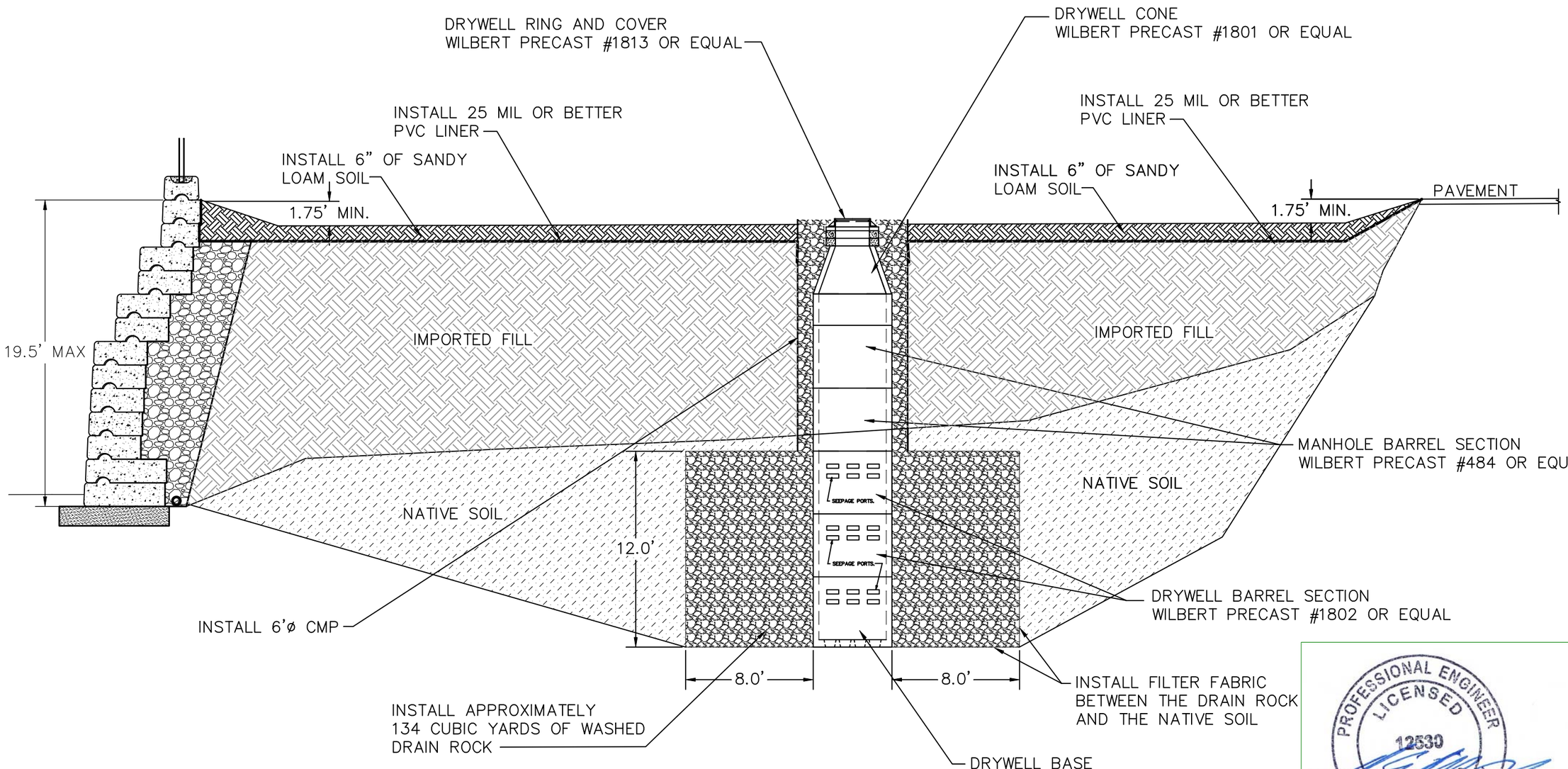

PROFESSIONAL ENGINEER
LICENSED
12530
STATE OF IDAHO
JOHN E. MCKERVEY
8/29/12

JM ENGINEERING
W. 8306 TRAILS ROAD
SPOKANE, WASHINGTON 99224
(509) 455-8760 / CELL (509) 953-9771

JOB TITLE: OROFINO CONTAMINATED SOIL CONTAINMENT PROJECT — OROFINO, IDAHO

SHEET TITLE: STORM DRAINAGE FACILITY

DATE: MAY 2012
DRAWN BY: JEM
DESIGN BY: JEM
JOB NO.: 12-131
SHEET NO.: 3

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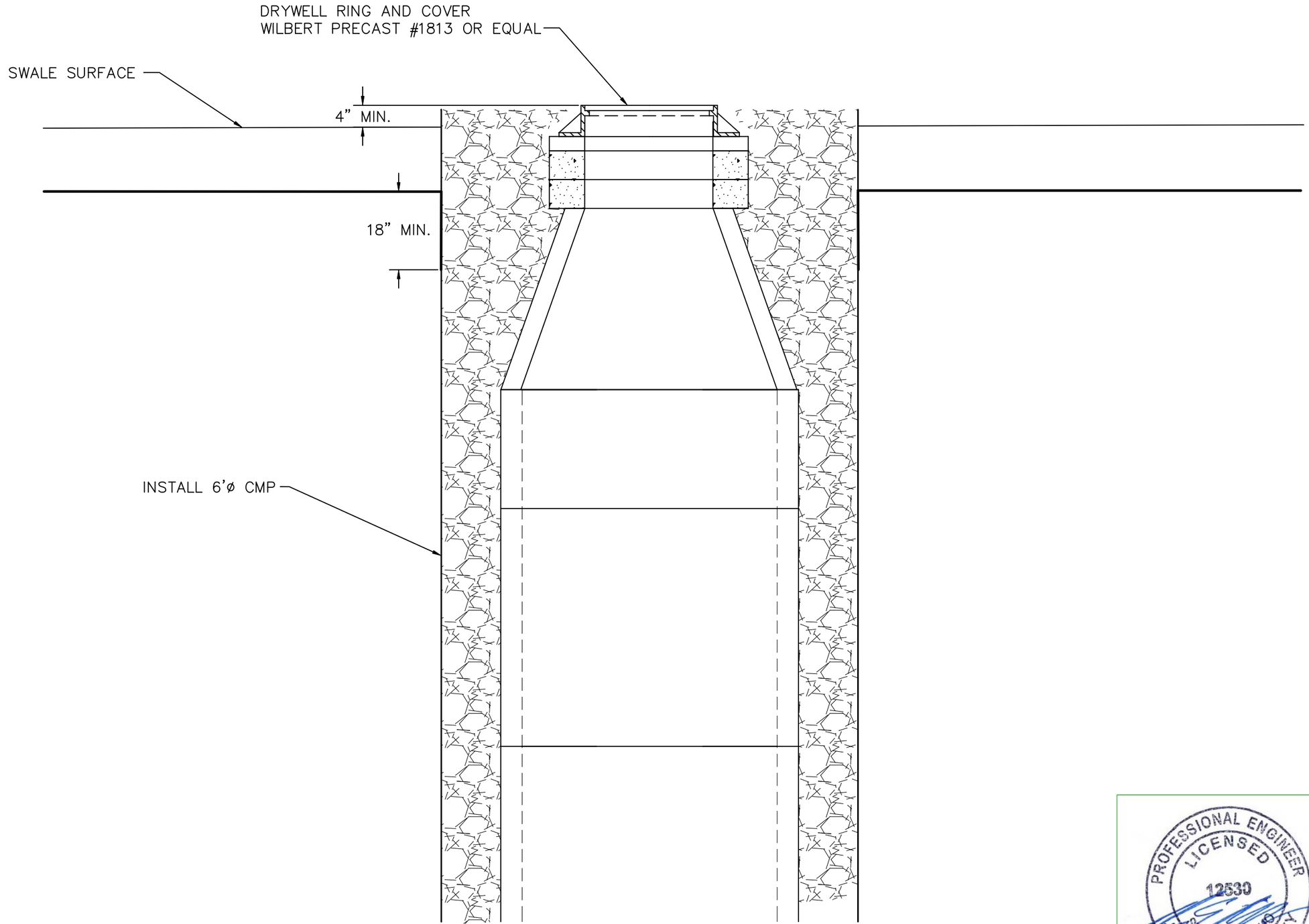

JM ENGINEERING
W. 8306 TRAILS ROAD
SPOKANE, WASHINGTON 99224
(509) 455-8760 / CELL (509) 953-9771

JOB TITLE
OROFINO CONTAMINATED SOIL CONTAINMENT PROJECT
OROFINO
IDAHO

SHEET TITLE
DRYWELL DETAIL

PROFESSIONAL ENGINEER LICENSED 12530 STATE OF IDAHO JOHN E. MCKERVEY
8/29/12

DATE: MAY 2012
DRAWN BY: JEM
DESIGN BY: JEM
JOB NO.: 12-131
SHEET NO.: 4

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D Storm Drainage Report

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STORM DRAINAGE REPORT

FOR

Soil Containment Project Site
Orofino, Idaho

May 2012

W.O. No. 12-131

Prepared by:

JM Engineering
W. 8306 Trails Road
Spokane, WA 99224
PH:(509)455-8760
FAX:(509)242-0793

This report has been prepared by JM Engineering under the direction of the undersigned professional engineer whose seal and signature appears hereon.

John E. McKervey, P.E.

INTRODUCTION

This project is located within the town of Orofino on 118th Street near its intersection with Tabor Drive. See Figure 1, Vicinity Map. This project proposes to construct a retaining wall to contain contaminated soil. A majority of the area will be covered by asphalt for a parking lot and the remaining area at the west end will be grass. This report will address drainage for the site in accordance with industry standards.

PURPOSE

The purpose of this report is to determine the extent of storm drainage facilities which will be required to treat and dispose of the increase in stormwater runoff created by the development of the subject parcel. The storm drainage facilities on this project will be designed to treat and dispose of runoff from a 25-year storm event. For this project a 25-year intensity of 2.2 inches was used.

ANALYSIS METHODOLOGY

The proposed drainage facilities for this site were designed by the use of a water budget analysis.

PROJECT DESCRIPTION

The proposed site is 2.93 acres in size and will consist of 60,782 square feet of impervious area and 66,790 square feet of pervious area.

TOPOGRAPHY

The site is located near the intersection of 118th Street and Tabor Drive. The site slopes to the north and to the west.

STREAM HYDROLOGY

No existing or intermittent streams are located on this property. No visual display of flows onsite other than sheet flow can be found; therefore, no shallow concentrated ditch flows were considered to have entered or exited the parcel area.

SOILS

I have included a soils map for this project, however the soil classifications for this site were not used to determine the infiltration capacity of the soil. A geo-tech study was completed by Allwest to determine the infiltration rate for the soils. I have also included a copy of the geo-tech report. An infiltration rate of 12 inches per hour was reported by Allwest and an infiltration rate of 6 inches per hour was used for design, incorporating a safety factor of 2.

DRAINAGE NARRATIVE

Off-site

Off site drainage from adjacent properties are cutoff by 118th Street and do not flow onto this site.

Onsite

All increase in drainage generated by development of this parcel will be collected within an evaporative/infiltrative swale located at the west end of the property. The size of the proposed storm drainage facility was determined using a water budget analysis which started with a 25-year storm in the swale and then analyzed a two year cycle of normal rainfall.

For this project there is 1 basin.

Table No. 1 - Pond and Basin Summary

POND AND BASIN SUMMARY Areas in SF					
Basin and Swale/ Pond	**Total Area (sf)**	**Total Impervious Area (sf)**	**Total Pervious Area (sf)**	**Swale Area (sf)**	**Max Pond Storage Depth (ft)[1]**
Basin 1	127,572	60,782	66790	9,963	1.44

[1] = See Basin Calculation Worksheet in Appendix

The swale was designed with a depth of 1.75' to provide a small amount of freeboard in the swale.

APPENDIX

Vicinity Map

Soils Map

Geo-Tech Report

25 Year Water Budget Calculations

Basin Map

VICINITY MAP

PROJECT LOCATION

JM ENGINEERING

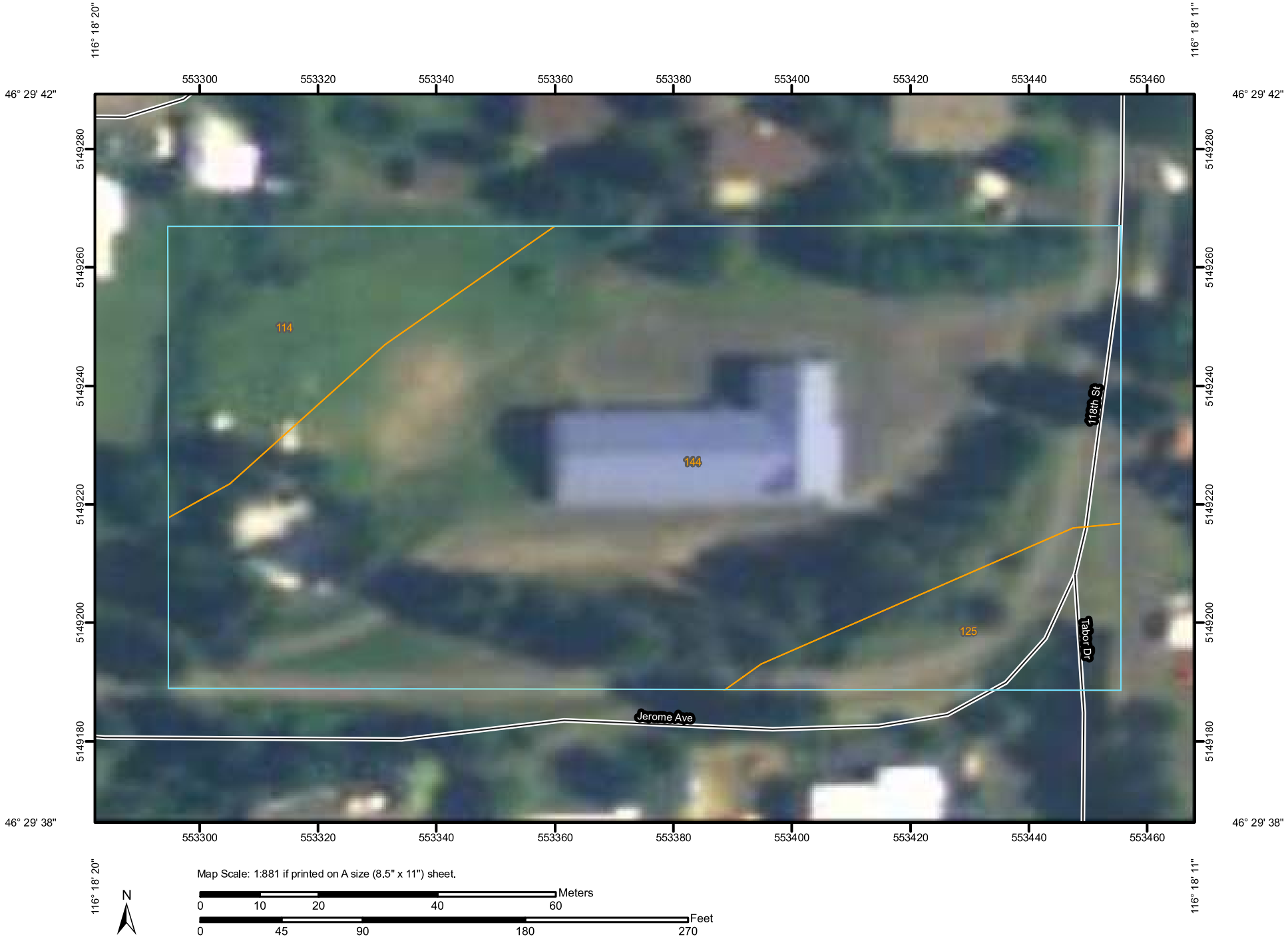
2706 N. BLUE RAVEN LANE
SPOKANE, WASHINGTON 99224
(509) 244-1619 / CELL (509) 953-9771

OROFINO, IDAHO
SOIL CONTAINMENT PROJECT
VICINITY MAP

JOB #: 12-131
DATE: MAY 2012

SOILS MAP

Soil Map—Clearwater Area, Idaho
(Orofino Soil Containment Site)



Map Scale: 1:881 if printed on A size (8.5" x 11") sheet.

N

Meters
0 10 20 40 60

Feet
0 45 90 180 270

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Units

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other

Special Line Features
- Gully
- Short Steep Slope
- Other

Political Features
- Cities

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

MAP INFORMATION

Map Scale: 1:881 if printed on A size (8.5" × 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: UTM Zone 11N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Clearwater Area, Idaho
Survey Area Data: Version 4, Jan 26, 2007

Date(s) aerial images were photographed: 6/21/2004

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Clearwater Area, Idaho (ID612)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
114	Itzee sandy loam, 0 to 5 percent slopes	0.4	12.7%
125	Johnson-Swayne complex, 20 to 40 percent slopes	0.3	8.5%
144	Klickson ashy silt loam, 15 to 35 percent slopes	2.5	78.8%
Totals for Area of Interest		**3.1**	**100.0%**

25 YEAR WATER BUDGET CALCULATIONS

NET INCREASE IN RUNOFF VOLUME PER ANNUM

Note: User to fill in shaded areas

Project:	Orofino
Job No.	12-131
Basin:	1
Date:	May-12
Reviewer:	John McKervey

Basin Data

Total Basin Area (acres) =	2.93	acres
Developed Conditions:		
Pervious Area (acres) =	1.53	acres
Impervious Area (acres) =	1.40	acres

	Curve Numbers (CN)		
	AMC II	AMC III	Winter
	Apr - Oct	Nov, Mar	Dec - Feb
Pre-Developed Conditions	82	92	95
Post-Developed Conditions			
Pervious Area	82	92	95
Impervious Area	98	98	98

Precipitation
Adjustment Factor = 17.1 /16.18 = 1.057

			Pre-Developed Conditions				Post-Developed Pervious Area				Post-Developed Impervious Area			
Month	Precipitation (inches)	Adjusted Precipitation (inches)	CN	S	Runoff (inches)	Runoff (cubic ft)	CN	S	Runoff (inches)	Runoff (cubic ft)	CN	S	Runoff (inches)	Runoff (cubic ft)
Jan	2.05	2.17	95	0.53	1.64	17,456	95	0.53	1.64	9,139	95	0.53	1.64	8,317
Feb	1.57	1.66	95	0.53	1.16	12,341	95	0.53	1.16	6,461	95	0.53	1.16	5,880
Mar	1.38	1.46	92	0.87	0.77	8,143	92	0.87	0.77	4,263	98	0.20	1.24	6,277
Apr	1.11	1.17	82	2.20	0.18	1,956	82	2.20	0.18	1,024	98	0.20	0.96	4,859
May	1.37	1.45	82	2.20	0.32	3,377	82	2.20	0.32	1,768	98	0.20	1.23	6,224
Jun	1.27	1.34	82	2.20	0.26	2,799	82	2.20	0.26	1,465	98	0.20	1.12	5,698
Jul	0.5	0.53	82	2.20	0.00	37	82	2.20	0.00	19	98	0.20	0.34	1,741
Aug	0.6	0.63	82	2.20	0.02	169	82	2.20	0.02	89	98	0.20	0.44	2,236
Sep	0.8	0.85	82	2.20	0.06	675	82	2.20	0.06	353	98	0.20	0.64	3,251
Oct	1.22	1.29	82	2.20	0.24	2,524	82	2.20	0.24	1,321	98	0.20	1.07	5,436
Nov	2.02	2.13	92	0.87	1.36	14,442	92	0.87	1.36	7,561	98	0.20	1.91	9,665
Dec	2.22	2.35	95	0.53	1.81	19,293	95	0.53	1.81	10,101	95	0.53	1.81	9,192
									7.83					
Annual Total =	16.11	17.03				0 cf				43,566 cf				68,777 cf

Increase in Runoff Volume/year = [(Post Impervious) + (Post Pervious)] - Pre-Developed

Increase in Runoff Volume/year = **112,343 cubic ft.** Mean Annual Increase in Runoff Volume

NET INCREASE IN RUNOFF VOLUME PER ANNUM

Note: User to fill in shaded areas

Precipitation with 25-yr storm 2.2 inches

Design Infiltration Rate = 6 inches/hr
Pond Bottom Area = 314 sq. ft.

	Pervious Area		Impervious Area	
	S	Runoff (in)	S	Runoff (in)
Runoff from 25-yr storm =	2.20	0.78	0.20	1.97

						Outflows				
	Total Runoff (cf)	Pan Evap (inches)	Adjusted Evaporation (inches)	Initial Pond Elev	Initial Pond Surface Area, (sq ft)	Pond Evaporation (cf)	Pond Overflow (cf)	Pond Infiltration Max, (cf)	Change in Pond vol. (cf)	Final Pond Elev
25-yr storm	14,355			100.00	9,963				14355.01	101.44
Nov	17,226	0.92	0.66	101.44	9,963	550	0	16,676	0	100.00
Dec	19,293	0.51	0.37	100.00	9,963	305	0	18,988	0	100.00
Jan	17,456	0.61	0.44	100.00	9,963	365	0	17,092	0	100.00
Feb	12,341	1.11	0.80	100.00	9,963	664	0	11,677	0	100.00
Mar	10,540	2.28	1.64	100.00	9,963	1,363	0	9,178	0	100.00
Apr	5,883	4.45	3.20	100.00	9,963	2,660	0	3,223	0	100.00
May	7,992	6.69	4.82	100.00	9,963	3,999	0	3,993	0	100.00
Jun	7,164	8.14	5.86	100.00	9,963	4,866	0	2,298	0	100.00
Jul	1,761	10.70	7.70	100.00	9,963	6,396	0	-4,636	0	100.00
Aug	2,325	9.42	6.78	100.00	9,963	5,631	0	-3,306	0	100.00
Sep	3,605	5.90	4.25	100.00	9,963	3,527	0	78	0	100.00
Oct	6,757	2.58	1.86	100.00	9,963	1,542	0	5,215	0	100.00
Nov	17,226	0.92	0.66	100.00	9,963	550	0	16,676	0	100.00
Dec	19,293	0.51	0.37	100.00	9,963	305	0	18,988	0	100.00
Jan	17,456	0.61	0.44	100.00	9,963	365	0	17,092	0	100.00
Feb	12,341	1.11	0.80	100.00	9,963	664	0	11,677	0	100.00
Mar	10,540	2.28	1.64	100.00	9,963	1,363	0	9,178	0	100.00
Apr	5,883	4.45	3.20	100.00	9,963	2,660	0	3,223	0	100.00
May	7,992	6.69	4.82	100.00	9,963	3,999	0	3,993	0	100.00
Jun	7,164	8.14	5.86	100.00	9,963	4,866	0	2,298	0	100.00
Jul	1,761	10.70	7.70	100.00	9,963	6,396	0	-4,636	0	100.00
Aug	2,325	9.42	6.78	100.00	9,963	5,631	0	-3,306	0	100.00
Sep	3,605	5.90	4.25	100.00	9,963	3,527	0	78	0	100.00
Oct	6,757	2.58	1.86	100.00	9,963	1,542	0	5,215	0	100.00

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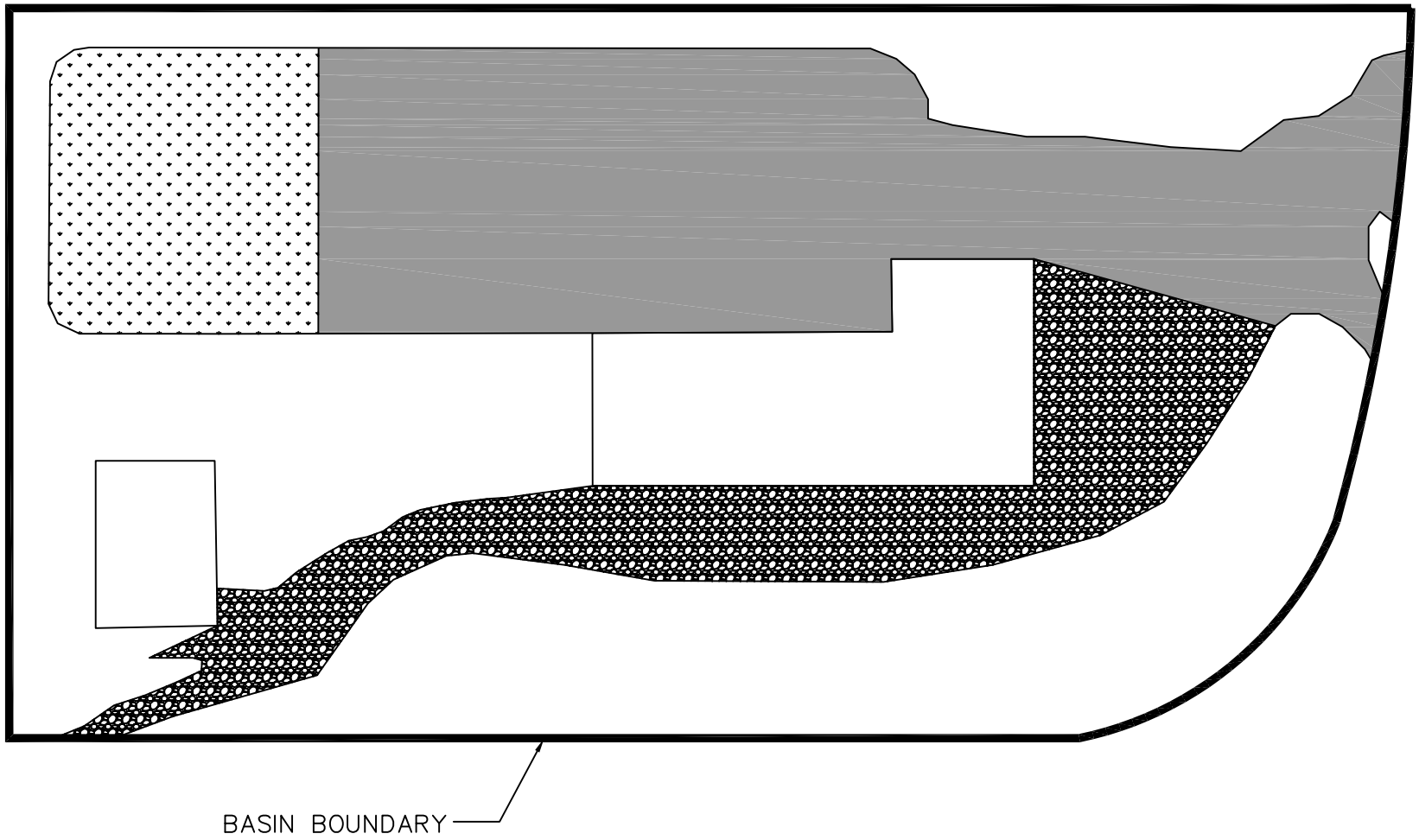
BASIN MAP



JM ENGINEERING

W. 8306 TRAILS ROAD
SPOKANE, WASHINGTON 99224
(509) 455-8760 / CELL (509) 953-9771

OROFINO, SOIL CONTAINMENT PROJECT

BASIN MAP

JOB #: 12-131
DATE: MAY 2012

ALLWEST
Testing & Engineering

Construction Materials Testing
Geotechnical Engineering
Environmental Consulting

May 23, 2012

Mr. Bryan Chernick
Response Manager
Environmental Quality Management, Inc.
6825 216th Street SW, Suite J
Lynnwood, WA 98036

RE: Geotechnical Consultation
Orofino Baptist Church Drywell
291 118th Street
Orofino, Idaho
ALLWEST Project No. 312-066G

Dear Mr. Chernick,

ALLWEST Testing & Engineering, LLC (ALLWEST) has been requested to provide geotechnical consultation services for the proposed drywell to be constructed at the Orofino Baptist church located on 118th Street in Orofino, Idaho. Our services were performed in general conformance with the scope of services outlined in our proposal dated May 1, 2012.

PROPOSED CONSTRUCTION

We understand a proposed drywell is to be constructed within the landscape area located west of the parking lot at the site. The drywell will be constructed to divert and discharge surface runoff away from the existing precast concrete block, mechanically stabilized earth (MSE) retaining wall along the western edge of the site. We understand the backfill placed behind the wall densified significantly and the upper portion of the wall rotated into the backfill requiring remediation. It is our understanding the drywell will be constructed at the time the MSE wall is repaired.

SUBSURFACE CONDITIONS

ALLWEST conducted a subsurface evaluation at the site on May 4, 2012. One boring was completed to conduct an infiltration test. The boring was drilled using a drill rig equipped with a Tubex drilling system which utilizes driven casing and a percussion hammer to

advance the boring. The cuttings were removed with compressed air and hose and containerized on-site due to the possible presence of asbestos containing materials (ACMs) in the on-site soils. On-site personnel utilized OSHA Level C personal protective equipment during drilling. Drilling equipment was decontaminated on site. The water from decontamination was containerized and left on site.

The subsurface profile observed in the boring generally consisted of fine to medium-grained silty sand with occasional interbedded layers of silt and clay to the maximum depth investigated, approximately 25 feet. Subsurface water was not observed at the time of drilling.

INFILTRATION TEST RESULTS

The infiltration test was conducted by extracting the driven casing to a depth of 20 feet. Two-inch diameter screened, PVC pipe was placed in the 6-inch diameter boring and the boring was sand packed between depths of 20 and 25 feet. Water was placed in the boring and maintained at a depth of approximately 15 feet for approximately one hour prior to recording measurements. The water level drop was measured at 15 minute intervals until two successive measurements indicated a stabilized infiltration rate. The water level was maintained at an approximate depth of 16 feet during measurements. A stabilized infiltration rate of approximately 12 inches per hour (in/hr) was measured.

RECOMMENDATIONS

We recommend an appropriate factor of safety be utilized for the measured infiltration rate for design of the proposed drywell.

LIMITATIONS

This letter has been prepared to assist in design of the proposed drywell at the Orofino Baptist Church located at 291 118th Street in Orofino, Idaho. Our services consist of professional opinions and conclusions made in accordance with generally accepted geotechnical engineering principles and practices. This acknowledgement is in lieu of all warranties either expressed or implied.

REMARKS

We appreciate the opportunity to be of service on this project. We are available to answer questions you may have regarding this report or to provide additional services as needed.

Sincerely,

ALLWEST Testing & Engineering, LLC

Shawn Turpin
Senior Geotechnical Engineer

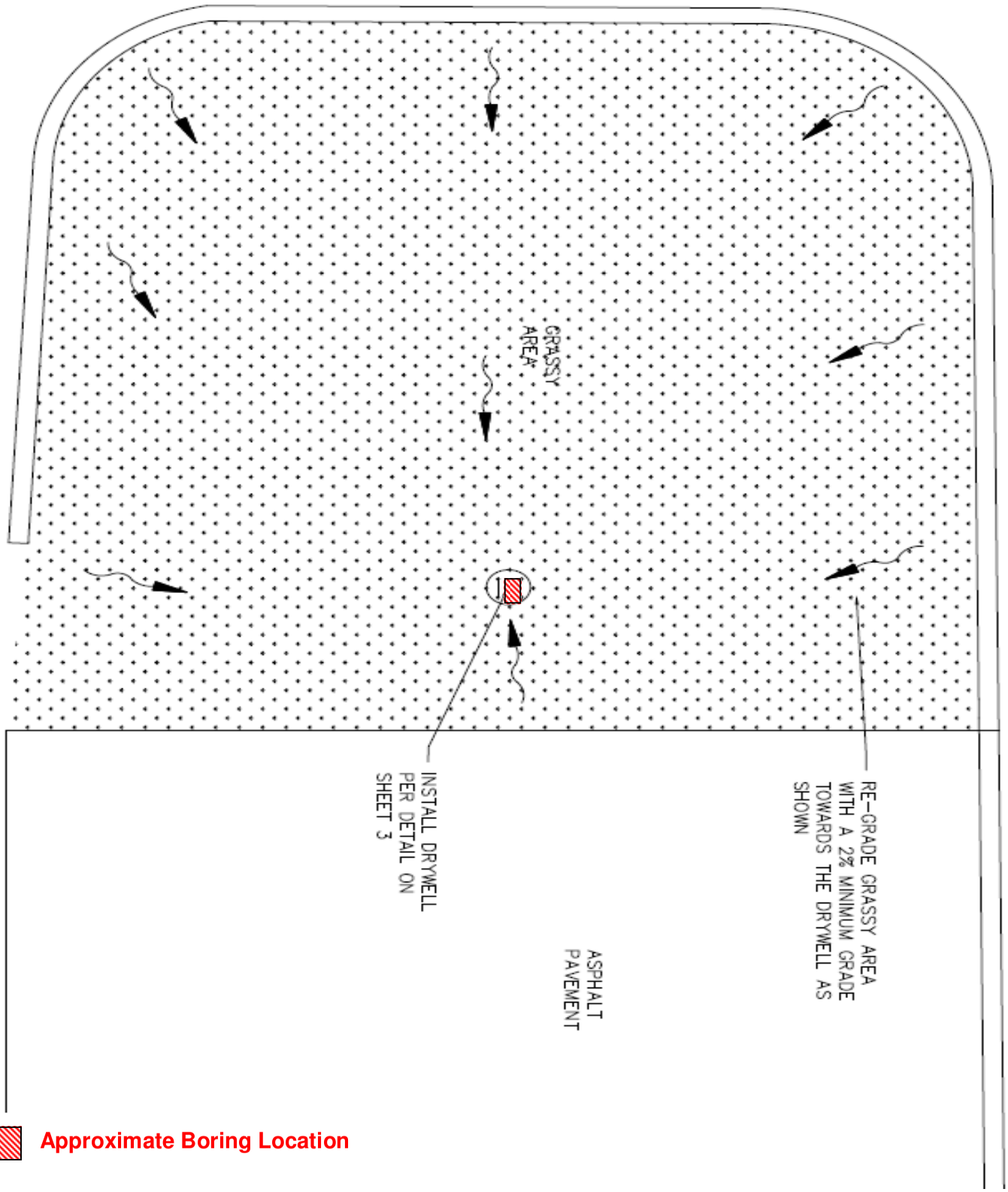
Colin Meehan, P.E.
Senior Geotechnical Engineer

Attachments:
- Vicinity Map
- Exploration Location Map
- Log of Boring

Approximate Site Location

Vicinity Map

ALLWEST Testing & Engineering	Drawn by: S. Turpin	Orofino Baptist Church Orofino, Idaho Environmental Quality Management	ALLWEST Project 312-066G	May 24, 2012



Exploration Location Map

ALLWEST Testing & Engineering	Drawn by: S. Turpin	Orofino Baptist Church Orofino, Idaho Environmental Quality Management	ALLWEST Project 312-066G	May 24, 2012

LOG OF BORING

PROJECT: **312-066G**
Orofino Baptist Church
Orofino, Idaho
Environmental Quality Managment, Inc.

BORING: **B-1**
LOCATION: **Refer to Exploration Location Map**
ELEVATION:
DATE: **5/4/2012**
SCALE: **1" = 4'**

Depth	ASTM D2487 Symbol	Description of Materials	N	WL	Tests or Notes
0.0	SM	TOPSOIL, silty fine SAND with organics.			
	SM	FILL, fine to medium grained silty SAND, moist and dark brown.			
12	SC	FILL, fine clayey SAND and dark brown.			
16	SM	FILL, fine silty SAND and moist.			Head maintained at a depth of approximately 16 feet during infiltration test.
24	SM	Fine to medium grained silty SAND, moist.			
		Boring terminated at an approximate depth of 25 feet.			

(See Report and Standard Plates for elevation and descriptive terminology.)

E Waste Disposal Records

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INVOICE

WASTE MANAGEMENT INC
GRAHAM ROAD LANDFILL
S. 1820 GRAHAM ROAD
MEDICAL LAKE WA 99022
(509)244-0151

Customer:	ENVIRONMENTAL QUALITY MGMT
Account Number:	518-0001422-1518-0
Invoice Date:	10/06/2012
Invoice Number:	0056135-1-1518-7
Terms:	Due Upon Receipt
WM ezPay Account ID:	00008-88731-45006

Current Invoice Amount	Total Amount Due
47,687.80	47,687.80

Please pay total amount due. Thank you for your business.

Account Summary

Description	Amount
Previous Balance	$ -
Total Credits and Adjustments	$ -
Total Payments Received	$ -
Total Current Charges	$ 47,687.80
Total Amount Due	$ 47,687.80
Total Amount Past Due	$ -

Description	Amount
Landfill	47,687.80
Total Current Charges	**47,687.80**

SEATTLE - 1.01.05
PN #: 030303.0011
P.O. #: 18800

ACCT #	AMOUNT
0570-001	47,687.80

INITIALS
10/30/12
DATE

Current Due	Over 30	Over 60	Over 90	Over 120	Total Due
47,687.80	0.00	0.00	0.00	0.00	47,687.80

WASTE MANAGEMENT INC
GRAHAM ROAD LANDFILL
S. 1820 GRAHAM ROAD
MEDICAL LAKE WA 99022
(509)244-0151

Your Account Number
518-0001422-1518-0

Waste Management introduces WM ezPay!! Pay your WM bill on-line at www.wm.com.

Invoice Date	Your Invoice Number
10/6/2012	0056135-1-1518-7

Due Date	Total Due	Amount Paid
Due Upon Receipt	47,687.80	

ENVIRONMENTAL QUALITY MGMT
6825 216TH ST SW SUITE J
LYNNWOOD WA 98036-7379

Please make Check Payable To:
WASTE MANAGEMENT
PO BOX 541065
LOS ANGELES CA 90054-1065

Customer: ENVIRONMENTAL QUALITY MGMT

WASTE MANAGEMENT

WASTE MANAGEMENT INC
GRAHAM ROAD LANDFILL
S. 1820 GRAHAM ROAD
800-592-9995

Account Number: 3160-0042-1518-0
Invoice Date: 10/06/2012
Invoice Number: 0056135-1-1518-7
Terms: Due Upon Receipt
WM ezPay Account ID: 00008-88731-45006

(Orofino)

Date	Ticket	Description	Quantity	U/M	Rate	Amount
9/28/2012	412550	Vehicle#None				
		Re-cert Fee	1.00	EA		50.00
		Profile#102491wa				
		Generator us epa region 10 orofino idaho				
		Ticket Total				**50.00**
9/28/2012	412628	Vehicle#Greg				
		Po# 18800				
		Special waste solid other	28.85	TON	35.00	1,009.75
		Refuse tax		TON		36.35
		Box liner $50/ea	1.00	ECH	~~50.00~~ 25.00	~~50.00~~ 25.00
		Env fee $4.55/Tn	28.85	TON	4.55	131.27
		Trans fee $1360/ld	1.00	ECH	1,360.00	1,360.00
		Profile#102491wa				
		Generator us epa region 10 orofino idaho				
		Manifest#10006				
		Ticket Total				**2,587.37**
9/28/2012	412632	Vehicle#Greg				
		Po# 18800				
		Special waste solid other	26.17	TON	35.00	915.95
		Refuse tax		TON		32.97
		Box liner $50/ea	1.00	ECH	~~50.00~~ 25.00	~~50.00~~ 25.00
		Env fee $4.55/Tn	26.17	TON	4.55	119.07
		Trans fee $1360/ld	1.00	ECH	1,360.00	1,360.00
		Profile#102491wa				
		Generator us epa region 10 orofino idaho				
		Manifest#10006				
		Ticket Total				**2,477.99**
9/28/2012	412634	Vehicle#Dan				
		Po# 18800				
		Special waste solid other	28.20	TON	35.00	987.00
		Refuse tax		TON		35.53
		Box liner $50/ea	1.00	ECH	~~50.00~~ 25.00	~~50.00~~ 25.00
		Env fee $4.55/Tn	28.20	TON	4.55	128.31
		Trans fee $1360/ld	1.00	ECH	1,360.00	1,360.00
		Profile#102491wa				
		Generator us epa region 10 orofino idaho				
		Manifest#10003				
		Ticket Total				**2,560.84**
9/28/2012	412638	Vehicle#Jay				
		Po# 18800				
		Special waste solid other	30.00	TON	35.00	1,050.00
		Refuse tax		TON		37.80
		Box liner $50/ea	1.00	ECH	~~50.00~~ 25.00	~~50.00~~ 25.00
		Env fee $4.55/Tn	30.00	TON	4.55	136.50
		Trans fee $1360/ld	1.00	ECH	1,360.00	1,360.00
		Profile#102491wa				
		Generator us epa region 10 orofino idaho				
		Manifest#10003				
		Ticket Total				**2,634.30**
9/28/2012	412649	Vehicle#Will				
		Po# 18800				
		Special waste solid other	32.00	TON	35.00	1,120.00
		Refuse tax		TON		40.32
		Box liner $50/ea	1.00	ECH	~~50.00~~ 25.00	~~50.00~~ 25.00
		Env fee $4.55/Tn	32.00	TON	4.55	145.60

	Trans fee $1360/ld	1.00	ECH	1,360.00	1,360.00
	Profile#102491wa				
	Generator us epa region 10 orofino idaho				
	Manifest#0				
	Ticket Total				**2,715.92**
10/2/2012	412896 Vehicle#Greg				
	Po# 18800				
	Special waste solid other	29.87	TON	35.00	1,045.45
	Refuse tax		TON		37.64
	Box liner $50/ea	1.00	ECH	~~50.00~~ 25.00	~~50.00~~ 25.00
	Env fee $4.55/Tn	29.87	TON	4.55	135.91
	Trans fee $1360/ld	1.00	ECH	1,360.00	1,360.00
	Profile#102491wa				
	Generator us epa region 10 orofino idaho				
	Manifest#0				
	Ticket Total				**2,629.00**
10/2/2012	412913 Vehicle#Dan				
	Po# 18800				
	Special waste solid other	29.22	TON	35.00	1,022.70
	Refuse tax		TON		36.82
	Box liner $50/ea	1.00	ECH	~~50.00~~ 25.00	~~50.00~~ 25.00
	Env fee $4.55/Tn	29.22	TON	4.55	132.95
	Trans fee $1360/ld	1.00	ECH	1,360.00	1,360.00
	Profile#102491wa				
	Generator us epa region 10 orofino idaho				
	Manifest#10007				
	Ticket Total				**2,602.47**
10/3/2012	412990 Vehicle#Will				
	Po# 18800				
	Special waste solid other	29.75	TON	35.00	1,041.25
	Refuse tax		TON		37.49
	Box liner $50/ea	1.00	ECH	~~50.00~~ 25.00	~~50.00~~ 25.00
	Env fee $4.55/Tn	29.75	TON	4.55	135.36
	Trans fee $1360/ld	1.00	ECH	1,360.00	1,360.00
	Profile#102491wa				
	Generator us epa region 10 orofino idaho				
	Manifest#1000				
	Ticket Total				**2,624.10**
10/3/2012	413006 Vehicle#Dan				
	Po# 18800				
	Special waste solid other	29.44	TON	35.00	1,030.40
	Refuse tax		TON		37.09
	Box liner $50/ea	1.00	ECH	~~50.00~~ 25.00	~~50.00~~ 25.00
	Env fee $4.55/Tn	29.44	TON	4.55	133.95
	Trans fee $1360/ld	1.00	ECH	1,360.00	1,360.00
	Profile#102491wa				
	Generator us epa region 10 orofino idaho				
	Manifest#10010				
	Ticket Total				**2,611.44**
10/3/2012	413068 Vehicle#Kelly				
	Po# 18800				
	Special waste solid other	23.91	TON	35.00	836.85
	Refuse tax		TON		30.13
	Box liner $50/ea	1.00	ECH	~~50.00~~ 25.00	~~50.00~~ 25.00
	Env fee $4.55/Tn	23.91	TON	4.55	108.79
	Trans fee $1360/ld	1.00	ECH	1,360.00	1,360.00
	Profile#102491wa				
	Generator us epa region 10 orofino idaho				
	Manifest#10012				
	Ticket Total				**2,385.77**
10/3/2012	413069 Vehicle#Bryan				
	Po# 18800				
	Special waste solid other	29.53	TON	35.00	1,033.55
	Refuse tax		TON		37.21
	Box liner $50/ea	1.00	ECH	~~50.00~~ 25.00	~~50.00~~ 25.00
	Env fee $4.55/Tn	29.53	TON	4.55	134.36

		Trans fee $1360/ld	1.00 ECH	1,360.00	1,360.00
		Profile#102491wa			
		Generator us epa region 10 orofino idaho			
		Manifest#10014			
		Ticket Total			**2,615.12**
10/3/2012	413071	Vehicle#Mike			
		Po# 18800			
		Special waste solid other	25.06 TON	35.00	877.10
		Refuse tax	TON		31.58
		Box liner $50/ea	1.00 ECH	~~50.00~~ 25.00	~~50.00~~ 25.00
		Env fee $4.55/Tn	25.06 TON	4.55	114.02
		Trans fee $1360/ld	1.00 ECH	1,360.00	1,360.00
		Profile#102491wa			
		Generator us epa region 10 orofino idaho			
		Manifest#10013			
		Ticket Total			**2,432.70**
10/3/2012	413073	Vehicle#Mike			
		Po# 18800			
		Special waste solid other	25.87 TON	35.00	905.45
		Refuse tax	TON		32.60
		Box liner $50/ea	1.00 ECH	~~50.00~~ 25.00	~~50.00~~ 25.00
		Env fee $4.55/Tn	25.87 TON	4.55	117.71
		Trans fee $1360/ld	1.00 ECH	1,360.00	1,360.00
		Profile#102491wa			
		Generator us epa region 10 orofino idaho			
		Manifest#10011			
		Ticket Total			**2,465.76**
10/3/2012	413105	Vehicle#Cecil			
		Po# 18800			
		Special waste solid other	29.19 TON	35.00	1,021.65
		Refuse tax	TON		36.78
		Box liner $50/ea	1.00 ECH	~~50.00~~ 25.00	~~50.00~~ 25.00
		Env fee $4.55/Tn	29.19 TON	4.55	132.81
		Trans fee $1360/ld	1.00 ECH	1,360.00	1,360.00
		Profile#102491wa			
		Generator us epa region 10 orofino idaho			
		Manifest#10015			
		Ticket Total			**2,601.24**
10/3/2012	413106	Vehicle#Steven			
		Po# 18800			
		Special waste solid other	26.31 TON	35.00	920.85
		Refuse tax	TON		33.15
		Box liner $50/ea	1.00 ECH	~~50.00~~ 25.00	~~50.00~~ 25.00
		Env fee $4.55/Tn	26.31 TON	4.55	119.71
		Trans fee $1360/ld	1.00 ECH	1,360.00	1,360.00
		Profile#102491wa			
		Generator us epa region 10 orofino idaho			
		Manifest#10016			
		Ticket Total			**2,483.71**
10/4/2012	413117	Vehicle#Jared			
		Po# 18800			
		Special waste solid other	20.69 TON	35.00	724.15
		Refuse tax	TON		26.07
		Box liner $50/ea	1.00 ECH	~~50.00~~ 25.00	~~50.00~~ 25.00
		Env fee $4.55/Tn	20.69 TON	4.55	94.14
		Trans fee $1360/ld	1.00 ECH	1,360.00	1,360.00
		Profile#102491wa			
		Generator us epa region 10 orofino idaho			
		Manifest#10018			
		Ticket Total			**2,254.36**
10/4/2012	413121	Vehicle#John			
		Po# 18800			
		Special waste solid other	25.75 TON	35.00	901.25
		Refuse tax	TON		32.45
		Box liner $50/ea	1.00 ECH	~~50.00~~ 25.00	~~50.00~~ 25.00
		Env fee $4.55/Tn	25.75 TON	4.55	117.16

		Trans fee $1360/ld	1.00	ECH	1,360.00	1,360.00
		Profile#102491wa				
		Generator us epa region 10 orofino idaho				
		Manifest#10017				
		Ticket Total				**2,460.86**
10/4/2012	413137	Vehicle#Will				
		Po# 18800				
		Special waste solid other	32.61	TON	35.00	1,141.35
		Refuse tax		TON		41.09
		Box liner $50/ea	1.00	ECH	~~50.00~~ 25.00	~~50.00~~ 25.00
		Env fee $4.55/Tn	32.61	TON	4.55	148.38
		Trans fee $1360/ld	1.00	ECH	1,360.00	1,360.00
		Profile#102491wa				
		Generator us epa region 10 orofino idaho				
		Manifest#10008				
		Ticket Total				**2,740.82**
10/4/2012	413169	Vehicle#Dan				
		Po# 18800				
		Special waste solid other	8.43	TON	35.00	295.05
		Refuse tax		TON		10.62
		Box liner $50/ea	1.00	ECH	~~50.00~~ 25.00	~~50.00~~ 25.00
		Env fee $4.55/Tn	8.43	TON	4.55	38.36
		Trans fee $1360/ld	1.00	ECH	1,360.00	1,360.00
		Profile#102491wa				
		Generator us epa region 10 orofino idaho				
		Manifest#10019				
		Ticket Total				**1,754.03**
		TOTAL CURRENT CHARGES				~~47,687.80~~ 47,212.80

Matthew Evenson

From: Wilson, Joyce <jwilso16@wm.com>
Sent: Friday, October 26, 2012 4:47 PM
To: Matthew Evenson
Subject: WM Revised Invoices
Attachments: EQM Revised Invoice 56135-1pdf.pdf; EQM Revised Invoice 55971 pdf.pdf; EQM Revised Invoice 56135.pdf

Joyce Wilson
W Waste Management
Billing Supervisor
Pacific Northwest Area
(425)825-0074
(425)890-8659
jwilso16@wm.com

WASTE MANAGEMENT

Graham Road Facility
1820 S. Graham Road
Medical Lake, WA, 99022
Ph: (509)244-0151

Web Tckt Reprint
Ticket# 412550

Customer Name ENV QUALITY MGMT Environmenta
Ticket Date 09/28/2012
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest
Destination
PO
Profile 102491WA (SOIL WITH LESS THAN 1% ASBESTOS)
Generator WA-US EPA REGION 10 OROFINO ID US EPA REGION 10 OROFINO IDAHO

Carrier NONE No Carrier
Vehicle# NONE
Container
Driver
Check#
Billing # 0001231
Gen EPA ID N/A
Grid

Volume

	Time	Scale	Operator	Inbound	Gross
In	09/28/2012 09:54:00	MANUAL WT	mcarothe		Tare
Out	09/28/2012 09:54:00	MANUAL WT	mcarothe		Net
					Tons

Comments $50.00 recert fee for permit 102491wa

MY SIGNATURE CERTIFIES NON-ASBESTOS DEBRIS/EXCEPT:PROPER PACKAGED- W/WSR

Product		LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	RECERT$50-RecCert	100	1	Each	50.00		$50.00	

Total Tax
Total Ticket $50.00

403WM
Driver's Signature

WASTE MANAGEMENT

Graham Road Facility
1820 S. Graham Road
Medical Lake, WA, 99022
Ph: (509)244-0151

Original
Ticket# 412628

Customer Name ENV QUALITY MGMT Environmenta
Ticket Date 09/28/2012
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest 10006
Destination
PO 18800
Profile 102491WA (SOIL WITH LESS THAN 1% ASBESTOS)
Generator WA-US EPA REGION 10 OROFINO ID US EPA REGION 10 OROFINO IDAHO

Carrier NRC ENVIRONMENTAL NRC
Vehicle# GREG
Container
Driver GREG
Check#
Billing # 0001231
Gen EPA ID N/A
Grid

Volume

	Time	Scale	Operator	Inbound		
In	09/28/2012 13:44:55	Scale1	MPERKIN3		Gross	100080 lb
Out	09/28/2012 14:01:45	Scale1	JSCHROD1		Tare	42380 lb
					Net	57700 lb
					Tons	28.85

Comments

MY SIGNATURE CERTIFIES NON-ASBESTOS DEBRIS/EXCEPT:PROPER PACKAGED- W/WSR

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Spwaste Solid Oth-	100	28.85	Tons	35.00	36.35	$1009.75	Clearwater
2	LINER$50-BOX LINER	100	1	Each	50.00		$50.00	Clearwater
3	ENVFEE$4.55-ENV FE	100	28.85	Tons	4.55		$131.27	Clearwater
4	TRA$1360/LD-Trans	100	1	Each	1360.00		$1360.00	Clearwater

Greg M.

Total Tax $36.35
Total Ticket $2587.37

403WM

WASTE MANAGEMENT

Graham Road Facility
1820 S. Graham Road
Medical Lake, WA, 99022
Ph: (509)244-0151

Original
Ticket# 412632

Customer Name	ENV QUALITY MGMT Environmenta	Carrier	NRC ENVIRONMENTAL NRC		
Ticket Date	09/28/2012	Vehicle#	DAN	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	DAN		
Hauling Ticket#		Check#			
Route		Billing #	0001231		
State Waste Code		Gen EPA ID	N/A		
Manifest	10006				
Destination		Grid			
PO	18800				
Profile	102491WA (SOIL WITH LESS THAN 1% ASBESTOS)				
Generator	WA-US EPA REGION 10 OROFINO ID US EPA REGION 10 OROFINO IDAHO				

	Time	Scale	Operator	Inbound		
In	09/28/2012 13:53:10	Scale1	JSCHROD1		Gross	92320 lb*
Out	09/28/2012 13:53:10		JSCHROD1		Tare	39980 lb*
			* Manual Weight		Net	52340 lb
					Tons	26.17

Comments REPLACES 412621

MY SIGNATURE CERTIFIES NON-ASBESTOS DEBRIS/EXCEPT:PROPER PACKAGED- W/WSR

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Spwaste Solid Oth-	100	26.17	Tons	35.00	32.97	$915.95	Clearwater
2	LINER$50-BOX LINER	100	1	Each	50.00		$50.00	Clearwater
3	ENVFEE$4.55-ENV FE	100	26.17	Tons	4.55		$119.07	Clearwater
4	TRA$1360/LD-Trans	100	1	Each	1360.00		$1360.00	Clearwater

Total Tax	$32.97
Total Ticket	$2477.99

WASTE MANAGEMENT

Graham Road Facility
1820 S. Graham Road
Medical Lake, WA, 99022
Ph: (509)244-0151

Original
Ticket# 412634

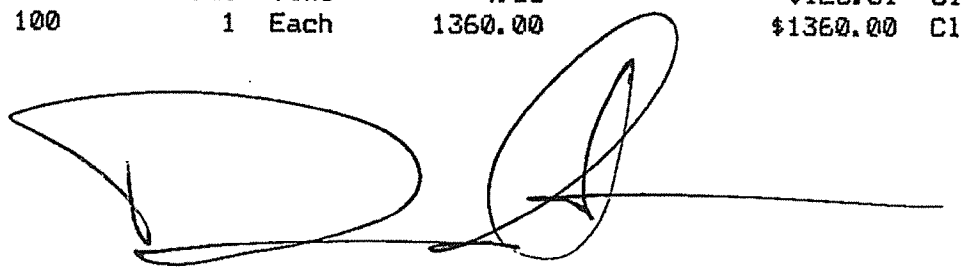
Customer Name	ENV QUALITY MGMT Environmenta	Carrier	NRC ENVIRONMENTAL NRC
Ticket Date	09/28/2012	Vehicle#	DANA
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	DANA
Hauling Ticket#		Check#	
Route		Billing #	0001231
State Waste Code		Gen EPA ID	N/A
Manifest	10003		
Destination		Grid	
PO	18800		
Profile	102491WA (SOIL WITH LESS THAN 1% ASBESTOS)		
Generator	WA-US EPA REGION 10 OROFINO ID US EPA REGION 10 OROFINO IDAHO		

	Time	Scale	Operator	Inbound		
In	09/28/2012 14:06:42	Scale1	JSCHROD1		Gross	99280 lb
Out	09/28/2012 14:25:51	Scale1	mperkin3		Tare	42880 lb
					Net	56400 lb
					Tons	28.20

Comments

MY SIGNATURE CERTIFIES NON-ASBESTOS DEBRIS/EXCEPT:PROPER PACKAGED- W/WSR

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Spwaste Solid Oth-	100	28.20	Tons	35.00	35.53	$987.00	Clearwater
2	LINER$50-BOX LINER	100	1	Each	50.00		$50.00	Clearwater
3	ENVFEE$4.55-ENV FE	100	28.20	Tons	4.55		$128.31	Clearwater
4	TRA$1360/LD-Trans	100	1	Each	1360.00		$1360.00	Clearwater



Total Tax	$35.53
Total Ticket	$2560.84

403WM

WASTE MANAGEMENT

Graham Road Facility
1820 S. Graham Road
Medical Lake, WA, 99022
Ph: (509)244-0151

Original
Ticket# 412638

Customer Name	ENV QUALITY MGMT Environmenta	Carrier	LABUTE LABUTE	
Ticket Date	09/28/2012	Vehicle#	JAY	Volume
Payment Type	Credit Account	Container		
Manual Ticket#		Driver	JAY	
Hauling Ticket#		Check#		
Route		Billing #	0001231	
State Waste Code		Gen EPA ID	N/A	
Manifest	0			
Destination		Grid		
PO	18800			
Profile	102491WA (SOIL WITH LESS THAN 1% ASBESTOS)			
Generator	WA-US EPA REGION 10 OROFINO ID US EPA REGION 10 OROFINO IDAHO			

	Time	Scale	Operator	Inbound	Gross	96760 lb
In	09/28/2012 14:35:42	Scale1	mperkin3		Tare	36760 lb
Out	09/28/2012 14:58:56	Scale1	mperkin3		Net	60000 lb
					Tons	30.00

Comments

MY SIGNATURE CERTIFIES NON-ASBESTOS DEBRIS/EXCEPT:PROPER PACKAGED- W/WSR

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Spwaste Solid Oth-	100	30.00	Tons	35.00	37.80	$1050.00	Clearwater
2	LINER$50-BOX LINER	100	1	Each	50.00		$50.00	Clearwater
3	ENVFEE$4.55-ENV FE	100	30.00	Tons	4.55		$136.50	Clearwater
4	TRA$1360/LD-Trans	100	1	Each	1360.00		$1360.00	Clearwater

Total Tax	$37.80
Total Ticket	$2634.30

WASTE MANAGEMENT

Graham Road Facility
1820 S. Graham Road
Medical Lake, WA, 99022
Ph: (509)244-0151

Original
Ticket# 412649

Customer Name ENV QUALITY MGMT Environmenta
Ticket Date 09/28/2012
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest 0
Destination
PO 18000
Profile 102491WA (SOIL WITH LESS THAN 1% ASBESTOS)
Generator WA-US EPA REGION 10 OROFINO ID US EPA REGION 10 OROFINO IDAHO

Carrier NRC ENVIRONMENTAL NRC
Vehicle# WILL
Container
Driver WILL
Check#
Billing # 0001231
Gen EPA ID N/A
Grid
Volume

	Time	Scale	Operator	Inbound		
In	09/28/2012 15:36:13	Scale1	mperkin3		Gross	101460 lb
Out	09/28/2012 16:00:58	Scale1	mperkin3		Tare	37460 lb
					Net	64000 lb
					Tons	32.00

Comments

MY SIGNATURE CERTIFIES NON-ASBESTOS DEBRIS/EXCEPT:PROPER PACKAGED- W/WSR

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Spwaste Solid Oth-	100	32.00	Tons	35.00	40.32	$1120.00	Clearwater
2	LINER$50-BOX LINER	100	1	Each	50.00		$50.00	Clearwater
3	ENVFEE$4.55-ENV FE	100	32.00	Tons	4.55		$145.60	Clearwater
4	TRA$1360/LD-Trans	100	1	Each	1360.00		$1360.00	Clearwater

Total Tax	$40.32
Total Ticket	$2715.92

WASTE MANAGEMENT

Graham Road Facility
1820 S. Graham Road
Medical Lake, WA, 99022
Ph: (509)244-0151

Original
Ticket# 412896

Customer Name ENV QUALITY MGMT Environmenta
Ticket Date 10/02/2012
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest 0
Destination
PO 18800
Profile 102451WA (SOIL WITH LESS THAN 1% ASBESTOS)
Generator WA-US EPA REGION 10 OROFINO ID US EPA REGION 10 OROFINO IDAHO

Carrier NRC ENVIRONMENTAL NRC
Vehicle# GREG
Container
Driver GREG
Check#
Billing # 0001231
Gen EPA ID N/A
Grid

Volume

	Time	Scale	Operator	Inbound		
In	10/02/2012 12:12:50	Scale1	mperkin3		Gross	102220 lb
Out	10/02/2012 12:39:45	Scale1	mperkin3		Tare	42480 lb
					Net	59740 lb
					Tons	29.87

Comments

MY SIGNATURE CERTIFIES NON-ASBESTOS DEBRIS/EXCEPT:PROPER PACKAGED- W/WSR

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Spwaste Solid Oth-	100	29.87	Tons	35.00	37.64	$1045.45	Clearwater
2	LINER$50-BOX LINER	100	1	Each	50.00		$50.00	Clearwater
3	ENVFEE$4.55-ENV FE	100	29.87	Tons	4.55		$135.91	Clearwater
4	TRA$1360/LD-Trans	100	1	Each	1360.00		$1360.00	Clearwater

Total Tax $37.64
Total Ticket $2629.00

WASTE MANAGEMENT

Graham Road Facility
1820 S. Graham Road
Medical Lake, WA, 99022
Ph: (509)244-0151

Original
Ticket# 412913

Customer Name ENV QUALITY MGMT Environmenta
Ticket Date 10/02/2012
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest 10007
Destination
PO 18800
Profile 102491WA (SOIL WITH LESS THAN 1% ASBESTOS)
Generator WA-US EPA REGION 10 OROFINO ID US EPA REGION 10 OROFINO IDAHO

Carrier NRC ENVIRONMENTAL NRC
Vehicle# DAN
Container
Driver DAN
Check#
Billing # 0001231
Gen EPA ID N/A
Grid

Volume

	Time	Scale	Operator	Inbound		
In	10/02/2012 12:57:29	Scale1	JSCHROD1		Gross	98420 lb
Out	10/02/2012 13:16:00	Scale1	JSCHROD1		Tare	39980 lb
					Net	58440 lb
					Tons	29.22

Comments

MY SIGNATURE CERTIFIES NON-ASBESTOS DEBRIS/EXCEPT:PROPER PACKAGED- W/WSR

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Spwaste Solid Oth-	100	29.22	Tons	35.00	36.82	$1022.70	Clearwater
2	LINER$50-BOX LINER	100	1	Each	50.00		$50.00	Clearwater
3	ENVFEE$4.55-ENV FE	100	29.22	Tons	4.55		$132.95	Clearwater
4	TRA$1360/LD-Trans	100	1	Each	1360.00		$1360.00	Clearwater

David Calkins

Total Tax $36.82
Total Ticket $2602.47

4021WM

WASTE MANAGEMENT

Graham Road Facility
1020 S. Graham Road
Medical Lake, WA, 99022
Ph: (509)244-0151

Original
Ticket# 412990

Customer Name ENV QUALITY MGMT Environmenta
Ticket Date 10/03/2012
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest 1000 9
Destination
PO 18800
Profile 102491WA (SOIL WITH LESS THAN 1% ASBESTOS)
Generator WA-US EPA REGION 10 OROFINO ID US EPA REGION 10 OROFINO IDAHO

Carrier NRC ENVIRONMENTAL NRC
Vehicle# WILL
Container
Driver WILL
Check#
Billing # 0001231
Gen EPA ID N/A
Grid
Volume

	Time	Scale	Operator	Inbound		
In	10/03/2012 08:54:33	Scale1	JSCHROD1		Gross	102080 lb
Out	10/03/2012 09:12:48	Scale1	JSCHROD1		Tare	42580 lb
					Net	59500 lb
					Tons	29.75

Comments

MY SIGNATURE CERTIFIES NON-ASBESTOS DEBRIS/EXCEPT:PROPER PACKAGED- W/WSR

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Spwaste Solid Oth-	100	29.75	Tons	35.00	37.49	$1041.25	Clearwater
2	LINER$50-BOX LINER	100	1	Each	50.00		$50.00	Clearwater
3	ENVFEE$4.55-ENV FE	100	29.75	Tons	4.55		$135.36	Clearwater
4	TRA$1360/LD-Trans	100	1	Each	1360.00		$1360.00	Clearwater

Total Tax $37.49
Total Ticket $2624.10

WASTE MANAGEMENT

Graham Road Facility
1820 S. Graham Road
Medical Lake, WA, 99022
Ph: (509)244-0151

Original
Ticket# 413006

Customer Name ENV QUALITY MGMT Environmenta
Ticket Date 10/03/2012
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest 10010
Destination
PO 18800
Profile 102491WA (SOIL WITH LESS THAN 1% ASBESTOS)
Generator WA-US EPA REGION 10 OROFINO ID US EPA REGION 10 OROFINO IDAHO

Carrier NRC ENVIRONMENTAL NRC
Vehicle# DAN
Container
Driver DAN
Check#
Billing # 0001231
Gen EPA ID N/A
Grid

Volume

	Time	Scale	Operator	Inbound		
In	10/03/2012 09:50:46	Scale1	JSCHROD1		Gross	99120 lb
Out	10/03/2012 10:12:12	Scale1	JSCHROD1		Tare	40240 lb
					Net	58880 lb
					Tons	29.44

Comments

MY SIGNATURE CERTIFIES NON-ASBESTOS DEBRIS/EXCEPT:PROPER PACKAGED- W/WSR

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Spwaste Solid Oth-	100	29.44	Tons	35.00	37.09	$1030.40	Clearwater
2	LINER$50-BOX LINER	100	1	Each	50.00		$50.00	Clearwater
3	ENVFEE$4.55-ENV FE	100	29.44	Tons	4.55		$133.95	Clearwater
4	TRA$1360/LD-Trans	100	1	Each	1360.00		$1360.00	Clearwater

David Calpus

Total Tax $37.09
Total Ticket $2611.44

402WM

WASTE MANAGEMENT

Graham Road Facility
1820 S. Graham Road
Medical Lake, WA, 99022
Ph: (509)244-0151

Original
Ticket# 413068

Customer Name ENV QUALITY MGMT Environmenta
Ticket Date 10/03/2012
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest 10012
Destination
PO 18800
Profile 102491WA (SOIL WITH LESS THAN 1% ASBESTOS)
Generator WA-US EPA REGION 10 OROFINO ID US EPA REGION 10 OROFINO IDAHO

Carrier MIKE MADSEN MIKE MADSEN TRUCKING
Vehicle# KELLY
Container
Driver KELLY COX
Check#
Billing # 0001231
Gen EPA ID N/A
Grid
Volume

	Time	Scale	Operator	Inbound		
In	10/03/2012 13:43:14	Scale1	JSCHROD1		Gross	84980 lb
Out	10/03/2012 14:01:32	Scale1	JSCHROD1		Tare	37160 lb
					Net	47820 lb
					Tons	23.91

Comments

MY SIGNATURE CERTIFIES NON-ASBESTOS DEBRIS/EXCEPT:PROPER PACKAGED- W/WSR

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Spwaste Solid Oth-	100	23.91	Tons	35.00	30.13	$836.85	Clearwater
2	LINER$50-BOX LINER	100	1	Each	50.00		$50.00	Clearwater
3	ENVFEE$4.55-ENV FE	100	23.91	Tons	4.55		$108.79	Clearwater
4	TRA$1360/LD-Trans	100	1	Each	1360.00		$1360.00	Clearwater

Kelly Cox

Total Tax $30.13
Total Ticket $2385.77

WASTE MANAGEMENT

Graham Road Facility
1820 S. Graham Road
Medical Lake, WA, 99022
Ph: (509)244-0151

Original
Ticket# 413069

Customer Name ENV QUALITY MGMT Environmenta
Ticket Date 10/03/2012
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest 10014
Destination
PO 18800
Profile 102491WA (SOIL WITH LESS THAN 1% ASBESTOS)
Generator WA-US EPA REGION 10 OROFINO ID US EPA REGION 10 OROFINO IDAHO

Carrier MIKE MADSEN MIKE MADSEN TRUCKING
Vehicle# BRYAN
Container
Driver BRYAN
Check#
Billing # 0001231
Gen EPA ID N/A
Grid
Volume

	Time	Scale	Operator	Inbound		
In	10/03/2012 13:45:20	Scale1	JSCHROD1		Gross	100020 lb
Out	10/03/2012 14:27:44	Scale1	JSCHROD1		Tare	40960 lb
					Net	59060 lb
					Tons	29.53

Comments

MY SIGNATURE CERTIFIES NON-ASBESTOS DEBRIS/EXCEPT:PROPER PACKAGED- W/WSR

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Spwaste Solid Oth-	100	29.53	Tons	35.00	37.21	$1033.55	Clearwater
2	LINER$50-BOX LINER	100	1	Each	50.00		$50.00	Clearwater
3	ENVFEE$4.55-ENV FE	100	29.53	Tons	4.55		$134.36	Clearwater
4	TRA$1360/LD-Trans	100	1	Each	1360.00		$1360.00	Clearwater

Total Tax $37.21
Total Ticket $2615.12

WASTE MANAGEMENT

Graham Road Facility
1820 S. Graham Road
Medical Lake, WA, 99022
Ph: (509)244-0151

Original
Ticket# 413071

Customer Name ENV QUALITY MGMT Environmenta
Ticket Date 10/03/2012
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest 10013
Destination
PO 18800
Profile 102491WA (SOIL WITH LESS THAN 1% ASBESTOS)
Generator WA-US EPA REGION 10 OROFINO ID US EPA REGION 10 OROFINO IDAHO

Carrier MIKE MADSEN MIKE MADSEN TRUCKING
Vehicle# MIKE L
Container
Driver MIKE LINTON
Check#
Billing # 0001231
Gen EPA ID N/A
Grid
Volume

	Time	Scale	Operator	Inbound		
In	10/03/2012 13:47:39	Scale1	JSCHROD1		Gross	88320 lb
Out	10/03/2012 14:06:42	Scale1	JSCHROD1		Tare	38200 lb
					Net	50120 lb
					Tons	25.06

Comments

MY SIGNATURE CERTIFIES NON-ASBESTOS DEBRIS/EXCEPT:PROPER PACKAGED- W/WSR

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Spwaste Solid Oth-	100	25.06	Tons	35.00	31.58	$877.10	Clearwater
2	LINER$50-BOX LINER	100	1	Each	50.00		$50.00	Clearwater
3	ENVFEE$4.55-ENV FE	100	25.06	Tons	4.55		$114.02	Clearwater
4	TRA$1360/LD-Trans	100	1	Each	1360.00		$1360.00	Clearwater

Total Tax	$31.58
Total Ticket	$2432.70

WASTE MANAGEMENT

Graham Road Facility
1820 S. Graham Road
Medical Lake, WA, 99022
Ph: (509)244-0151

Original
Ticket# 413073

Customer Name ENV QUALITY MGMT Environmenta
Ticket Date 10/03/2012
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest 10011
Destination
PO 18800
Profile 102491WA (SOIL WITH LESS THAN 1% ASBESTOS)
Generator WA-US EPA REGION 10 OROFINO ID US EPA REGION 10 OROFINO IDAHO

Carrier MIKE MADSEN MIKE MADSEN TRUCKING
Vehicle# MIKE
Container
Driver MIKE MADSEN
Check#
Billing # 0001231
Gen EPA ID N/A
Grid

Volume

	Time	Scale	Operator	Inbound		
In	10/03/2012 13:51:04	Scale1	JSCHROD1		Gross	91540 lb
Out	10/03/2012 14:35:16	Scale1	JSCHROD1		Tare	39800 lb
					Net	51740 lb
					Tons	25.87

Comments

MY SIGNATURE CERTIFIES NON-ASBESTOS DEBRIS/EXCEPT:PROPER PACKAGED- W/WSR

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Spwaste Solid Oth-	100	25.87	Tons	35.00	32.60	$905.45	Clearwater
2	LINER$50-BOX LINER	100	1	Each	50.00		$50.00	Clearwater
3	ENVFEE$4.55-ENV FE	100	25.87	Tons	4.55		$117.71	Clearwater
4	TRA$1360/LD-Trans	100	1	Each	1360.00		$1360.00	Clearwater

Total Tax $32.60
Total Ticket $2465.76

WASTE MANAGEMENT

Graham Road Facility
1820 S. Graham Road
Medical Lake, WA, 99022
Ph: (509)244-0151

Original
Ticket# 413105

Customer Name ENV QUALITY MGMT Environmenta
Ticket Date 10/03/2012
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest 10015
Destination
PO 18800
Profile 102491WA (SOIL WITH LESS THAN 1% ASBESTOS)
Generator WA-US EPA REGION 10 OROFINO ID US EPA REGION 10 OROFINO IDAHO

Carrier ACTION ACTION MATERIALS
Vehicle# CECIL
Container
Driver CECIL ANDERSON
Check#
Billing # 0001231
Gen EPA ID N/A
Grid

Volume

	Time	Scale	Operator	/ Inbound		
In	10/03/2012 15:43:23	Scale1	JSCHROD1		Gross	96480 lb
Out	10/03/2012 16:20:01	Scale1	JSCHROD1		Tare	38100 lb
					Net	58380 lb
					Tons	29.19

Comments

MY SIGNATURE CERTIFIES NON-ASBESTOS DEBRIS/EXCEPT:PROPER PACKAGED- W/WSR

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Spwaste Solid Oth-	100	29.19	Tons	35.00	36.78	$1021.65	Clearwater
2	LINER$50-BOX LINER	100	1	Each	50.00		$50.00	Clearwater
3	ENVFEE$4.55-ENV FE	100	29.19	Tons	4.55		$132.81	Clearwater
4	TRA$1360/LD-Trans	100	1	Each	1360.00		$1360.00	Clearwater

Total Tax $36.78
Total Ticket $2601.24

402WM

WASTE MANAGEMENT

Graham Road Facility
1820 S. Graham Road
Medical Lake, WA, 99022
Ph: (509)244-0151

Original
Ticket# 413106

Customer Name ENV QUALITY MGMT Environmenta
Ticket Date 10/03/2012
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest 10016
Destination
PO 10000
Profile 102491WA (SOIL WITH LESS THAN 1% ASBESTOS)
Generator WA-US EPA REGION 10 OROFINO ID US EPA REGION 10 OROFINO IDAHO

Carrier ACTION ACTION MATERIALS
Vehicle# STEVEN
Container
Driver STEVEN
Check#
Billing # 0001231
Gen EPA ID N/A
Grid

Volume

	Time	Scale	Operator	Inbound		
In	10/03/2012 15:47:12	Scale1	JSCHROD1		Gross	90980 lb
Out	10/03/2012 16:23:55	Scale1	JSCHROD1		Tare	38360 lb
					Net	52620 lb
					Tons	26.31

Comments

MY SIGNATURE CERTIFIES NON-ASBESTOS DEBRIS/EXCEPT:PROPER PACKAGED- W/WSR

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Spwaste Solid Oth-	100	26.31	Tons	35.00	33.15	$920.85	Clearwater
2	LINER$50-BOX LINER	100	1	Each	50.00		$50.00	Clearwater
3	ENVFEE$4.55-ENV FE	100	26.31	Tons	4.55		$119.71	Clearwater
4	TRA$1360/LD-Trans	100	1	Each	1360.00		$1360.00	Clearwater

Total Tax $33.15
Total Ticket $2483.71

WASTE MANAGEMENT

Graham Road Facility
1820 S. Graham Road
Medical Lake, WA, 99022
Ph: (509)244-0151

Original
Ticket# 413117

Customer Name ENV QUALITY MGMT Environmenta
Ticket Date 10/04/2012
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest 10018
Destination
PO 18800
Profile 102491WA (SOIL WITH LESS THAN 1% ASBESTOS)
Generator WA-US EPA REGION 10 OROFINO ID US EPA REGION 10 OROFINO IDAHO

Carrier ACTION ACTION MATERIALS
Vehicle# JARED
Container
Driver JARED HANSON
Check#
Billing # 0001231
Gen EPA ID N/A

Grid

Volume

	Time	Scale	Operator
In	10/04/2012 07:09:30	Scale1	mperkin3
Out	10/04/2012 07:30:57	Scale1	mperkin3

Inbound

Gross	81060 lb
Tare	39680 lb
Net	41380 lb
Tons	20.69

Comments

MY SIGNATURE CERTIFIES NON-ASBESTOS DEBRIS/EXCEPT:PROPER PACKAGED- W/WSR

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Spwaste Solid Oth-	100	20.69	Tons	35.00	26.07	$724.15	Clearwater
2	LINER$50-BOX LINER	100	1	Each	50.00		$50.00	Clearwater
3	ENVFEE$4.55-ENV FE	100	20.69	Tons	4.55		$94.14	Clearwater
4	TRA$1360/LD-Trans	100	1	Each	1360.00		$1360.00	Clearwater

Total Tax $26.07
Total Ticket $2254.36

WM

WASTE MANAGEMENT

Graham Road Facility
1820 S. Graham Road
Medical Lake, WA, 99022
Ph: (509)244-0151

Original
Ticket# 413121

Customer Name ENV QUALITY MGMT Environmenta
Ticket Date 10/04/2012
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest 10017
Destination
PO 18800
Profile 102491WA (SOIL WITH LESS THAN 1% ASBESTOS)
Generator WA-US EPA REGION 10 OROFINO ID US EPA REGION 10 OROFINO IDAHO

Carrier ACTION ACTION MATERIALS
Vehicle# JOHN
Container
Driver JOHN TAYLOR
Check#
Billing # 0001231
Gen EPA ID N/A
Grid

Volume

	Time	Scale	Operator	Inbound		
In	10/04/2012 07:24:22	Scale1	mperkin3		Gross	91840 lb
Out	10/04/2012 07:46:28	Scale1	mperkin3		Tare	40340 lb
					Net	51500 lb
					Tons	25.75

Comments

MY SIGNATURE CERTIFIES NON-ASBESTOS DEBRIS/EXCEPT:PROPER PACKAGED- W/WSR

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Spwaste Solid Oth-	100	25.75	Tons	35.00	32.45	$901.25	Clearwater
2	LINER$50-BOX LINER	100	1	Each	50.00		$50.00	Clearwater
3	ENVFEE$4.55-ENV FE	100	25.75	Tons	4.55		$117.16	Clearwater
4	TRA$1360/LD-Trans	100	1	Each	1360.00		$1360.00	Clearwater

Total Tax $32.45
Total Ticket $2460.86

403WM

WASTE MANAGEMENT

Graham Road Facility
1020 S. Graham Road
Medical Lake, WA, 99022
Ph: (509)244-0151

Original
Ticket# 413137

Customer Name ENV QUALITY MGMT Environmenta-Carrier NRC ENVIRONMENTAL NRC
Ticket Date 10/04/2012 Vehicle# WILL Volume
Payment Type Credit Account Container
Manual Ticket# Driver WILL
Hauling Ticket# Check#
Route Billing # 0001231
State Waste Code Gen EPA ID N/A
Manifest 10008
Destination Grid
PO 18800
Profile 102491WA (SOIL WITH LESS THAN 1% ASBESTOS)
Generator WA-US EPA REGION 10 OROFINO ID US EPA REGION 10 OROFINO IDAHO

	Time	Scale	Operator	Inbound		
In	10/04/2012 08:27:35	Scale1	mperkin3		Gross	102340 lb
Out	10/04/2012 08:52:08	Scale1	mperkin3		Tare	37120 lb
					Net	65220 lb
					Tons	32.61

Comments

MY SIGNATURE CERTIFIES NON-ASBESTOS DEBRIS/EXCEPT:PROPER PACKAGED- W/WSR

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Spwaste Solid Oth-	100	32.61	Tons	35.00	41.09	$1141.35	Clearwater
2	LINER$50-BOX LINER	100	1	Each	50.00		$50.00	Clearwater
3	ENVFEE$4.55-ENV FE	100	32.61	Tons	4.55		$148.38	Clearwater
4	TRA$1360/LD-Trans	100	1	Each	1360.00		$1360.00	Clearwater

Total Tax $41.09
Total Ticket $2740.82

4021WM

WASTE MANAGEMENT

Graham Road Facility
1820 S. Graham Road
Medical Lake, WA, 99022
Ph: (509)244-0151

Original
Ticket# 413169

Customer Name ENV QUALITY MGMT Environmenta
Ticket Date 10/04/2012
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest 10019
Destination
PO 10800
Profile 102491WA (SOIL WITH LESS THAN 1% ASBESTOS)
Generator WA-US EPA REGION 10 OROFINO ID US EPA REGION 10 OROFINO IDAHO

Carrier NRC ENVIRONMENTAL NRC
Vehicle# DAN
Container
Driver DAN
Check#
Billing # 0001231
Gen EPA ID N/A
Grid

Volume

	Time	Scale	Operator	Inbound		
In	10/04/2012 10:41:58	Scale1	jschrod1		Gross	56620 lb
Out	10/04/2012 10:52:00	Scale1	jschrod1		Tare	39760 lb
					Net	16860 lb
					Tons	8.43

Comments only truck is loaded

MY SIGNATURE CERTIFIES NON-ASBESTOS DEBRIS/EXCEPT:PROPER PACKAGED- W/WSR

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Spwaste Solid Oth-	100	8.43	Tons	35.00	10.62	$295.05	Clearwater
2	LINER$50-BOX LINER	100	1	Each	50.00		$50.00	Clearwater
3	ENVFEE$4.55-ENV FE	100	8.43	Tons	4.55		$38.36	Clearwater
4	TRA$1360/LD-Trans	100	1	Each	1360.00		$1360.00	Clearwater

Daniel Calmus

Total Tax $10.62
Total Ticket $1754.03

Please print or type
(Form designed for use on elite (12-pitch) typewriter.)

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. IN.DUStrial Solids | Manifest Doc. No. 1.0.001 | 2. Page 1 of 1

GENERATOR

3. Generator's Name and Mailing Address
USEPA
950 W. Bannock St - Suite 900
Boise, ID 83702
29518 St.
Orofino, ID

4. Generator's Phone (208) 378-5773

5. Transporter 1 Company Name: NRC Environmental | 6. US EPA ID Number | A. Transporter's Phone: 509-998-2108.

7. Transporter 2 Company Name | 8. US EPA ID Number | B. Transporter's Phone

9. Designated Facility Name and Site Address
WASTEMANAGEMENT-Grahm RD
Grahm Road Landfill
S. 1820 Grahm Road
Medical Lake, WA 99022
10. US EPA ID Number
C. Facility's Phone: 509-244-0151

11. Waste Shipping Name and Description	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol
a. Non Hazardous - Non Regulated Industrial Solids (Asbestos)	001	D.T	00032	T
b.				
c.				
d.				

D. Additional Descriptions for Materials Listed Above

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
Profile # 10249I-WA

28.85T

16. **GENERATOR'S CERTIFICATION:** I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.
Printed/Typed Name: Joe Weiss | Signature | Month 9 Day 28 Year 12

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: NRC Environmental | Signature | Month 9 Day 28 Year 12

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name | Signature | Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.
Printed/Typed Name | Signature | Month Day Year

Printed by J. J. KELLER & ASSOCIATES, INC.
Neenah, WI 54957-0368

TRANSPORTER #1

Please print or type
(Form designed for use on elite (12-pitch) typewriter.)

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. INDUSTRIAL | Manifest Doc. No. 10002 | 2. Page 1 of 1

GENERATOR

3. Generator's Name and Mailing Address USEPA 950 W. Bannock St #900 Boise, ID 83702 | 295 118th St. Orofino, ID.

4. Generator's Phone 208 1378-5773 | Boise, ID 83702

5. Transporter 1 Company Name: NRC Environmental | 6. US EPA ID Number | A. Transporter's Phone: 509-998-2108

7. Transporter 2 Company Name | 8. US EPA ID Number | B. Transporter's Phone

9. Designated Facility Name and Site Address: WASTE MANAGEMENT. 5. 1820 Graham RD Medical Lake, WA | 10. US EPA ID Number | C. Facility's Phone: 509 244-0151

11. Waste Shipping Name and Description	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol
a. Non Hazardous - Non Regulated Industrial ~~Waste~~ (Asbestos)	001	DT	00032	T
b.				
c.				
d.				

D. Additional Descriptions for Materials Listed Above

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
Profile #10249I-WA

26.17 T

16. **GENERATOR'S CERTIFICATION:** I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name: Dan Weese | Signature | Month 9 | Day 28 | Year 12

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: Daniel Calkins | Signature: Daniel Calkins | Month 9 | Day 29 | Year 12

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name | Signature | Month | Day | Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name | Signature | Month | Day | Year

Printed by J. J. KELLER & ASSOCIATES, INC.
Neenah, WI 54957-0368

TRANSPORTER #1

Please print or type
(Form designed for use on elite (12-pitch) typewriter.)

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. INDUSTRIAL . . . | Manifest Doc. No. 10003 | 2. Page 1 of 1

GENERATOR

3. Generator's Name and Mailing Address USEPA
950 W. Bannock St #900 Boise, ID 83702
2951 16th St Orofino, ID

4. Generator's Phone (208) 378-5773

5. Transporter 1 Company Name	6. US EPA ID Number	A. Transporter's Phone
NRC Environmental	. . . . .	505-998-2108
7. Transporter 2 Company Name	8. US EPA ID Number	B. Transporter's Phone
	. . . . .	
9. Designated Facility Name and Site Address Waste Management S. 1820 Graham Rd Medical Lake, WA	10. US EPA ID Number	C. Facility's Phone 502-244-0151

11. Waste Shipping Name and Description	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol
a. Non Hazardous - Non Regulated (Industrial Solid (Asbestos)	001	DT	0032	T
b.				
c.				
d.				

D. Additional Descriptions for Materials Listed Above

E: Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
Profile # 10249 WA.
28.2 T

16. **GENERATOR'S CERTIFICATION:** I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name	Signature	Month	Day	Year
Ted Weigel		9	28	12

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Dana Olson		9	28	12

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year

Printed by J. J. KELLER & ASSOCIATES, INC.
Neenah, WI 54957-0368

TRANSPORTER #1

Please print or type
(Form designed for use on elite (12-pitch) typewriter.)

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. INDUSTRIAL | Manifest Doc. No. 10094 | 2. Page 1 of 1

GENERATOR

3. Generator's Name and Mailing Address USEPA
950 W. Bannock St. 295 118th St.
Boise ID 83702 Orofino, ID
4. Generator's Phone (208) 378-5773

5. Transporter 1 Company Name: NRC Environmental | 6. US EPA ID Number | A. Transporter's Phone: 509-998-2108

7. Transporter 2 Company Name | 8. US EPA ID Number | B. Transporter's Phone

9. Designated Facility Name and Site Address
WASTE Management
5. 1820 Graham RD
Medical LAKE, WA 99022
10. US EPA ID Number
C. Facility's Phone: 509-244-0151

11. Waste Shipping Name and Description	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Non Hazardous - Non Regulated Industrial Solid (Asbestos)	001	DT	0032	T
b.				
c.				
d.				

D. Additional Descriptions for Materials Listed Above

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
Profile # 10249 WA.
30 T

16. **GENERATOR'S CERTIFICATION:** I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.
Printed/Typed Name | Signature | Month 9 | Day 28 | Year 12

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Jay LaBute | Signature | Month 9 | Day 28 | Year 12

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name | Signature | Month | Day | Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.
Printed/Typed Name | Signature | Month | Day | Year

Printed by J. J. KELLER & ASSOCIATES, INC.
Neenah, WI 54957-0368

TRANSPORTER #1

Please print or type
(Form designed for use on elite (12-pitch) typewriter.)

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.	Manifest Doc. No.	2. Page 1 of 1
INDUSTRIAL . . .	1000.6.	

GENERATOR

3. Generator's Name and Mailing Address USEPA
950 W. BANNOCK ST.
BOISE, ID 83702

4. Generator's Phone (208) 378-5773

5. Transporter 1 Company Name	6. US EPA ID Number	A. Transporter's Phone
NRC Environmental	. . . . .	509-998-2168
7. Transporter 2 Company Name	8. US EPA ID Number	B. Transporter's Phone
	. . . . .	

9. Designated Facility Name and Site Address	10. US EPA ID Number	C. Facility's Phone
WASTE MANAGEMENT S. 1820 Graham Rd MEDICAL LAKE, WA 99022	. . . . .	509-244-8151

11. Waste Shipping Name and Description	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol
~~WASTE MAC~~ NON HAZARDOUS/Non Regulated Industrial SOLID (ASBESTOS)	0.01	DT	0032.	T
b.				
c.				
d.				

D. Additional Descriptions for Materials Listed Above	E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
Profile # 10249/WA
29.87 T

16. **GENERATOR'S CERTIFICATION:** I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name	Signature	Month	Day	Year
Greg Weigel		9	28	17

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Greg MacIntyer				

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year

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Neenah, WI 54957-0368

TRANSPORTER #1

12-BLS-C6 Rev. 12/98

Please print or type
(Form designed for use on elite (12-pitch) typewriter.)

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. INDUSTRIAL | Manifest Doc. No. 10005 | 2. Page 1 of 1

GENERATOR

3. Generator's Name and Mailing Address USEPA 950 W. BANNOCK ST BOISE, ID 83702 — 295-1118 PROFILE, ID

4. Generator's Phone (208) 378-5773

5. Transporter 1 Company Name	6. US EPA ID Number	A. Transporter's Phone
NRC Environmental		509-998-2108
7. Transporter 2 Company Name	8. US EPA ID Number	B. Transporter's Phone
9. Designated Facility Name and Site Address	10. US EPA ID Number	C. Facility's Phone
WASTE MANAGEMENT 5. 1820 Graham Rd Medical Lake, WA 99022		509-244-0151

11. Waste Shipping Name and Description	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol
a. Non Hazardous - Non Regulated Industrial Solid (ASBESTOS)	001	DT	0032	T
b.				
c.				
d.				

D. Additional Descriptions for Materials Listed Above	E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

Profile 102491 WA

32T

16. **GENERATOR'S CERTIFICATION:** I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name	Signature	Month	Day	Year
[illegible]	[signature]	10	12	12

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Greg Mackenzie	[signature]	10	12	12

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year

Printed by J. J. KELLER & ASSOCIATES, INC.
Neenah, WI 54957-0368

TRANSPORTER #1

Please print or type
(Form designed for use on elite (12-pitch) typewriter.)

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. INDUSTRIAL | Manifest Doc. No. 10007 | 2. Page 1 of 1

GENERATOR

3. Generator's Name and Mailing Address USEPA 950 Bannock St. #900 Boise, ID 83702 — 295 118th St 010f, no, 20

4. Generator's Phone (208) 378-5773

5. Transporter 1 Company Name: NRC Environmental | 6. US EPA ID Number | A. Transporter's Phone: 509-998-2108

7. Transporter 2 Company Name | 8. US EPA ID Number | B. Transporter's Phone

9. Designated Facility Name and Site Address: WASTE MANAGEMENT S. 1820 Graham Rd. Spokane, WA 99022 | 10. US EPA ID Number | C. Facility's Phone: 509-244-0151

11. Waste Shipping Name and Description	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol
a. NON HAZARDOUS - NON REGULATED SOLID (asbestos)	001	DT	0032	T
b.				
c.				
d.				

D. Additional Descriptions for Materials Listed Above

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
Profile 10249/WA

29.22

16. **GENERATOR'S CERTIFICATION:** I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name: Leo Weiss | Signature | Month 9 | Day 28 | Year 12

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: DAN Calkins | Signature: Daniel Calkins | Month 10 | Day 2 | Year 12

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name | Signature | Month | Day | Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name | Signature | Month | Day | Year

Printed by J. J. KELLER & ASSOCIATES, INC.
Neenah, WI 54957-0368

TRANSPORTER #1

Please print or type
(Form designed for use on elite (12-pitch) typewriter.)

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. INDUSTRIAL | Manifest Doc. No. 10008 | 2. Page 1 of 1

GENERATOR

3. Generator's Name and Mailing Address USEPA 950 W. BANNOCK - 900 Boise ID 83702 — 295 118 ST Coeur d'Alene, ID

4. Generator's Phone (208) 378 5773

5. Transporter 1 Company Name: NRC Environmental | 6. US EPA ID Number | A. Transporter's Phone: 509-928-2108

7. Transporter 2 Company Name | 8. US EPA ID Number | B. Transporter's Phone

9. Designated Facility Name and Site Address: Waste Management S. 1820 Graham Rd Spokane, WA | 10. US EPA ID Number | C. Facility's Phone: 509-244-0511

11. Waste Shipping Name and Description	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. NON HAZARDOUS - NON Regulated Solid Asbestos	0.01	DT	0032.	T
b.				
c.				
d.				

D. Additional Descriptions for Materials Listed Above

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
Profile 102491 WA

29.75

16. **GENERATOR'S CERTIFICATION:** I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name | Signature | Month | Day | Year

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Joe Weed | Signature | Month 10 | Day 2 | Year 12

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: NRC Environmental | Signature | Month 10 | Day 2 | Year 12

FACILITY

19. Discrepancy Indication Space
17. OSC signed in wrong place
18. Transporter 1

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name | Signature | Month | Day | Year

Printed by J. J. KELLER & ASSOCIATES, INC.
Neenah, WI 54957-0368

TRANSPORTER #1

Please print or type
(Form designed for use on elite (12-pitch) typewriter.)

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. INDUSTRIAL . . . | Manifest Doc. No. 10009 | 2. Page 1 of 1

GENERATOR

3. Generator's Name and Mailing Address USEPA 950 W. BANNOCK ST - 900 BOISE, ID 83702 — 29511 8th ST OLOF WA

4. Generator's Phone (208) 378 5773

5. Transporter 1 Company Name	6. US EPA ID Number	A. Transporter's Phone
NRC Environmental	. . . . .	509 928-2108
7. Transporter 2 Company Name	8. US EPA ID Number	B. Transporter's Phone
	. . . . .	
9. Designated Facility Name and Site Address	10. US EPA ID Number	C. Facility's Phone
Waste Management S. 1820 Graham Rd SPOKANE, WA 99022	. . . . .	509-244-0151

11. Waste Shipping Name and Description	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol
a. NON HAZARDOUS - Non Regulated Solid (asbestos)	001	DT	0032	T
b.				
c.				
d.				

D. Additional Descriptions for Materials Listed Above	E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
Profile 102491WA

29.44

16. **GENERATOR'S CERTIFICATION:** I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name	Signature	Month	Day	Year
MICHAEL SIBLEY		10	02	12

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Greg Macinster		10	02	12

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
		.	.	.

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
		.	.	.

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Neenah, WI 54957-0368

TRANSPORTER #1

Please print or type
(Form designed for use on elite (12-pitch) typewriter.)

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. INDUSTRIAL | Manifest Doc. No. 10010. | 2. Page 1 of 1

GENERATOR

3. Generator's Name and Mailing Address USEPA
950 W. Bannock - 900 295 118th St
Boise ID 83702 Olof, WA, ID

4. Generator's Phone (208) 378-5733

5. Transporter 1 Company Name NRC Environmental | 6. US EPA ID Number | A. Transporter's Phone 509-928-2108

7. Transporter 2 Company Name | 8. US EPA ID Number | B. Transporter's Phone

9. Designated Facility Name and Site Address
Waste Management
S. 1820 Graham Rd
Spokane, WA 99022

10. US EPA ID Number

C. Facility's Phone 509-244-0151

11. Waste Shipping Name and Description	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. NON HAZARDOUS - NON Regulated Solid (asbestos)	001	DT	0032.	T
b.				
c.				
d.				

D. Additional Descriptions for Materials Listed Above

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
Profile 102491 WA.

23.91 T

16. **GENERATOR'S CERTIFICATION:** I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name Michael Sibley | Signature [signature] | Month 10 | Day 02 | Year 12

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name Dan Calkins | Signature Dan Calkins | Month 10 | Day 02 | Year 12

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name | Signature | Month | Day | Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name | Signature | Month | Day | Year

Printed by J. J. KELLER & ASSOCIATES, INC.
Neenah, WI 54957-0368

TRANSPORTER #1

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. INDUSTRIAL . . | Manifest Document No. 1.0.01.1 | 2. Page 1 of 1

3. Generator's Name and Mailing Address USEPA 950 BANNOCK ST - 900 BOISE, ID 83702 — 295 118th St Orofino, ID

4. Generator's Phone (208) 378-5773

5. Transporter 1 Company Name: NRC ENVIRONMENTAL | 6. US EPA ID Number | A. Transporter's Phone: 509-998-2108

7. Transporter 2 Company Name | 8. US EPA ID Number | B. Transporter's Phone

9. Designated Facility Name and Site Address: WASTE MANAGEMENT S. 1810 Graham RD Spokane, WA 99202 | 10. US EPA ID Number | C. Facility's Phone: 509-244-0151

11. Waste Shipping Name and Description	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. NON HAZARDOUS - Non Regulated Solid (asbestos)	001	DT	00032	T
b.				
c.				
d.				

D. Additional Descriptions for Materials Listed Above

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

Profile 10249IWA

29.53T

16. **GENERATOR'S CERTIFICATION:** I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name: MICHAEL SIBLEY | Signature | Month 10 Day 03 Year 12

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: Mike Madsen | Signature | Month 10 Day 03 Year 12

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name | Signature | Month . Day . Year .

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name | Signature | Month . Day . Year .

GENERATOR / TRANSPORTER / FACILITY

Printed by J. J. KELLER & ASSOCIATES, INC. Neenah, WI 54957-0368

12-BLC-MB

ORIGINAL - RETURN TO GENERATOR

Please print or type.
(Form designed for use on elite (12-pitch) typewriter.)

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: INDUSTRIAL

Manifest Document No.: 1.0012

2. Page 1 of 1

3. Generator's Name and Mailing Address: USEPA
950 BANNOCK ST - 900
BOISE, ID 83702
295 118th St
Orofino, ID

4. Generator's Phone (208) 378-5773

5. Transporter 1 Company Name	6. US EPA ID Number	A. Transporter's Phone
NRC Environmental		509-998-2108
7. Transporter 2 Company Name	**8. US EPA ID Number**	**B. Transporter's Phone**
9. Designated Facility Name and Site Address	**10. US EPA ID Number**	**C. Facility's Phone**
WASTE MANAGEMENT S. 1810 Graham RD Spokane, WA 99022		509-244-0151

11. Waste Shipping Name and Description	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. NON HAZARDOUS - NON Regulated Solid (asbestos)	0.01	DT	00032	T
b.				
c.				
d.				

D. Additional Descriptions for Materials Listed Above

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

Profile 102491WA

25.06T

16. **GENERATOR'S CERTIFICATION:** I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name	Signature	Month	Day	Year
MICHAEL SIBLEY	[signature]	10	03	12

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Kelly Cox	Kelly Cox	10	3	12

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year

GENERATOR / TRANSPORTER / FACILITY

Printed by J. J. KELLER & ASSOCIATES, INC.
Neenah, WI 54957-0368

12-BLC-NS

ORIGINAL - RETURN TO GENERATOR

Please print or type
(Form designed for use on elite (12-pitch) typewriter)

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. INDUSTRIAL . . | Manifest Document No. 10013 | 2. Page 1 of 1

GENERATOR

3. Generator's Name and Mailing Address USEPA 950 BANNOCK ST - 900 BOISE, ID 83702 — 2951 18th ST ORofino, ID

4. Generator's Phone (208) 378-5773

5. Transporter 1 Company Name: NRC Environmental | 6. US EPA ID Number | A. Transporter's Phone 509-998-2108

7. Transporter 2 Company Name | 8. US EPA ID Number | B. Transporter's Phone

9. Designated Facility Name and Site Address: WASTE MANAGEMENT S. 1820 Graham Rd Spokane, WA 99224 | 10. US EPA ID Number | C. Facility's Phone 509-244-0151

11. Waste Shipping Name and Description	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. NON HAZARDOUS - NON Regulated Solid (asbestos)	0.01	DT	00032	T
b.				
c.				
d.				

D. Additional Descriptions for Materials Listed Above

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

Profile 10249 WA

25.87 T

16. **GENERATOR'S CERTIFICATION:** I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name: Michael Sibley | Signature | Month 10 Day 31 Year 12

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: Mike Linton | Signature | Month 10 Day 31 Year 12

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name | Signature | Month . Day . Year .

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name | Signature | Month . Day . Year .

Printed by J. KELLER & ASSOCIATES, INC. Neenah, WI 54957-0368

ORIGINAL - RETURN TO GENERATOR

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. INDUSTRIAL . . | Manifest Document No. F.0.0.14 | 2. Page 1 of 1

GENERATOR

3. Generator's Name and Mailing Address USEPA 950 BANNOCK ST - 900 BOISE, ID 83702 — 29511 8th St Orofino, ID

4. Generator's Phone (208) 378-5773

5. Transporter 1 Company Name: NRC Environmental | 6. US EPA ID Number | A. Transporter's Phone: 509-998-2108

7. Transporter 2 Company Name | 8. US EPA ID Number | B. Transporter's Phone

9. Designated Facility Name and Site Address: WASTE MANAGEMENT S. 18 E Graham Rd Spokane, WA 99202 | 10. US EPA ID Number | C. Facility's Phone: 509-244-0151

11. Waste Shipping Name and Description	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. NON HAZARDOUS - Non Regulated Solid (asbestos)	001	DT	00032	T
b.				
c.				
d.				

D. Additional Descriptions for Materials Listed Above

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

Profile 10249 WA

29.19T

16. **GENERATOR'S CERTIFICATION:** I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name: MICHAEL SIBLEY | Signature | Month 10 Day 03 Year 12

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: Bryan Sinclair | Signature | Month 10 Day 03 Year 12

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name | Signature | Month . Day . Year .

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name | Signature | Month . Day . Year .

Printed by J.J. KELLER & ASSOCIATES, INC. Neenah, WI 54957-0368

12-ELO-NM

ORIGINAL - RETURN TO GENERATOR

Please print or type
(Form designed for use on elite (12-pitch) typewriter.)

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: INDUSTRIAL
Manifest Document No.: 1 00 15
2. Page 1 of 1

3. Generator's Name and Mailing Address: USEPA
950 BANNOCK ST - 900
BOISE, ID 83702
295 118th St
Orofino, ID

4. Generator's Phone: (208) 378-5773

5. Transporter 1 Company Name: NRC Environmental
6. US EPA ID Number:
A. Transporter's Phone: 509-998-2108

7. Transporter 2 Company Name:
8. US EPA ID Number:
B. Transporter's Phone:

9. Designated Facility Name and Site Address: WASTE MANAGEMENT
S. 1820 Graham RD
Spokane, WA 99022
10. US EPA ID Number:
C. Facility's Phone: 509-244-0151

11. Waste Shipping Name and Description	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. NON HAZARDOUS - NON Regulated Solid (asbestos)	0.01	DT	00032	T
b.				
c.				
d.				

D. Additional Descriptions for Materials Listed Above

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
Profile 102491WA
26.31 T

16. **GENERATOR'S CERTIFICATION:** I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name	Signature	Month	Day	Year
MICHAEL SIBLEY	[signature]	10	03	12

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Cecil Anderson	[signature]	10	3	12

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year

GENERATOR / TRANSPORTER / FACILITY

Printed by J.J. KELLER & ASSOCIATES, INC.
Neenah, WI 54957-0368

12-BLC-M5

ORIGINAL - RETURN TO GENERATOR

Please print or type
(Form designed for use on elite (12-pitch) typewriter.)

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. INDUSTRIAL . . | Manifest Document No. 1.00160 | 2. Page 1 of 1

3. Generator's Name and Mailing Address USEPA 950 BANNOCK St - 900 Boise, ID 83702 — 29511 8th St Orofino, ID

4. Generator's Phone 208) 378-5793

5. Transporter 1 Company Name	6. US EPA ID Number	A. Transporter's Phone
NRC Environmental	. . . . .	509-998-2108
7. Transporter 2 Company Name	8. US EPA ID Number	B. Transporter's Phone
	. . . . .	
9. Designated Facility Name and Site Address	10. US EPA ID Number	C. Facility's Phone
WASTE MANAGEMENT S. 18LE Graham RD Spokane, WA 99202	. . . . .	509-244-0151

11. Waste Shipping Name and Description	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. NON HAZARDOUS - NON Regulated Solid (asbestos)	001	DT	00032	T
b.				
c.				
d.				

D. Additional Descriptions for Materials Listed Above

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

Profile 10249 WA

20.69 T

16. **GENERATOR'S CERTIFICATION:** I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name	Signature	Month	Day	Year
MICHAEL SIBLEY		10	03	12

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Steve Morgan		10	03	12

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
		.	.	.

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
		.	.	.

GENERATOR — TRANSPORTER — FACILITY

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Neenah, WI 54957-0368

ORIGINAL - RETURN TO GENERATOR

12-BLC-6M5

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NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. INDUSTRIAL . . | Manifest Document No. 10017 | 2. Page 1 of 1

3. Generator's Name and Mailing Address USEPA 950 BANNOCK ST - 900 BOISE, ID 83702 — 295 118th St Orofino, ID

4. Generator's Phone (208) 378-5773

5. Transporter 1 Company Name: NRC Environmental | 6. US EPA ID Number | A. Transporter's Phone: 509-998-2108

7. Transporter 2 Company Name | 8. US EPA ID Number | B. Transporter's Phone

9. Designated Facility Name and Site Address: WASTE MANAGEMENT S. 1810 Graham Rd Spokane, WA 99202 | 10. US EPA ID Number | C. Facility's Phone: 509-244-0151

11. Waste Shipping Name and Description	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. NON HAZARDOUS - NON Regulated Solid (asbestos)	0.01	DT	00032	T
b.				
c.				
d.				

D. Additional Descriptions for Materials Listed Above

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

Profile 10249 WA

25.75 T

16. **GENERATOR'S CERTIFICATION:** I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name: MICHAEL SIBLEY | Signature | Month 10 Day 03 Year 12

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: John Taylor | Signature | Month 10 Day 3 Year 12

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name | Signature | Month . Day . Year .

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name | Signature | Month . Day . Year .

GENERATOR — TRANSPORTER — FACILITY

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12-ELG-NRC

ORIGINAL - RETURN TO GENERATOR

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NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. INDUSTRIAL . . | Manifest Document No. 10018 | 2. Page 1 of 1

3. Generator's Name and Mailing Address USEPA 950 BANNOCK ST - 900 BOISE, ID 83702 — 2951 18th St Orofino, ID

4. Generator's Phone (208) 378-5773

5. Transporter 1 Company Name	6. US EPA ID Number	A. Transporter's Phone
NRC Environmental	. . . . .	509-998-2108
7. Transporter 2 Company Name	8. US EPA ID Number	B. Transporter's Phone
	. . . . .	
9. Designated Facility Name and Site Address	10. US EPA ID Number	C. Facility's Phone
WASTE MANAGEMENT S. 18 LG Graham RD Spokane, WA 99224	. . . . .	509-244-0151

11. Waste Shipping Name and Description	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol
a. NON HAZARDOUS - Non Regulated Solid (asbestos)	001	DT	00032	T
b.				
c.				
d.				

D. Additional Descriptions for Materials Listed Above	E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

Profile 102491WA

32.61 T

16. **GENERATOR'S CERTIFICATION:** I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name	Signature	Month	Day	Year
MICHAEL SIBLEY	M-H Sib	10	03	12

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
		.	.	.

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Jared Hanson	Jared Hanson	10	3	12

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
		.	.	.

GENERATOR — TRANSPORTER — FACILITY

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Neenah, WI 54957-9305

12-BLC-NR

ORIGINAL - RETURN TO GENERATOR

Please print or type
(Form designed for use on elite 12-pitch typewriter)

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.	Manifest Document No.	2. Page 1 of 1
INDUSTRIAL	1007	

GENERATOR

3. Generator's Name and Mailing Address: USEPA, 950 BANNOCK ST - 900, BOISE, ID 83702 — 2951 18th ST, Orofino, ID

4. Generator's Phone: (208) 378-5793

5. Transporter 1 Company Name	6. US EPA ID Number	A. Transporter's Phone
NRC Environmental		509-998-2108
7. Transporter 2 Company Name	8. US EPA ID Number	B. Transporter's Phone
9. Designated Facility Name and Site Address	10. US EPA ID Number	C. Facility's Phone
WASTE MANAGEMENT, S. 1820 Graham Rd, Spokane, WA 99202		509-244-0151

11. Waste Shipping Name and Description	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol
a. NON HAZARDOUS - Non Regulated Solid (asbestos)	0.01	DT	00015 00032	T
b.				
c.				
d.				

D. Additional Descriptions for Materials Listed Above

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

Profile 10249 WA

8.43.1

16. **GENERATOR'S CERTIFICATION:** I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name	Signature	Month	Day	Year
MICHAEL SIBLEY		10	03	12

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Dan Collins	Daniel Collins	10	3	12

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year

Printed by J. J. KELLER & ASSOCIATES, INC.
Neenah, WI 54957-0368

12-EL-MF

ORIGINAL - RETURN TO GENERATOR

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Re-Certification of Generator's Non-Hazardous Waste Profile Sheet

Profile #: 102491WA New Expiration Date: _____

A. GENERATOR INFORMATON

1. Generator Name: US EPA Region 10/Orofino Asbestos Removal
2. Address: 1200 56th Ave Suite 800 (ECL-116) Seattle, WA 98101
3. Technical Contact: ~~Eori Liverman~~ Greg Weigel Title: FOSC
4. Telephone: ~~208 664 4858~~ 208-867-3710 Fax #: _____
5. Email: ~~lwierman@aerl@epe.gov~~ weigel.greg@epa.gov.

B. BILLING INFORMATION - Optional (Mail WM Invoices To:) ☐ Same as above

1. Company Name: Environmental Qualiyty Management Inc
2. Address: 6825 218th St SW Suite J, Lynnwood WA 98039
3. Contact: Ron McManamy Title: _____
4. Telephone: 425 573 2900 P.O. Box: _____
5. Special Billing Requirements: _____
6. Email: rmcmanamy-eqm@msn.com

C. RECERTIFICATION INFORMATION

1. Waste Name: Soil with less than 1% asbestos contamination
2. Have you obtained any laboratory analysis of this waste within the past year? ☐ Yes ☑ No
3. Have you changed the raw materials used in the waste generating process or the process itself? ☐ Yes ☑ No
4. Is the laboratory analysis and/or other pertinent information previously submitted still representative of the waste as presently generated? ☑ Yes ☐ No

NOTE: IF YOU ANSWERED YES TO QUESTION 2 OR 3 LISTED ABOVE, PLEASE ATTACH APPROPRIATE DOCUMENTATION.

D. RECERTIFICATION STATEMENT.

By signing this form, the generator hereby certifies: The information provided in this document, the attached Waste Management Generator's Waste Profile Sheet, and all other attached documents contain true and accurate descriptions of this waste material. All new information regarding known or suspected hazards in the possession of the generator has been disclosed. The Generator hereby certifies this waste is not a "Hazardous Waste" as defined by the USEPA or Canadian Federal regulation and/or the state/province and this waste does not contain regulated radioactive materials or regulated concentrations of PCB's.

Name: (Print) Greg Weigel Title: Federal OSC

Signature: _____ Date: 9-26-2012

This is an extension of the original WM Decision. All conditions continue to apply.

Acceptable for use in the following states as sanctioned by Waste Management's waste review and approval process. Some waste streams will require the use of a new profile rather than the re-certification form.

AK, AL, AR, CO, DE, FL, GA, HI, IL, IN, KY, LA, MA, MD, ME, MI, MS, NC, NH, NY, OK, OR, SC, TX, VA & WA.

FOR WM USE ONLY

Management Method: ☐ Landfill ☐ Bioremediation ☐ Non-hazardous solidification ☐ Other: _____ ☐ Transfer ☐ See attached conditions

Approval Decision: ☐ Approved ☐ Not Approved

Waste Approval Expiration Date: _____

Management Facility Precautions, Special Handling Procedures or Limitation on approval: _____

☐ Shall not contain free liquid
☐ Shipment must be scheduled into disposal facility
☐ Approval number must accompany each shipment
☐ Waste Manifest must accompany load

WM Authorization Name / Title: _____ **Date:** _____

State Authorization (if Required): _____ **Date:** _____

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F Analytical Results and Data Validation Memoranda

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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: September 19, 2012

TO: Steve Hall, START-3 Project Manager, E & E, Seattle, WA

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, WA MW

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

REF: TDD: 10-09-0008 PAN: EE-002233-0603-01TT0

The data quality assurance review of one soil sample collected from the Orofino Asbestos site in Orofino, Idaho, has been completed. Resource Conservation and Recovery Act (RCRA) Toxicity Characteristic Leaching Procedure (TCLP) metals analyses (EPA Methods 1311, 6010C, and 7470A) were performed by GEL Laboratories, Inc., Charleston, South Carolina. All sample analyses were evaluated following EPA's Stage 4 Data Validation Manual Process (S4VM).

The sample was numbered: 12080127

Data Qualifications:

1. **Sample Holding Times: Acceptable.**

The sample was maintained at < 6°C. The sample was collected on September 11, 2012, and was extracted and analyzed by September 18, 2012, therefore meeting QC criteria of less than 6 months between collection, extraction, and analysis (28 days for mercury).

2. **Initial and Continuing Calibration: Acceptable.**

A minimum of one calibration standard and a blank were analyzed at the beginning of the ICP analysis sequence and after every 10 samples. No results were greater than 110% of the highest calibration standard. All ICP recoveries were within the QC limits of 90% to 110%. All AA recoveries were within QC limits of 80% to 120%.

3. **Blanks: Acceptable.**

A preparation blank was analyzed for each 20 samples or per matrix per concentration level. Blanks were analyzed after each Initial or Continuing Calibration Verification. There were no detections in any blanks that affected sample results.

4. **ICP Interference Check Sample: Acceptable.**

An Interference Check Sample (ICS) was analyzed at the beginning and end of each sequence or at

least twice every 8 hours, whichever was more frequent. All ICS (solution AB) results were within QC limits of 80% - 120% recovery.

5. Precision and Bias Determination: Not Performed.

Samples necessary to determine precision and bias were not provided to the laboratory. All results were flagged "PND" (Precision Not Determined) and "RND" (Recovery Not Determined), although the flags do not appear on the data sheets.

6. Performance Evaluation Sample Analysis: Not Provided.

Performance evaluation samples were not provided to the laboratory.

7. ICP Serial Dilution: Acceptable.

A serial dilution analysis was performed per matrix per concentration or per sample delivery group, whichever was more frequent. All serial dilution results were within QC limits.

8. Matrix Spike Analysis: Satisfactory.

A matrix spike analysis was performed per SDG or per matrix per concentration level, whichever was more frequent. Spike and spike duplicate recoveries were within the QC limits except arsenic (low recovery). The sample quantitation limit associated with the low recovery outlier was qualified as an estimated quantity with a low bias (UJL).

9. Duplicate Analysis: Satisfactory.

A laboratory duplicate analysis was performed per SDG or per matrix per concentration level, whichever was more frequent. All duplicate results were within QC limits except arsenic; no additional actions were taken based on this outlier.

10. Laboratory Control Sample Analysis: Acceptable.

A Laboratory Control Sample (LCS) was analyzed per SDG per matrix. All LCS results were within the established control limits.

11. Overall Assessment of Data for Use

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), the analytical methods, and, when applicable, the Office of Emergency and Remedial Response Publication "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review". 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.

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

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Ecology and Environment, Inc.
Address : 720 Third Avenue
Suite 1700
Seattle, Washington 98104
Contact: Mr. Mark Woodke
Project: **Project No. 10-09-0008 Orofino Asbestos Site**

Report Date: September 18, 2012

Client Sample ID: 12080127
Sample ID: 311194001
Matrix: Soil
Collect Date: 11-SEP-12 12:00
Receive Date: 13-SEP-12
Collector: Client

Project: ECOL00803
Client ID: ECOL008

Parameter	Qualifier	Result	RL	Units	DF	Analyst	Date	Time	Batch	Method
Mercury Analysis-CVAA										
TCLP Hg in Solid "As Received"										
Mercury	U	ND	0.002	mg/L	1	BYV1	09/17/12	1056	1246253	1
Metals Analysis-ICP										
TCLP ICP Metals - 1311/3010A/6010C "As Received"										
Arsenic	U	ND	0.300	mg/L	1	JWJ	09/18/12	0004	1246374	2
Barium		0.324	0.050	mg/L	1					
Cadmium	U	ND	0.050	mg/L	1					
Chromium	U	ND	0.050	mg/L	1					
Lead	U	ND	0.100	mg/L	1					
Selenium	U	ND	0.300	mg/L	1					
Silver	U	ND	0.050	mg/L	1					

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 1311	SW846 1311 TCLP Leaching	EXF1	09/13/12	1600	1245955

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3010A	ICP-TRACE TCLP by SW846 3010A	BXA1	09/14/12	2004	1246373

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 7470A Prep	EPA 7470A Mercury Prep TCLP Liquid	AXS5	09/14/12	1555	1246252

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 7470A	
2	SW846 3010A/6010C	

9-19-12

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: January 18, 2013

TO: Steve Hall, START-3 Project Manager, E & E, Seattle, WA

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, WA MW

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

REF: TDD: 10-09-0008 PAN: EE-002233-0603-01TT0

The data quality assurance review of 6 air filter samples collected from the Orofino Asbestos site in Orofino, Idaho, has been completed. Transmission electron microscopy (TEM; Method ISO 10312) asbestos analyses were performed by EMSL, Inc., Cinnaminson, New Jersey.

The samples were numbered:

12080010	12080022	12080028	12080040	12080046	12080047

Data Qualifications:

The samples were analyzed between September 5 and October 9, 2012. No issues were noted by the laboratory.

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 Qualifier and Definition

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

Orofino Asbestos Site [4500000592-EE-02233-0603-01TTO]

version 12i-DRAFT

National Asbestos Data Entry Spreadsheet (NADES) for Air & Dust Analysis by Superfund TEM

ANALYTICAL REPORT

FILE NAME: 10-09-0008L_EMSL04_12080010_09-05-12_041223283_TEM-EPASM_D.xls

SAMPLE/ANALYSIS INFORMATION			
Field Sample Number	12080010	**Lab Sample Number**	041223283-0003
Media	Air	**Preparation**	Direct
Sample Type	Field Sample	**Sample Status**	Analyzed
Air Volume (L)	6265.17	**Analysis Date**	9/5/2012
QA Sample Type	Not QC	**Method SOP**	TEM ISO 10312
Stopping Rule(s):	Max Area = n/a, Structures = 100, Sensitivity = 1.00E-03		
Recording Rule(s):	Min Aspect Ratio = ≥ 3:1, Min Length = 0.5µm, Min Width = 0µm		

ANALYSIS PARAMETERS	
Effective filter area (mm2)	385
F-factor	1.00E+00
Grid opening area (mm2)	0.0132
# GOs counted High Magnification	5
# GOs counted Low Magnification	0
Sensitivity (1/cc)	
Total Asbestos	0.0009311
PCME	0.0009311
Maximum Area Examined	
High Magnification	6.6E-02
Low Magnification	0.0E+00

Number of Structures with Fatal Data Entry Errors 0

(Structures with fatal errors are excluded from calculations below)

Desired Confidence Interval (%): 90

Mineral Class	Number of Structures (a)	Loading on Filter (b) (s/mm^2)	Air Conc (c) (s/cc)	90% Poisson Confidence Interval for this Sample
Total TEM-EPASM Structures				
Total Asbestos	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
Total Chrysotile (CH)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
Total Amphibole	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
actinolite (AC)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
amosite (AM)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
anthophyllite (AN)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
crocidolite (CR)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
tremolite (TR)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
Libby amphibole (LA)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
other amphibole (OA)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
Solid Soln: Amosite	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
Solid Soln: Trem-Act	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
other mineral class (OM)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
PCM Equivalent Structures (PCME)				
Total Asbestos	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
Total Chrysotile (CH)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
Total Amphibole	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
actinolite (AC)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
amosite (AM)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
anthophyllite (AN)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
crocidolite (CR)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
tremolite (TR)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
Libby amphibole (LA)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
other amphibole (OA)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
Solid Soln: Amosite	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
Solid Soln: Trem-Act	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
other mineral class (OM)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
USER DEFINED				
Total Asbestos	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
Total Chrysotile (CH)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
Total Amphibole	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
actinolite (AC)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
amosite (AM)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
anthophyllite (AN)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
crocidolite (CR)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
tremolite (TR)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
Libby amphibole (LA)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
other amphibole (OA)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
Solid Soln: Amosite	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
Solid Soln: Trem-Act	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
other mineral class (OM)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03

Binning Rule Description:

Apply to fibers (F) only:
L ≥ 0.5µm, AR ≥ 3

No restrictions for other structure types.

Binning Rule Description:

Apply to all structures where Total column > 0

L > 5µm, W ≥ 0.25µm and W < 3µm, AR ≥ 3

Binning Rule Description:

Apply binning rules to:
all countable structures

Length restrictions:
lower bound -- >10 µm
upper bound -- none

Width restrictions:
lower bound -- none
upper bound -- none

Aspect Ratio criterion: >=3

(a) Based on countable structures only.

(b) Loading on Filter (s/mm^2) = N structures / (GOs Counted * GO Area). Results for indirect samples are based on the secondary filter.

(c) Air Concentration (s/cc) = (N structures * EFA) / (GOs Counted * GO Area * F-factor * Air Volume * 1000).
Dust Loading (s/cm2) = (N structures * EFA) / (GOs Counted * GO Area * F-factor * Dust Collection Area).

MW 1-18-13

Orofino Asbestos Site [4500000592-EE-002233-0603-01TTO]

version 12i-DRAFT

National Asbestos Data Entry Spreadsheet (NADES) for Air & Dust Analysis by Superfund TEM

ANALYTICAL REPORT

FILE NAME: 10-09-0008L_EMSL04_12080022_09-18-12_041224419_TEM-EPASM_D.xls

SAMPLE/ANALYSIS INFORMATION				ANALYSIS PARAMETERS	
Field Sample Number	12080022	**Lab Sample Number**	041224419-0003	**Effective filter area (mm2)**	385
				F-factor	1.00E+00
Media	Air	**Preparation**	Direct	**Grid opening area (mm2)**	0.0132
Sample Type	Field Sample	**Sample Status**	Analyzed	**# GOs counted High Magnification**	5
Air Volume (L)	5844.58	**Analysis Date**	9/18/2012	**# GOs counted Low Magnification**	0
QA Sample Type	Not QC	**Method SOP**	TEM ISO 10312	**Sensitivity (1/cc)**	
				Total Asbestos	0.0009981
Stopping Rule(s):	Max Area = n/a, Structures = 100, Sensitivity = 1.00E-03			**PCME**	0.0009981
Recording Rule(s):	Min Aspect Ratio = ≥ 3:1, Min Length = 0.5µm, Min Width = 0µm			**Maximum Area Examined**	
				High Magnification	6.6E-02
				Low Magnification	0.0E+00

Number of Structures with Fatal Data Entry Errors 0

(Structures with fatal errors are excluded from calculations below)

Desired Confidence Interval (%): 90

Mineral Class	Number of Structures (a)	Loading on Filter (b) (s/mm^2)	Air Conc (c) (s/cc)	90% Poisson Confidence Interval for this Sample
Total TEM-EPASM Structures				
Total Asbestos	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
Total Chrysotile (CH)	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
Total Amphibole	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
actinolite (AC)	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
amosite (AM)	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
anthophyllite (AN)	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
crocidolite (CR)	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
tremolite (TR)	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
Libby amphibole (LA)	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
other amphibole (OA)	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
Solid Soln: Amosite	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
Solid Soln: Trem-Act	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
other mineral class (OM)	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
PCM Equivalent Structures (PCME)				
Total Asbestos	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
Total Chrysotile (CH)	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
Total Amphibole	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
actinolite (AC)	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
amosite (AM)	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
anthophyllite (AN)	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
crocidolite (CR)	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
tremolite (TR)	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
Libby amphibole (LA)	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
other amphibole (OA)	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
Solid Soln: Amosite	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
Solid Soln: Trem-Act	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
other mineral class (OM)	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
USER DEFINED				
Total Asbestos	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
Total Chrysotile (CH)	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
Total Amphibole	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
actinolite (AC)	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
amosite (AM)	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
anthophyllite (AN)	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
crocidolite (CR)	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
tremolite (TR)	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
Libby amphibole (LA)	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
other amphibole (OA)	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
Solid Soln: Amosite	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
Solid Soln: Trem-Act	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
other mineral class (OM)	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03

Binning Rule Description:

Apply to fibers (F) only:
L ≥ 0.5µm, AR ≥ 3

No restrictions for other structure types.

Binning Rule Description:

Apply to all structures where Total column > 0

L > 5µm, W ≥ 0.25µm and W < 3µm, AR ≥ 3

Binning Rule Description:

Apply binning rules to:
all countable structures

Length restrictions:
lower bound -- >0.5 µm
upper bound -- none

Width restrictions:
lower bound -- none
upper bound -- none

Aspect Ratio criterion: >=3

(a) Based on countable structures only.

(b) Loading on Filter (s/mm^2) = N structures / (GOs Counted * GO Area). Results for indirect samples are based on the secondary filter.

(c) Air Concentration (s/cc) = (N structures * EFA) / (GOs Counted * GO Area * F-factor * Air Volume * 1000).
Dust Loading (s/cm2) = (N structures * EFA) / (GOs Counted * GO Area * F-factor * Dust Collection Area).

Orofino Asbestos Site [4500000592-EE-002233-0603-01TTO]

version 12i-DRAFT

National Asbestos Data Entry Spreadsheet (NADES) for Air & Dust Analysis by Superfund TEM

ANALYTICAL REPORT

FILE NAME: 10-09-0008L_EMSL04_12080028_09-21-12_041224780_TEM-EPASM_D.xls

SAMPLE/ANALYSIS INFORMATION			
Field Sample Number	12080028	**Lab Sample Number**	041224780-0003
Media	Air	**Preparation**	Direct
Sample Type	Field Sample	**Sample Status**	Analyzed
Air Volume (L)	6285	**Analysis Date**	9/21/2012
QA Sample Type	Not QC	**Method SOP**	TEM ISO 10312
Stopping Rule(s):	Max Area = n/a, Structures = 100, Sensitivity = 1.00E-03		
Recording Rule(s):	Min Aspect Ratio = ≥ 3:1, Min Length = 0.5µm, Min Width = 0µm		

ANALYSIS PARAMETERS	
Effective filter area (mm2)	385
F-factor	1.00E+00
Grid opening area (mm2)	0.0132
# GOs counted High Magnification	5
# GOs counted Low Magnification	0
Sensitivity (1/cc)	
Total Asbestos	0.0009281
PCME	0.0009281
Maximum Area Examined	
High Magnification	6.6E-02
Low Magnification	0.0E+00

Number of Structures with Fatal Data Entry Errors 0

(Structures with fatal errors are excluded from calculations below)

Desired Confidence Interval (%): 90

Mineral Class	Number of Structures (a)	Loading on Filter (b) (s/mm^2)	Air Conc (c) (s/cc)	90% Poisson Confidence Interval for this Sample
Total TEM-EPASM Structures				
Total Asbestos	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
Total Chrysotile (CH)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
Total Amphibole	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
actinolite (AC)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
amosite (AM)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
anthophyllite (AN)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
crocidolite (CR)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
tremolite (TR)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
Libby amphibole (LA)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
other amphibole (OA)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
Solid Soln: Amosite	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
Solid Soln: Trem-Act	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
other mineral class (OM)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
PCM Equivalent Structures (PCME)				
Total Asbestos	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
Total Chrysotile (CH)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
Total Amphibole	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
actinolite (AC)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
amosite (AM)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
anthophyllite (AN)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
crocidolite (CR)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
tremolite (TR)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
Libby amphibole (LA)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
other amphibole (OA)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
Solid Soln: Amosite	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
Solid Soln: Trem-Act	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
other mineral class (OM)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
USER DEFINED				
Total Asbestos	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
Total Chrysotile (CH)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
Total Amphibole	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
actinolite (AC)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
amosite (AM)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
anthophyllite (AN)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
crocidolite (CR)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
tremolite (TR)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
Libby amphibole (LA)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
other amphibole (OA)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
Solid Soln: Amosite	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
Solid Soln: Trem-Act	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03
other mineral class (OM)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E-03

Binning Rule Description:

Apply to fibers (F) only:
L ≥ 0.5µm, AR ≥ 3

No restrictions for other structure types.

Binning Rule Description:

Apply to all structures where Total column > 0

L > 5µm, W ≥ 0.25µm and W < 3µm, AR ≥ 3

Binning Rule Description:

Apply binning rules to:
all countable structures

Length restrictions:
lower bound -- none
upper bound -- none

Width restrictions:
lower bound -- none
upper bound -- none

Aspect Ratio criterion: >=3

(a) Based on countable structures only.

(b) Loading on Filter (s/mm^2) = N structures / (GOs Counted * GO Area). Results for indirect samples are based on the secondary filter.

(c) Air Concentration (s/cc) = (N structures * EFA) / (GOs Counted * GO Area * F-factor * Air Volume * 1000).
Dust Loading (s/cm2) = (N structures * EFA) / (GOs Counted * GO Area * F-factor * Dust Collection Area).

MW 1-18-13

Orofino Asbestos Site [4500000592-EE-002233-0603-01TTO]

version 12i-DRAFT

National Asbestos Data Entry Spreadsheet (NADES) for Air & Dust Analysis by Superfund TEM

ANALYTICAL REPORT

FILE NAME: 10-09-0008_EMSL04_12080040_10-09-12_041226188_TEM-EPASM_D.xls

SAMPLE/ANALYSIS INFORMATION				ANALYSIS PARAMETERS	
Field Sample Number	12080040	**Lab Sample Number**	041226188-0001	**Effective filter area (mm2)**	385
				F-factor	1.00E+00
Media	Air	**Preparation**	Direct	**Grid opening area (mm2)**	0.0132
Sample Type	Field Sample	**Sample Status**	Analyzed	**# GOs counted High Magnification**	6
Air Volume (L)	5057.19	**Analysis Date**	10/9/2012	**# GOs counted Low Magnification**	0
QA Sample Type	Not QC	**Method SOP**	TEM ISO 10312	**Sensitivity (1/cc)**	
				Total Asbestos	0.0009612
Stopping Rule(s):	Max Area = n/a, Structures = 100, Sensitivity = 1.00E-03			**PCME**	0.0009612
Recording Rule(s):	Min Aspect Ratio = ≥ 3:1, Min Length = 0.5µm, Min Width = 0µm			**Maximum Area Examined**	
				High Magnification	7.9E-02
				Low Magnification	0.0E+00

Number of Structures with Fatal Data Entry Errors 0

(Structures with fatal errors are excluded from calculations below)

Desired Confidence Interval (%): 90

Mineral Class	Number of Structures (a)	Loading on Filter (b) (s/mm^2)	Air Conc (c) (s/cc)	90% Poisson Confidence Interval for this Sample
Total TEM-EPASM Structures				
Total Asbestos	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
Total Chrysotile (CH)	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
Total Amphibole	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
actinolite (AC)	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
amosite (AM)	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
anthophyllite (AN)	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
crocidolite (CR)	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
tremolite (TR)	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
Libby amphibole (LA)	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
other amphibole (OA)	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
Solid Soln: Amosite	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
Solid Soln: Trem-Act	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
other mineral class (OM)	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
PCM Equivalent Structures (PCME)				
Total Asbestos	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
Total Chrysotile (CH)	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
Total Amphibole	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
actinolite (AC)	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
amosite (AM)	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
anthophyllite (AN)	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
crocidolite (CR)	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
tremolite (TR)	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
Libby amphibole (LA)	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
other amphibole (OA)	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
Solid Soln: Amosite	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
Solid Soln: Trem-Act	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
other mineral class (OM)	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
USER DEFINED				
Total Asbestos	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
Total Chrysotile (CH)	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
Total Amphibole	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
actinolite (AC)	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
amosite (AM)	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
anthophyllite (AN)	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
crocidolite (CR)	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
tremolite (TR)	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
Libby amphibole (LA)	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
other amphibole (OA)	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
Solid Soln: Amosite	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
Solid Soln: Trem-Act	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
other mineral class (OM)	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03

Binning Rule Description:

Apply to fibers (F) only:
L ≥ 0.5µm, AR ≥ 3

No restrictions for other structure types.

Binning Rule Description:

Apply to all structures where Total column > 0

L > 5µm, W ≥ 0.25µm and W < 3µm, AR ≥ 3

Binning Rule Description:

Apply binning rules to:
all countable structures

Length restrictions:
lower bound -- none
upper bound -- none

Width restrictions:
lower bound -- none
upper bound -- none

Aspect Ratio criterion: >=3

(a) Based on countable structures only.

(b) Loading on Filter (s/mm^2) = N structures / (GOs Counted * GO Area). Results for indirect samples are based on the secondary filter.

(c) Air Concentration (s/cc) = (N structures * EFA) / (GOs Counted * GO Area * F-factor * Air Volume * 1000).
Dust Loading (s/cm2) = (N structures * EFA) / (GOs Counted * GO Area * F-factor * Dust Collection Area).

MW 1-18-13

Orofino Asbestos Site [4500000592-EE-002233-0603-01TTO]

version 12i-DRAFT

National Asbestos Data Entry Spreadsheet (NADES) for Air & Dust Analysis by Superfund TEM

ANALYTICAL REPORT

FILE NAME: 10-09-0008_EMSL04_12080046_10-09-12_041226188_TEM-EPASM_D.xls

SAMPLE/ANALYSIS INFORMATION				ANALYSIS PARAMETERS	
Field Sample Number	12080046	**Lab Sample Number**	041226188-0002	**Effective filter area (mm2)**	385
				F-factor	1.00E+00
Media	Air	**Preparation**	Direct	**Grid opening area (mm2)**	0.0132
Sample Type	Field Sample	**Sample Status**	Analyzed	**# GOs counted High Magnification**	12
Air Volume (L)	2438.35	**Analysis Date**	10/9/2012	**# GOs counted Low Magnification**	0
QA Sample Type	Not QC	**Method SOP**	TEM ISO 10312	**Sensitivity (1/cc)**	
				Total Asbestos	0.0009968
Stopping Rule(s):	Max Area = n/a, Structures = 100, Sensitivity = 1.00E-03			**PCME**	0.0009968
Recording Rule(s):	Min Aspect Ratio = ≥ 3:1, Min Length = 0.5µm, Min Width = 0µm			**Maximum Area Examined**	
				High Magnification	1.6E-01
				Low Magnification	0.0E+00

Number of Structures with Fatal Data Entry Errors 0

(Structures with fatal errors are excluded from calculations below)

Desired Confidence Interval (%): 90

Mineral Class	Number of Structures (a)	Loading on Filter (b) (s/mm^2)	Air Conc (c) (s/cc)	90% Poisson Confidence Interval for this Sample
Total TEM-EPASM Structures				
Total Asbestos	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
Total Chrysotile (CH)	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
Total Amphibole	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
actinolite (AC)	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
amosite (AM)	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
anthophyllite (AN)	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
crocidolite (CR)	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
tremolite (TR)	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
Libby amphibole (LA)	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
other amphibole (OA)	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
Solid Soln: Amosite	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
Solid Soln: Trem-Act	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
other mineral class (OM)	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
PCM Equivalent Structures (PCME)				
Total Asbestos	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
Total Chrysotile (CH)	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
Total Amphibole	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
actinolite (AC)	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
amosite (AM)	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
anthophyllite (AN)	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
crocidolite (CR)	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
tremolite (TR)	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
Libby amphibole (LA)	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
other amphibole (OA)	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
Solid Soln: Amosite	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
Solid Soln: Trem-Act	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
other mineral class (OM)	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
USER DEFINED				
Total Asbestos	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
Total Chrysotile (CH)	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
Total Amphibole	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
actinolite (AC)	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
amosite (AM)	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
anthophyllite (AN)	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
crocidolite (CR)	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
tremolite (TR)	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
Libby amphibole (LA)	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
other amphibole (OA)	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
Solid Soln: Amosite	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
Solid Soln: Trem-Act	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03
other mineral class (OM)	0	0.0E+00	0.0E+00	0.0E+00 - 3.0E-03

Binning Rule Description:

Apply to fibers (F) only:
L ≥ 0.5µm, AR ≥ 3

No restrictions for other structure types.

Binning Rule Description:

Apply to all structures where Total column > 0

L > 5µm, W ≥ 0.25µm and W < 3µm, AR ≥ 3

Binning Rule Description:

Apply binning rules to:
all countable structures

Length restrictions:
lower bound -- none
upper bound -- none

Width restrictions:
lower bound -- none
upper bound -- none

Aspect Ratio criterion: >=3

(a) Based on countable structures only.

(b) Loading on Filter (s/mm^2) = N structures / (GOs Counted * GO Area). Results for indirect samples are based on the secondary filter.

(c) Air Concentration (s/cc) = (N structures * EFA) / (GOs Counted * GO Area * F-factor * Air Volume * 1000).
Dust Loading (s/cm2) = (N structures * EFA) / (GOs Counted * GO Area * F-factor * Dust Collection Area).

MW HB-13

Orofino Asbestos Site [4500000592-EE-002233-0603-01TTO]

version 12i-DRAFT

National Asbestos Data Entry Spreadsheet (NADES) for Air & Dust Analysis by Superfund TEM

ANALYTICAL REPORT

FILE NAME: 10-09-0008_EMSL04_12080047_10-09-12_041226188_TEM-EPASM_D.xls

SAMPLE/ANALYSIS INFORMATION				ANALYSIS PARAMETERS	
Field Sample Number	12080047	**Lab Sample Number**	041226188-0003	**Effective filter area (mm2)**	385
				F-factor	1.00E+00
Media	Air	**Preparation**	Direct	**Grid opening area (mm2)**	0.0132
Sample Type	Field Sample	**Sample Status**	Analyzed	**# GOs counted High Magnification**	32
Air Volume (L)	927.89	**Analysis Date**	10/9/2012	**# GOs counted Low Magnification**	0
QA Sample Type	Not QC	**Method SOP**	TEM ISO 10312	**Sensitivity (1/cc)**	
				Total Asbestos	0.0009823
Stopping Rule(s):	Max Area = n/a, Structures = 100, Sensitivity = 1.00E-03			**PCME**	0.0009823
Recording Rule(s):	Min Aspect Ratio = ≥ 3:1, Min Length = 0.5µm, Min Width = 0µm			**Maximum Area Examined**	
				High Magnification	4.2E-01
				Low Magnification	0.0E+00

Number of Structures with Fatal Data Entry Errors 0

(Structures with fatal errors are excluded from calculations below)

Desired Confidence Interval (%): 90

Mineral Class	Number of Structures (a)	Loading on Filter (b) (s/mm^2)	Air Conc (c) (s/cc)	90% Poisson Confidence Interval for this Sample
Total TEM-EPASM Structures				
Total Asbestos	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
Total Chrysotile (CH)	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
Total Amphibole	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
actinolite (AC)	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
amosite (AM)	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
anthophyllite (AN)	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
crocidolite (CR)	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
tremolite (TR)	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
Libby amphibole (LA)	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
other amphibole (OA)	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
Solid Soln: Amosite	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
Solid Soln: Trem-Act	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
other mineral class (OM)	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
PCM Equivalent Structures (PCME)				
Total Asbestos	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
Total Chrysotile (CH)	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
Total Amphibole	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
actinolite (AC)	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
amosite (AM)	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
anthophyllite (AN)	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
crocidolite (CR)	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
tremolite (TR)	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
Libby amphibole (LA)	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
other amphibole (OA)	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
Solid Soln: Amosite	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
Solid Soln: Trem-Act	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
other mineral class (OM)	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
USER DEFINED				
Total Asbestos	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
Total Chrysotile (CH)	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
Total Amphibole	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
actinolite (AC)	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
amosite (AM)	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
anthophyllite (AN)	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
crocidolite (CR)	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
tremolite (TR)	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
Libby amphibole (LA)	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
other amphibole (OA)	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
Solid Soln: Amosite	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
Solid Soln: Trem-Act	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03
other mineral class (OM)	0	0.0E+00	0.0E+00	0.0E+00 - 2.9E-03

Binning Rule Description:

Apply to fibers (F) only:
L ≥ 0.5µm, AR ≥ 3

No restrictions for other structure types.

Binning Rule Description:

Apply to all structures where Total column > 0

L > 5µm, W ≥ 0.25µm and W < 3µm, AR ≥ 3

Binning Rule Description:

Apply binning rules to:
all countable structures

Length restrictions:
lower bound -- none
upper bound -- none

Width restrictions:
lower bound -- none
upper bound -- none

Aspect Ratio criterion: >=3

(a) Based on countable structures only.

(b) Loading on Filter (s/mm^2) = N structures / (GOs Counted * GO Area). Results for indirect samples are based on the secondary filter.

(c) Air Concentration (s/cc) = (N structures * EFA) / (GOs Counted * GO Area * F-factor * Air Volume * 1000).
Dust Loading (s/cm2) = (N structures * EFA) / (GOs Counted * GO Area * F-factor * Dust Collection Area).

MWH 8-13

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: December 17, 2012

TO: Steve Hall, START-3 Project Manager, E & E, Seattle, WA

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, WA MW

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

REF: TDD: 10-09-0008 PAN: EE-002233-0603-01TT0

The data quality assurance review of 7 air filter samples collected from the Orofino Asbestos site in Orofino, Idaho, has been completed. Phase contrast microscopy (PCM; NIOSH Method 7400) asbestos analyses were performed by EMSL, Inc., Cinnaminson, New Jersey.

The samples were numbered:

12080001 12080002 12080003 12080004 12080005 12080006 12080007

Data Qualifications:

The samples were received at the laboratory on September 4, 2012, and were analyzed on September 4, 2012. Samples 12080002 and 12080003 were overloaded and were not analyzed by the laboratory. No field blanks were issued with these samples.

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 Qualifier and Definition

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

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:	041223057
CustomerID:	ECOL44
CustomerPO:	
ProjectID:	BOA

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

Phone:	(206) 624-9537
Fax:	(206) 621-9832
Received:	08/30/12 10:10 AM
Analysis Date:	8/30/2012
Collected:	8/28/2012

Project: **Orofino Asbestos Site; 4500000592-EE-002233-0603-01TT0; No: 10-09-0008-27**

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*
12080001 *041223057-0001*	EX-1	8/28/2012	1373.25	13	100	0.002	16.6	0.005	
12080002 *041223057-0002*	BCH-1	8/28/2012							Overloaded
12080003 *041223057-0003*	BCH-2	8/28/2012							Overloaded
12080004 *041223057-0004*	BCH-3	8/28/2012	4674.62	12	100	0.001	15.3	0.001	

No discernable field blanks submitted with this sample set.

Analyst(s)

Dave Stanhope (4)

Stephen Siegel, CIH, 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

Initial report from 08/31/2012 08:41:55

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:	041223161
CustomerID:	ECOL44
CustomerPO:	
ProjectID:	BOA

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

Phone:	(206) 624-9537
Fax:	(206) 621-9832
Received:	08/31/12 10:05 AM
Analysis Date:	8/31/2012
Collected:	8/29/2012

Project: **Orofino Asbestos Site; 4500000592-EE-002233-0603-01TT0; No: 10-09-0008L-28**

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*
12080005 *041223161-0001*	EX-1	8/29/2012	1318.46	16.5	100	0.002	21.0	0.006	
12080006 *041223161-0002*	BCH-1	8/29/2012	4726.04	24	100	0.001	30.6	0.002	
12080007 *041223161-0003*	BCH-2	8/29/2012	6740.64	17	100	0.0004	21.7	0.001	

No discernable field blanks submitted with this sample set.

Analyst(s)
Adam Gart (3)

MW 2-17-12
Stephen Siegel, CIH, 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

Initial report from 08/31/2012 14:16:01

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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: September 5, 2012

TO: Steve Hall, START-3 Project Manager, E & E, Seattle, WA

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, WA MW

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

REF: TDD: 10-09-0008 PAN: EE-002233-0603-01TT0

The data quality assurance review of 6 air filter samples collected from the Orofino Asbestos site in Orofino, Idaho, has been completed. Phase contrast microscopy (PCM; NIOSH Method 7400) asbestos analyses were performed by EMSL, Inc., Cinnaminson, New Jersey.

The samples were numbered:

12080008	12080009	12080011	12080012	12080013	12080014

Data Qualifications:

The samples were received at the laboratory on September 4, 2012, and were analyzed on September 4, 2012. No issues were noted by the laboratory. There were no detections in the analyzed samples.

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 Qualifier and Definition

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

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:	041223283
CustomerID:	ECOL44
CustomerPO:	
ProjectID:	BOA

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

Phone:	(206) 624-9537
Fax:	(206) 621-9832
Received:	09/04/12 8:30 AM
Analysis Date:	9/4/2012
Collected:	8/30/2012

Project: **Orofino Asbestos Site; 4500000592-EE-002233-0603-01TTO; No: 10-09-0008L-29**

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*
12080008	EX-1	8/30/2012	1299.62	<5.5	100	0.002	<7.01 U	<0.002 U	
041223283-0001									
12080009	BCH-3	8/30/2012	6096.17	<5.5	100	0.0004	<7.01 U	<0.0004 U	
041223283-0002									
12080011	BCH-2	8/30/2012	9486.89	<5.5	100	0.0003	<7.01 U	<0.0003 U	
041223283-0004									

No discernable field blanks submitted with this sample set.

Analyst(s)
Chris Little (3)

Stephen Siegel, CIH, 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 #100184, NJ DEP 03036

Initial report from 09/04/2012 23:00:52

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

EMSL Order:	041223285
CustomerID:	ECOL44
CustomerPO:	
ProjectID:	BOA

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

Phone:	(206) 624-9537
Fax:	(206) 621-9832
Received:	09/04/12 8:30 AM
Analysis Date:	9/4/2012
Collected:	8/31/2012

Project: **Orofino Asbestos Site; 4500000592-EE-002233-0603-01TTO; No: 10-09-0008L-30**

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*
12080012	EX-1	8/31/2012	869.02	<5.5	100	0.003	<7.01 U	<0.003 U	
041223285-0001									
12080013	BCH-1	8/31/2012	3116.96	<5.5	100	0.001	<7.01 U	<0.001 U	
041223285-0002									
12080014	BCH-3a	8/31/2012	3278.50	<5.5	100	0.001	<7.01 U	<0.001 U	
041223285-0003									

No discernable field blanks submitted with this sample set.

Analyst(s)
Chris Little (3)

Stephen Siegel, CIH, 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

Initial report from 09/04/2012 22:52:33

THIS IS THE LAST PAGE OF THE REPORT.

9-5-12

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: September 14, 2012

TO: Steve Hall, START-3 Project Manager, E & E, Seattle, WA

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, WA

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

REF: TDD: 10-09-0008 PAN: EE-002233-0603-01TT0

The data quality assurance review of 2 air filter samples collected from the Orofino Asbestos site in Orofino, Idaho, has been completed. Phase contrast microscopy (PCM; NIOSH Method 7400) asbestos analyses were performed by EMSL, Inc., Cinnaminson, New Jersey.

The samples were numbered: 12080015 12080016

Data Qualifications:

The samples were received at the laboratory on September 12, 2012, and were analyzed on September 13, 2012. No issues were noted by the laboratory. No field blanks were submitted with this sample set.

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 Qualifier and Definition

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

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:	041224058
CustomerID:	ECOL44
CustomerPO:	
ProjectID:	BOA

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

Phone:	(206) 624-9537
Fax:	(206) 621-9832
Received:	09/12/12 10:15 AM
Analysis Date:	9/13/2012
Collected:	9/10/2012

Project: **Orofino Asbestos Site; 4500000592-EE-002233-0603-01TTO; No: 10-09-0008L-31**

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*
12080015	EX-1	9/10/2012	1212.00	22	100	0.002	28.0	0.009	
041224058-0001									
12080016	BCH-3	9/10/2012	5443.63	44	100	0.0005	56.1	0.004	
041224058-0002									

No discernable field blanks submitted with this sample set.

Analyst(s)
Lauren Kerber (2)

Stephen Siegel, CIH, 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

MW 9-14-12

Initial report from 09/13/2012 11:17:27

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

MEMORANDUM

DATE: September 14, 2012

TO: Steve Hall, START-3 Project Manager, E & E, Seattle, WA

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, WA

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

REF: TDD: 10-09-0008 PAN: EE-002233-0603-01TT0

The data quality assurance review of 1 bulk sample collected from the Orofino Asbestos site in Orofino, Idaho, has been completed. Polarized light microscopy (PLM; EPA Method 600/R-93/116 with CARB 435 Prep) asbestos analyses were performed by EMSL, Inc., Cinnaminson, New Jersey.

The sample was numbered: 12080126

Data Qualifications:

The sample was received at the laboratory on September 12, 2012, and was analyzed on September 13, 2012. No issues were noted by the laboratory. No asbestos was detected in the sample.

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 Qualifier and Definition

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

EMSL Analytical, Inc.
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http://www.emsl.com cinnaslab@EMSL.com

EMSL Order:	041224052
CustomerID:	ECOL44
CustomerPO:	
ProjectID:	BOA

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

Phone:	(206) 624-9537
Fax:	(206) 621-9832
Received:	09/12/12 10:15 AM
Analysis Date:	9/13/2012
Collected:	9/11/2012

Project: **Orofino Asbestos Site; 4500000592-EE-002233-0603-01TTO; No: 10-09-0008L-32**

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
12080126 *041224052-0001*	TripCo Quarry	Tan Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	None Detected

Analyst(s)

Nancy Stalter (1)

Stephen Siegel, CIH, Laboratory Manager
or other approved signatory

MW 9/14/12

Initial report from 09/14/2012 08:32:59

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

MEMORANDUM

DATE: September 17, 2012

TO: Steve Hall, START-3 Project Manager, E & E, Seattle, WA

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, WA

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

REF: TDD: 10-09-0008 PAN: EE-002233-0603-01TT0

The data quality assurance review of 3 air filter samples collected from the Orofino Asbestos site in Orofino, Idaho, has been completed. Phase contrast microscopy (PCM; NIOSH Method 7400) asbestos analyses were performed by EMSL, Inc., Cinnaminson, New Jersey.

The samples were numbered: 12080017 12080018 12080019

Data Qualifications:

The samples were received at the laboratory on September 14, 2012, and were analyzed on September 15, 2012. No issues were noted by the laboratory.

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 Qualifier and Definition

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

EMSL Analytical, Inc.
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EMSL Order:	041224281
CustomerID:	ECOL44
CustomerPO:	
ProjectID:	BOA

Attn: **Eric Lindeman**
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720 3rd Ave
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Phone:	(206) 624-9537
Fax:	(206) 621-9832
Received:	09/14/12 10:20 AM
Analysis Date:	9/15/2012
Collected:	9/12/2012

Project: **Orofino Asbestos Site; 4500000592-EE-002233-0603-01TTO; No: 10-03-0008L-34**

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*
12080017	EX-1	9/12/2012	1393.11	9	100	0.002	11.5	0.003	
041224281-0001									
12080018	BCH-2	9/12/2012	5755.05	<5.5 U	100	0.0005	<7.0 U	<0.0005 U	
041224281-0002									
12080019	BCH-3	9/12/2012	5710.44	<5.5 U	100	0.0005	<7.0 U	<0.0005 U	
041224281-0003									

No discernable field blanks submitted with this sample set.

Analyst(s)
Dave Poitras (3)

Stephen Siegel, CIH, 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

JMW 9-17-12

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MEMORANDUM

DATE: September 19, 2012

TO: Steve Hall, START-3 Project Manager, E & E, Seattle, WA

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, WA

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

REF: TDD: 10-09-0008 PAN: EE-002233-0603-01TT0

The data quality assurance review of 2 air filter samples collected from the Orofino Asbestos site in Orofino, Idaho, has been completed. Phase contrast microscopy (PCM; NIOSH Method 7400) asbestos analyses were performed by EMSL, Inc., Cinnaminson, New Jersey.

The samples were numbered: 12080020 12080021

Data Qualifications:

The samples were received at the laboratory on September 17, 2012, and were analyzed on September 18, 2012. No issues were noted by the laboratory.

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 Qualifier and Definition

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

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EMSL Order:	041224419
CustomerID:	ECOL44
CustomerPO:	
ProjectID:	BOA

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

Phone:	(206) 624-9537
Fax:	(206) 621-9832
Received:	09/17/12 8:45 AM
Analysis Date:	9/18/2012
Collected:	9/13/2012

Project: **Orofino Asbestos Site; 4500000592-EE-002233-0603-01TTO; No: 10-09-0008L-35**

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*
12080020	EX-1	9/13/2012	1390.45	14	100	0.002	17.8	0.005	
041224419-0001									
12080021	BCH-2	9/13/2012	6463.63	6	100	0.0004	7.64	0.0005	
041224419-0002									

No discernable field blanks submitted with this sample set.

MW 9.19.20

Analyst(s)
Dave Poitras (2)

Stephen Siegel, CIH, 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

Initial report from 09/18/2012 11:51:21

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MEMORANDUM

DATE: September 24, 2012

TO: Steve Hall, START-3 Project Manager, E & E, Seattle, WA

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, WA MW

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

REF: TDD: 10-09-0008 PAN: EE-002233-0603-01TT0

The data quality assurance review of 3 air filter samples collected from the Orofino Asbestos site in Orofino, Idaho, has been completed. Phase contrast microscopy (PCM; NIOSH Method 7400) asbestos analyses were performed by EMSL, Inc., Cinnaminson, New Jersey.

The samples were numbered: 12080023 12080024 12080025

Data Qualifications:

The samples were received at the laboratory on September 19, 2012, and were analyzed on September 20, 2012. Samples 12080023 and 12080025 were overloaded and were not analyzed. No field blanks were submitted with this sample set. No other issues were noted by the laboratory.

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 Qualifier and Definition

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

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EMSL Order:	041224664
CustomerID:	ECOL44
CustomerPO:	
ProjectID:	BOA

Attn: **Eric Lindeman**
Ecology & Environment, Inc.
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Seattle, WA 98104

Phone:	(206) 624-9537
Fax:	(206) 621-9832
Received:	09/19/12 10:15 AM
Analysis Date:	9/20/2012
Collected:	9/17/2012

Project: **Orofino Asbestos Site; 4500000592-EE-002233-0603-01TTO; 10-09-0008L-36**

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*
12080023	BCH-2	9/17/2012							Overloaded
041224664-0001									
12080024	EX-1	9/17/2012	1203.92	8.5	100	0.002	10.8	0.003	
041224664-0002									
12080025	EX-2	9/17/2012							Overloaded
041224664-0003									

No discernable field blanks submitted with this sample set.

Analyst(s)
Dave Stanhope (3)

Stephen Siegel, CIH, 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

JMW 9-24-12

Initial report from 09/20/2012 10:26:23

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720 Third Avenue, Suite 1700, Seattle, WA 98104
Tel: (206) 624-9537, Fax: (206) 621-9832

MEMORANDUM

DATE: September 24, 2012

TO: Steve Hall, START-3 Project Manager, E & E, Seattle, WA

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, WA MW

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

REF: TDD: 10-09-0008 PAN: EE-002233-0603-01TT0

The data quality assurance review of 3 air filter samples collected from the Orofino Asbestos site in Orofino, Idaho, has been completed. Phase contrast microscopy (PCM; NIOSH Method 7400) asbestos analyses were performed by EMSL, Inc., Cinnaminson, New Jersey.

The samples were numbered: 12080026 12080027 12080029

Data Qualifications:

The samples were received at the laboratory on September 20, 2012, and were analyzed on September 21, 2012. Samples 12080026 and 12080029 were overloaded and were not analyzed. No field blanks were submitted with this sample set. No other issues were noted by the laboratory.

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 Qualifier and Definition

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

EMSL Analytical, Inc.
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EMSL Order:	041224780
CustomerID:	ECOL44
CustomerPO:	
ProjectID:	BOA

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

Phone:	(206) 624-9537
Fax:	(206) 621-9832
Received:	09/20/12 10:15 AM
Analysis Date:	9/21/2012
Collected:	9/18/2012

Project: **Orofino Asbestos Site; 4500000592-EE-002233-0603-01TTO; No: 10-09-0008L-37**

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*
12080026	EX-1	9/18/2012							Overloaded
041224780-0001									
12080027	EX-2	9/18/2012	1338.00	7	100	0.002	8.92	0.003	
041224780-0002									
12080029	BCH-3	9/18/2012							Overloaded
041224780-0004									

No discernable field blanks submitted with this sample set.

Analyst(s)
Dave Stanhope (3)

Stephen Siegel, CIH, 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

MW 9-24-12

Initial report from 09/24/2012 09:25:09

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

MEMORANDUM

DATE: September 25, 2012

TO: Steve Hall, START-3 Project Manager, E & E, Seattle, WA

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, WA

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

REF: TDD: 10-09-0008 PAN: EE-002233-0603-01TT0

The data quality assurance review of 3 air filter samples collected from the Orofino Asbestos site in Orofino, Idaho, has been completed. Phase Contract Microscopy (PCM; NIOSH Method 7400) asbestos analyses were performed by EMSL, Inc., Cinnaminson, New Jersey.

The samples were numbered: 12080030 12080031 12080032

Data Qualifications:

The samples were received at the laboratory on September 21, 2012, and were analyzed on September 22, 2012. No issues were noted by the laboratory.

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 Qualifier and Definition

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

EMSL Analytical, Inc.
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http://www.emsl.com cinnaslab@EMSL.com

EMSL Order:	041224881
CustomerID:	ECOL44
CustomerPO:	
ProjectID:	BOA

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

Phone:	(206) 624-9537
Fax:	(206) 621-9832
Received:	09/21/12 9:30 AM
Analysis Date:	9/22/2012
Collected:	9/19/2012

Project: **Orofino Asbestos Site; 4500000592-EE-002233-0603-01TTO; No:10-09-0008L-40**

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*
12080030	EX-1	9/19/2012	773.73	7	100	0.003	8.92	0.004	
041224881-0001									
12080031	EX-2	9/19/2012	1181.63	6	100	0.002	7.64	0.002	
041224881-0002									
12080032	BCH-3	9/19/2012	5125.78	<5.5 U	100	0.001	<7.0 U	<0.001 U	
041224881-0003									

No discernable field blanks submitted with this sample set.

Analyst(s)
Dave Poltras (3)

MW 9-25-12
Stephen Siegel, CIH, 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

Initial report from 09/22/2012 10:56:51

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

MEMORANDUM

DATE: September 25, 2012 .

TO: Steve Hall, START-3 Project Manager, E & E, Seattle, WA

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, WA MW

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

REF: TDD: 10-09-0008 PAN: EE-002233-0603-01TT0

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; EPA 600/R-93/116) asbestos analyses were performed by EMSL, Inc., Cinnaminson, New Jersey.

The samples were numbered: 12080129 12080130

Data Qualifications:

The samples were received at the laboratory on September 21, 2012, and were analyzed on September 24, 2012. No issues were noted by the laboratory.

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 Qualifier and Definition

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

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

EMSL Order:	041224875
CustomerID:	ECOL44
CustomerPO:	
ProjectID:	BOA

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

Phone:	(206) 624-9537
Fax:	(206) 621-9832
Received:	09/21/12 9:30 AM
Analysis Date:	9/24/2012
Collected:	9/19/2012

Project: **Orofino Asbestos Site; 4500000592-EE-002233-0603-01TTO; No:10-09-0008L-39**

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
12080129 *041224875-0001*	DryW-1/3	Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	**None Detected**
12080130 *041224875-0002*	DryW-2/3	Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	**None Detected**

Analyst(s)
Leslie McCluskey (2)

Stephen Siegel, CIH, Laboratory Manager
or other approved signatory

9-25-12

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 09/24/2012 14:34:30

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: September 25, 2012

TO: Steve Hall, START-3 Project Manager, E & E, Seattle, WA

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, WA MW

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

REF: TDD: 10-09-0008 PAN: EE-002233-0603-01TT0

The data quality assurance review of 1 soil sample collected from the Orofino Asbestos site in Orofino, Idaho, has been completed. Polarized Light Microscopy (PLM; EPA 600/R-93/116) asbestos analyses were performed by EMSL, Inc., Cinnaminson, New Jersey.

The sample was numbered: 12080128

Data Qualifications:

The sample was received at the laboratory on September 21, 2012, and was analyzed on September 24, 2012. No issues were noted by the laboratory.

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 Qualifier and Definition

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

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

EMSL Order:	041224873
CustomerID:	ECOL44
CustomerPO:	
ProjectID:	BOA

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

Phone:	(206) 624-9537
Fax:	(206) 621-9832
Received:	09/21/12 9:30 AM
Analysis Date:	9/24/2012
Collected:	9/19/2012

Project: **Orofino Asbestos Site; 4500000592-EE-002233-0603-01TTO; No:10-09-0008L-38**

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
12080128 *041224873-0001*	DryW-Surface	Brown Non-Fibrous Homogeneous	1.00% Cellulose	99.00% Non-fibrous (other)	None Detected

Analyst(s)
Leslie McCluskey (1)

Stephen Siegel, CIH, Laboratory Manager
or other approved signatory

Initial report from 09/24/2012 14:40:08

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: September 26, 2012

TO: Steve Hall, START-3 Project Manager, E & E, Seattle, WA

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, WA

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

REF: TDD: 10-09-0008 PAN: EE-002233-0603-01TT0

The data quality assurance review of 3 air filter samples collected from the Orofino Asbestos site in Orofino, Idaho, has been completed. Phase Contract Microscopy (PCM; NIOSH Method 7400) asbestos analyses were performed by EMSL, Inc., Cinnaminson, New Jersey.

The samples were numbered: 12080034 12080035 12080036

Data Qualifications:

The samples were received at the laboratory on September 24, 2012, and were analyzed on September 25, 2012. Samples 12080034 and 12080035 were overloaded and were not analyzed. No other issues were noted by the laboratory.

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 Qualifier and Definition

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

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:	041225027
CustomerID:	ECOL44
CustomerPO:	
ProjectID:	BOA

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

Phone:	(206) 624-9537
Fax:	(206) 621-9832
Received:	09/24/12 8:45 AM
Analysis Date:	9/25/2012
Collected:	9/20/2012

Project: **Orofino Asbestos Site; 4500000592-EE-002233-0603-01TTO; 10-09-0008L-41**

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*
12080034	EX-2	9/20/2012							Overloaded
041225027-0001									
12080035	BCH-3	9/20/2012							Overloaded
041225027-0002									
12080036	BCH-2	9/20/2012	5641.58	9	100	0.0005	11.5	0.001	
041225027-0003									

No discernable field blanks submitted with this sample set.

Analyst(s)
Dave Poitras (3)

Stephen Siegel, CIH, 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

MW 9-26-12

Initial report from 09/25/2012 09:02:39

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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: October 1, 2012

TO: Steve Hall, START-3 Project Manager, E & E, Seattle, WA

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, WA MW

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

REF: TDD: 10-09-0008 PAN: EE-002233-0603-01TT0

The data quality assurance review of 3 air filter samples collected from the Orofino Asbestos site in Orofino, Idaho, has been completed. Phase Contract Microscopy (PCM; NIOSH Method 7400) asbestos analyses were performed by EMSL, Inc., Cinnaminson, New Jersey.

The samples were numbered: 12080033 12080037 12080038

Data Qualifications:

The samples were received at the laboratory on September 24, 2012, and were analyzed on September 28, 2012. Sample 12080038 was overloaded and was not analyzed. No other issues were noted by the laboratory.

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 Qualifier and Definition

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

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

EMSL Order:	041225024
CustomerID:	ECOL44
CustomerPO:	
ProjectID:	BOA

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

Phone:	(206) 624-9537
Fax:	(206) 621-9832
Received:	09/24/12 8:45 AM
Analysis Date:	9/28/2012
Collected:	9/21/2012

Project: **Orofino Asbestos Site; 4500000592-EE-002233-0603-01TTO; 10-09-0008L-42**

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*
12080033	EndL-1	9/21/2012	1498.35	13	100	0.002	16.6	0.004	
041225024-0001									
12080037	EX-1	9/21/2012	926.12	11	100	0.003	14.0	0.006	
041225024-0002									
12080038	BCH-2	9/21/2012							Overloaded
041225024-0003									

No discernable field blanks submitted with this sample set.

Analyst(s)

Dave Stanhope (3)

Stephen Siegel, CIH, 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

Initial report from 09/28/2012 10:44:39

THIS IS THE LAST PAGE OF THE REPORT.

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

MEMORANDUM

DATE: October 15, 2012

TO: Steve Hall, START-3 Project Manager, E & E, Seattle, WA

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, WA MW

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

REF: TDD: 10-09-0008 PAN: EE-002233-0603-01TT0

The data quality assurance review of 9 air filter samples collected from the Orofino Asbestos site in Orofino, Idaho, has been completed. Phase contrast microscopy (PCM; NIOSH Method 7400) asbestos analyses were performed by EMSL, Inc., Cinnaminson, New Jersey.

The samples were numbered:

12080039	12080041	12080042	12080043	12080044
12080045	12080048	12080049	12080050	

Four field blanks were also collected but were not analyzed.

Data Qualifications:

The samples were received at the laboratory on October 5, 2012, and were analyzed on October 11, 2012. No issues were noted by the laboratory.

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 Qualifier and Definition

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

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

EMSL Order:	041226175
CustomerID:	ECOL44
CustomerPO:	
ProjectID:	BOA

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

Phone:	(206) 624-9537
Fax:	(206) 621-9832
Received:	10/05/12 10:28 AM
Analysis Date:	10/11/2012
Collected:	10/3/2012

Project: **Orofino Asbestos Site; 4500000592-EE-002233-0603-01TTO; No: 10-09-0008-43**

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 (f/b/cc)*	*Fibers/ mm²*	*Fibers/ cc*	*Notes*
12080039 *041226175-0001*	EX-1	9/25/2012	2338.02	<5.5	100	0.001	<7.01	<0.001	
12080041 *041226175-0002*	EX-1	9/26/2012	1397.59	<5.5	100	0.002	<7.01	<0.002	
12080042 *041226175-0003*	BCH-2	9/26/2012	6452.18	<5.5	100	0.0004	<7.01	<0.0004	
12080043 *041226175-0004*	EX-1	9/27/2012	1207.56	<5.5	100	0.002	<7.01	<0.002	
12080044 *041226175-0005*	BCH-2	9/27/2012	6135.68	<5.5	100	0.0004	<7.01	<0.0004	
12080045 *041226175-0006*	EX-1	9/28/2012	544.15	<5.5	100	0.005	<7.01	<0.005	
12080048 *041226175-0007*	BCH-4	10/2/2012	6090.30	<5.5	100	0.0004	<7.01	<0.0004	
12080049 *041226175-0008*	EX-1	10/3/2012	908.05	<5.5	100	0.003	<7.01	<0.003	
12080050 *041226175-0009*	BCH-4	10/3/2012	4110.70	<5.5	100	0.001	<7.01	<0.001	
12080163 *041226175-0010*	BCH-2 BLANK	9/26/2012							Field Blank Not Analyzed

Analyst(s)
Chris Little (9)

Stephen Siegel, CIH, 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

MW 10-15-12

Initial report from 10/11/2012 21:27:27

Test Report PCM-7.22.0 Printed: 10/11/2012 9:27:30 PM

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:	041226175
CustomerID:	ECOL44
CustomerPO:	
ProjectID:	BOA

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

Phone:	(206) 624-9537
Fax:	(206) 621-9832
Received:	10/05/12 10:28 AM
Analysis Date:	10/11/2012
Collected:	10/3/2012

Project: **Orofino Asbestos Site; 4500000592-EE-002233-0603-01TTO; No: 10-09-0008-43**

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*
12080164 *041226175-0011*	BCH-2 BLANK	9/27/2012							Field Blank Not Analyzed
12080167 *041226175-0012*	BCH-4 BLANK	10/2/2012							Field Blank Not Analyzed
12080168 *041226175-0013*	BCH-4 BLANK	10/3/2012							Field Blank Not Analyzed

The results reported have been blank corrected as applicable.

Analyst(s)
Chris Little (9)

Stephen Siegel, CIH, 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

10-15-12

Initial report from 10/11/2012 21:27:27

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G Geotechnical Testing Results

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ALLWEST
Testing & Engineering

REPORT TRANSMITTAL

ATTENTION:	Pat Heyneman		
COMPANY:	Environmental Quality Management		
PROJECT NAME:	Orofino First Baptist Church		
PROJECT LOCATON:	Orofino, ID		
FROM:	Michelle Roby	PROJECT #:	311-119T

DATE	DESCRIPTION
9/19/2012	Field Report

CC: Matt Evenson (EQM)

NOTES:

Reports Dated: 9/13/2012

If you need additional assistance, please contact us at mroby@allwesttesting.com or 208-743-5710.

690 W. Capstone Court ▪ Hayden, ID 83835 ▪ (208) 762-4721 ▪ Fax (208) 762-0942
12928 E. Indiana Avenue #1 ▪ Spokane Valley, WA 99216 ▪ (509) 534-4411 ▪ Fax (509) 534-9326
2705 E. Main Street ▪ Lewiston, ID 83501 ▪ (208) 743-5710 ▪ Fax (208) 743-8270

ALLWEST Testing & Engineering

DAILY PROJECT FIELD REPORT

Project:	Orofino First Baptist Church			Project #:	311-119T
Project Address:	Orofino, Idaho			Weather:	Clear
Permit #		Date:	9/13/2012	Page	1 of 2
Report#	Sheet# 11381			Technician:	Brad Bowles
Type of Testing / Inspection:			Compaction Testing		
Deficiencies Noted:	X	NO		YES	If yes, explain below
Reported To:	Pat	of		EQM	

Narrative:

Arrived on site as scheduled to check in-place density on the native material being used as backfill on the retaining wall and to check density on the ¾" base aggregate under base blocks. Upon our arrival, the Contractor informed us they were not ready but wanted us to remain on site for stand-by. The Contractor did not have a test ready until 3:00p.m.

See the attached density report for test results.

Representative:	Project Manager:

This report shall be considered preliminary until reviewed and countersigned by the ALLWEST Project Manager

Codes	Project Times Begin	End	Hours	Miles	Equipment					
SFD	5:30	3:30	10.0	85	X	Nuke		Coring Machine		Generator
						Other Type:				Quantity

Field Samples Obtained

690 W. Capstone Court • Hayden, ID 83835 • (208) 762-4721 • (208) 762-0942
12928 E. Indiana Avenue #1 • Spokane Valley, WA 99216 • (509) 534-4411 • (509) 534-9326
2127 2nd Avenue North • Lewiston, ID 83501 • (208) 743-5710 • (208) 743-8270

☐ Billing ☐ TS

ALLWEST Testing & Engineering

FIELD DENSITY REPORT FOR SOILS
ASTM 6938

Report # _____ Sheet # 11381 Page 2 of 2

Project Name: Orofino First Baptist Church		Project No.: 311-119T	
Date: 9/13/2012	Weather: Clear	Test Method: Nuke	Gauge: 31960
Location: Orofino, Idaho		Technician: Brad Bowles	M.S.: 760
Contractor: EQM			D.S.: 2491

Proctor Number		Soil Description	Optimum Moisture	Maximum Density	Standard/Modified
1	A311-639	3/4" Base Aggregate	10.0	142.2	Modified
2	S311-061	Native Silty Sand with Cobble	11.1	125.3	Modified
3					

Test Number	Test Location	Elevation	Proctor Number	Probe Depth	% Moisture	Dry Density	% Compaction	Required Compaction	Re-Test of Test No.
	Retaining Wall								
1	5th step up on wall SW side	8' BG	1	4"	6.3	128.5	90	90%	

690 W. Capstone Ct. • Hayden, ID 83835 • Phone (208) 762-4721 • Fax (208) 762-0942
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2127 2nd Avenue North • Lewiston, ID 83501 • Phone (208) 743-5710 • Fax (208) 743-8270

Revision #3 - 03.20.12

ALLWEST
Testing & Engineering

REPORT TRANSMITTAL

ATTENTION:	Pat Heyneman		
COMPANY:	Environmental Quality Management		
PROJECT NAME:	Orofino First Baptist Church		
PROJECT LOCATON:	Orofino, ID		
FROM:	Michelle Roby	PROJECT #:	311-119T

DATE	DESCRIPTION
9/13/2012	Field Reports

CC: Matt Evenson (EQM)

NOTES:

Reports Dated: 9/5/2012, 9/6/2012, 9/8/2012 & 9/10/2012 – 9/12/2012

If you need additional assistance, please contact us at mroby@allwesttesting.com or 208-743-5710.

690 W. Capstone Court ▪ Hayden, ID 83835 ▪ (208) 762-4721 ▪ Fax (208) 762-0942
12928 E. Indiana Avenue #1 ▪ Spokane Valley, WA 99216 ▪ (509) 534-4411 ▪ Fax (509) 534-9326
2705 E. Main Street ▪ Lewiston, ID 83501 ▪ (208) 743-5710 ▪ Fax (208) 743-8270

ALLWEST Testing & Engineering

DAILY PROJECT FIELD REPORT

Project:	Orofino First Baptist Church			Project #:	311-119T
Project Address:	Orofino, Idaho			Weather:	Clear
Permit #		Date:	9/5/2012	Page 1	of 2
Report#	Sheet# 11649			Technician:	Lance Eacret
Type of Testing / Inspection:			Compaction Testing		
Deficiencies Noted:	X	NO		YES	If yes, explain below
Reported To:	Pat	of	EQM		

Narrative:

Arrived on site as requested to perform in-place density testing on ¾" base aggregate. The material was placed with an excavator, spread by hand and compacted with a jumping jack. The compacted material was used as a base for the Northwest corner of the retaining wall. During placement, the Contractor applied water to the material. We tested three locations. Two of the three locations met the requirement of 90% upon initial testing. The third test required the application of additional compactive efforts. Re-test yielded passing results.

See the attached density report for test results.

Representative:	Project Manager:

This report shall be considered preliminary until reviewed and countersigned by the ALLWEST Project Manager

Codes	Project Times Begin	End	Hours	Miles	Equipment					
SFD	7:00	3:30	8.5	82	X	Nuke		Coring Machine		Generator
						Other Type:				Quantity

Field Samples Obtained

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FIELD DENSITY REPORT FOR SOILS
ASTM 6938

Report # _____ Sheet # 11649 Page 2 of 2

Project Name: Orofino First Baptist Church		Project No.: 311-119T	
Date: 9/5/2012	Weather: Clear	Test Method: Nuke	Gauge: 2469
Location: Orofino, Idaho		Technician: Lance Eacret	M.S.: 9040
Contractor: EQM			D.S.: 36585

Proctor Number		Soil Description	Optimum Moisture	Maximum Density	Standard/Modified
1	A311-639	3/4" Base Aggregate	10.0	142.2	Modified
2					
3					

Test Number	Test Location	Elevation	Proctor Number	Probe Depth	% Moisture	Dry Density	% Compaction	Required Compaction	Re-Test of Test No.
	Retaining Wall - Ref. W Fence Line								
1	Approx. 105' E	13.5' BG	1	4"	7.1	128.0	90	90%	
2	Approx. 95' E	13.5' BG	1	4"	9.0	131.5	92	90%	
3	Approx. 88' E	15.5' BG	1	4"	7.7	126.1	89	90%	
4	Approx. 88' E	15.5' BG	1	4"	7.8	129.6	91	90%	3

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DAILY PROJECT FIELD REPORT

Project:	Orofino First Baptist Church	Project #:	311-119T
Project Address:	Orofino, Idaho	Weather:	Clear
Permit #	Date: 9/6/2012	Page	1 of 2
Report#	Sheet# 11535	Technician:	Brad Bowles
Type of Testing / Inspection:	Compaction Testing		
Deficiencies Noted:	X NO		YES If yes, explain below
Reported To:	Pat of		EQM

Narrative:

Arrived on site to check in-place densities under the base blocks around the radius of the retaining wall on the West end of the parking lot. The Contractor is removing five base blocks and then leveling and compacting the base. The Contractor started this process on the South side of the retaining wall as well.

See the attached density report for test results.

Representative:	Project Manager:

This report shall be considered preliminary until reviewed and countersigned by the ALLWEST Project Manager

Codes	Project Times Begin	End	Hours	Miles	Equipment					
SFD			9.5	82	X	Nuke		Coring Machine		Generator
						Other Type:				Quantity

Field Samples Obtained

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FIELD DENSITY REPORT FOR SOILS
ASTM 6938

Report # _____ Sheet # 11535 Page 2 of 2

Project Name: Orofino First Baptist Church		Project No.: 311-119T	
Date: 9/6/2012	Weather: Clear	Test Method: Nuke	Gauge: Troxler
Location: Orofino, Idaho		Technician: Brad Bowles	M.S.: 754
Contractor: EQM			D.S.: 2470

Proctor Number		Soil Description	Optimum Moisture	Maximum Density	Standard/Modified
1	A311-639	3/4" Base Aggregate	10.0	142.2	Modified
2					
3					

Test Number	Test Location	Elevation	Proctor Number	Probe Depth	% Moisture	Dry Density	% Compaction	Required Compaction	Re-Test of Test No.
	Retaining Wall- Base Blocks								
1	4th set of 5 base blocks	20' BG	1	4"	4.6	131.4	92	90%	
2	5th set of 5 base blocks	20' BG	1	4"	6.3	129.3	91	90%	
3	6th set of 5 base blocks	20' BG	1	4"	4.2	128.0	90	90%	
4	7th set of 5 base blocks	20' BG	1	4"	4.3	129.9	91	90%	
5	1st step up, S side	10' BG	1	4"	4.9	130.7	92	90%	

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DAILY PROJECT FIELD REPORT

Project:	Orofino First Baptist Church			Project #:	311-119T
Project Address:	Orofino, Idaho			Weather:	Clear
Permit #		Date:	9/8/2012	Page	1 of 2
Report#	Sheet# 11530			Technician:	Brad Bowles
Type of Testing / Inspection:			Compaction Testing		
Deficiencies Noted:	X	NO		YES	If yes, explain below
Reported To:	Pat	of	EQM		

Narrative:

Arrived on site to check in-place densities on the ¾" base aggregate in the soft spot repair on the Northeast corner of the parking lot and under the base blocks on the Southwest side of the radius of the retaining wall. We also checked densities on the native material being used as backfill behind the retaining wall where repairs are being made. The Contractor is using a track hoe to place the material at 12" depth and then rolling it with a duel drum trench roller for compactive efforts.

See the attached density report for test results.

Representative:	Project Manager:

This report shall be considered preliminary until reviewed and countersigned by the ALLWEST Project Manager

Codes	Project Times Begin	End	Hours	Miles	Equipment					
SFD	5:30	3:00	7.5	88	X	Nuke		Coring Machine		Generator
						Other Type:				Quantity

Field Samples Obtained

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FIELD DENSITY REPORT FOR SOILS
ASTM 6938

Report # _____ Sheet # 11530 Page 2 of 2

Project Name:	Orofino First Baptist Church	Project No.:	311-119T
Date:	9/8/2012	Weather:	Clear
Test Method:	Nuke	Gauge:	31960
Location:	Orofino, Idaho	Technician:	Brad Bowles
M.S.:	765		
Contractor:	EQM	D.S.:	2474

Proctor Number		Soil Description	Optimum Moisture	Maximum Density	Standard/Modified
1	A311-639	3/4" Base Aggregate	10.0	142.2	Modified
2	S311-061	Native Silty Sand with Cobble	11.1	125.3	Modified
3					

Test Number	Test Location	Elevation	Proctor Number	Probe Depth	% Moisture	Dry Density	% Compaction	Required Compaction	Re-Test of Test No.
	Retaining Wall								
1	Soft spot repair NE corner of lot	1' BG	1	8"	6.6	141.8	100	95%	
2	2nd step up, SW corner wall	18' BG	1	4"	7.9	133.7	94	90%	
3	Center of radius behind blocks	17' BG	2	8"	8.9	121.4	97	95%	
4	SW section of radius	16' BG	2	8"	10.8	124.4	99	95%	
5	NW section of radius	16' BG	2	8"	11.2	124.3	99	95%	

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DAILY PROJECT FIELD REPORT

Project:	Orofino First Baptist Church	Project #:	311-119T
Project Address:	Orofino, Idaho	Weather:	Cloudy
Permit #	Date: 9/10/2012	Page	1 of 2
Report#	Sheet# 11532	Technician:	Brad Bowles
Type of Testing / Inspection:	Compaction Testing		
Deficiencies Noted:	X NO		YES If yes, explain below
Reported To:	Pat of		EQM

Narrative:

Arrived on site to check in-place densities on the backfill material being placed behind the retaining wall and on the ¾" base aggregate being placed under the base blocks. The Contractor is placing approximately 1' lifts of fill material behind the wall and then using a duel drum trench roller, making 5 – 7 passes for compactive efforts.

See the attached density report for test results.

Representative:	Project Manager:

This report shall be considered preliminary until reviewed and countersigned by the ALLWEST Project Manager

Codes	Project Times Begin	End	Hours	Miles	Equipment					
SFD	5:30	4:30	11.0	85	X	Nuke		Coring Machine		Generator
						Other Type:				Quantity

Field Samples Obtained

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FIELD DENSITY REPORT FOR SOILS
ASTM 6938

Report # _____ Sheet # 11532 Page 2 of 2

Project Name: Orofino First Baptist Church		Project No.: 311-119T	
Date: 9/10/2012	Weather: Cloudy	Test Method: Nuke	Gauge: 31960
Location: Orofino, Idaho		Technician: Brad Bowles	M.S.: 761
Contractor: EQM			D.S.: 2494

Proctor Number		Soil Description	Optimum Moisture	Maximum Density	Standard/Modified
1	A311-639	3/4" Base Aggregate	10.0	142.2	Modified
2	S311-061	Native Silty Sand with Cobble	11.1	125.3	Modified
3					

Test Number	Test Location	Elevation	Proctor Number	Probe Depth	% Moisture	Dry Density	% Compaction	Required Compaction	Re-Test of Test No.
	Retaining Wall								
1	SW corner radius	14' BG	2	8"	7.0	124.6	99	95%	
2	NW corner radius	14' BG	2	8"	6.6	119.3	95	95%	
3	3rd step up, NW corner	14' BG	1	4"	3.7	131.9	93	90%	
4	Center of radius	13' BG	2	8"	11.7	119.4	95	95%	
5	SW corner radius	13' BG	2	8"	11.9	124.5	99	95%	
6	4th step up, NW corner	13' BG	1	4"	7.7	131.9	93	90%	

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DAILY PROJECT FIELD REPORT

Project:	Orofino First Baptist Church	Project #:	311-119T
Project Address:	Orofino, Idaho	Weather:	Clear
Permit #		Date: 9/11/2012	Page 1 of 2
Report#	Sheet# 11549	Technician:	Brad Bowles
Type of Testing / Inspection:	Compaction Testing		
Deficiencies Noted:	X NO		YES If yes, explain below
Reported To:	Pat of		EQM

Narrative:

Arrived on site to check in-place density on the fill material being placed behind the retaining wall. Lift and compactive efforts had been done prior to our arrival.

See the attached density report for test results.

Representative:	Project Manager:

This report shall be considered preliminary until reviewed and countersigned by the ALLWEST Project Manager

Codes	Project Times Begin	End	Hours	Miles	Equipment					
SFD	7:00	11:00	4.0	85	X	Nuke		Coring Machine		Generator
						Other Type:				Quantity

Field Samples Obtained

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FIELD DENSITY REPORT FOR SOILS
ASTM 6938

Report # _____ Sheet # 11549 Page 2 of 2

Project Name: Orofino First Baptist Church		Project No.: 311-119T	
Date: 9/11/2012	Weather: Clear	Test Method: Nuke	Gauge: 31960
Location: Orofino, Idaho		Technician: Brad Bowles	M.S.: 757
Contractor: EQM			D.S.: 2489

	Proctor Number	Soil Description	Optimum Moisture	Maximum Density	Standard/Modified
1	A311-639	3/4" Base Aggregate	10.0	142.2	Modified
2	S311-061	Native Silty Sand with Cobble	11.1	125.3	Modified
3					

Test Number	Test Location	Elevation	Proctor Number	Probe Depth	% Moisture	Dry Density	% Compaction	Required Compaction	Re-Test of Test No.
	Retaining Wall								
1	N side of wall	10' BG	2	8"	9.1	123.3	98	95%	
2	SE corner radius	12' BG	2	8"	9.4	124.7	100	95%	

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DAILY PROJECT FIELD REPORT

Project:	Orofino First Baptist Church			Project #:	311-119T
Project Address:	Orofino, Idaho			Weather:	Partly Cloudy
Permit #		Date:	9/12/2012	Page	1 of 2
Report#	Sheet# 11533			Technician:	Brad Bowles
Type of Testing / Inspection:			Compaction Testing		
Deficiencies Noted:	X	NO		YES	If yes, explain below
Reported To:	Pat	of		EQM	

Narrative:

Arrived on site to check in-place density on the fill material being placed as backfill to the retaining wall repair. The Contractor placed approximately 1' lifts and used a HAMM 3307 roller, making 4 – 5 vibratory passes for compactive efforts. See the attached density report for test results.

Representative:	Project Manager:

This report shall be considered preliminary until reviewed and countersigned by the ALLWEST Project Manager

Codes	Project Times Begin	End	Hours	Miles	Equipment					
SFD			5.0	45	X	Nuke		Coring Machine		Generator
						Other Type:				Quantity

Field Samples Obtained

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FIELD DENSITY REPORT FOR SOILS
ASTM 6938

Report # _____ Sheet # 11533 Page 2 of 2

Project Name:	Orofino First Baptist Church			Project No.:	311-119T
Date:	9/12/2012	Weather:	Partly Cloudy	Test Method: Nuke	Gauge: 31960
Location:	Orofino, Idaho			Technician: Brad Bowles	M.S.: 751
Contractor:	EQM				D.S.: 2469

	Proctor Number	Soil Description	Optimum Moisture	Maximum Density	Standard/Modified
1	A311-639	3/4" Base Aggregate	10.0	142.2	Modified
2	S311-061	Native Silty Sand with Cobble	11.1	125.3	Modified
3					

Test Number	Test Location	Elevation	Proctor Number	Probe Depth	% Moisture	Dry Density	% Compaction	Required Compaction	Re-Test of Test No.
	Retaining Wall								
1	SW side behind wall	11' BG	2	8"	7.4	125.0	100	95%	
2	Center of radius	11' BG	2	8"	11.9	121.2	97	95%	
3	N side of fill	7' BG	2	8"	10.6	124.8	100	95%	
4	SW corner of fill	10' BG	2	8"	8.0	122.9	98	95%	

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