The Former Screening Plant and Nearby Areas Operable Unit 2 Institutional Control Implementation and Assurance Plan Revision 3

USACE Contract No. W912DQ-15-D-3013
Task Order No. DK03

100003734

U.S. Environmental Protection Agency

Libby Asbestos Superfund Site
Libby, Montana

March 2018

Libby Asbestos Superfund Site
The Former Screening Plant and Nearby Areas
Operable Unit 2
Lincoln County, Montana

Institutional Control Implementation and Assurance Plan, Revision 3

USACE Contract No. W912DQ-15-D-3013
Task Order No. DK03

Approved by: _____ Date: 3/9/18
Geoffrey McKenzie, P.E.
CDM Smith Technical Reviewer

Approved by: _____ Date: 3/9/18
Thomas Cook, CHMM, PMP
CDM Smith Project Manager

Approved by: _____ Date: 3/14/18
Mark Meacham
USACE Omaha District, Program Manager

Approved by: _____ Date: 3/8/18
Dania Zinner
EPA Region VIII Remedial Project Manager

Document Revision Log

Revision No.	Date	Description
0	11/2013	---
1	02/2014	▪ Made editorial changes ▪ Removed all references to the EPA environmental resource specialist and replaced with Lincoln County Asbestos Resource Program
2	08/2015	▪ Made editorial changes ▪ Revised Table 5-1
3	01/2018	▪ Made editorial changes ▪ Revised plan to be consistent with more recent Site operable unit institutional control plans ▪ Added results of site-wide human health risk assessment to discussion (Section 3.3.2) ▪ Revised Table 4-1 (previously Table 5-1) ▪ Added BMP manual (Appendix C)

Table of Contents

Section 1 Introduction 1-1

Section 2 Site Details 2-1

2.1 Site Description 2-1

Section 3 Operable Unit 2 – Former Screening Plant and Nearby Areas 3-1

3.1 OU2 Characteristics and History 3-1
3.2 Response Action Discussion 3-3
3.2.1 Institutional Control Elements 3-4
3.3 Contaminant of Concern 3-4
3.3.1 Boundaries of Impacted Resources 3-5
3.3.2 Post-ROD Risk Assessment Discussion 3-5
3.4 Current OU2 Site Information 3-6
3.4.1 Parcel Ownership/Occupancy Information 3-6
3.4.1.1 Subarea 1 – Former Screening Plant Parcel Contact Information 3-6
3.4.1.2 Subarea 2 – Flyway Parcel Contact Information 3-6
3.4.1.3 Subarea 3 – Private Property Parcel Contact Information 3-6
3.4.1.4 Subarea 4 – Rainy Creek Road Frontages Parcel Contact Information 3-7
3.4.2 Property Interest and Resource Ownership 3-7
3.4.3 Current and Reasonably Anticipated Future OU1 Land Use 3-7
3.4.3.1 Land Use 3-7
3.4.3.2 Groundwater Use 3-7
3.4.3.3 Surface Water Use 3-8
3.4.4 Responsible Parties and Stakeholders 3-8
3.4.5 Local Government Information 3-8
3.5 Site Mapping 3-8

Section 4 Institutional Control Implementation 4-1

Section 5 Institutional Control Instruments 5-1

5.1 Key Components 5-1
5.1.1 Institutional Controls Objectives 5-1
5.1.2 Current and Reasonably Anticipated Future Land Use 5-1
5.1.3 Instrument Duration 5-1
5.2 Instrument Categories 5-1
5.2.1 Proprietary Controls 5-2
5.2.2 Government Controls 5-2
5.2.3 Enforcement Documents with Institutional Control Components 5-2
5.2.4 Informational Devices 5-2
5.2.4.1 Informational Devices Use Restrictions 5-3

Section 6 Institutional Control Maintenance 6-1

Section 7 Institutional Control Enforcement 7-1

Section 8 Institutional Control Modification and Termination 8-1

Section 9 References 9-1

List of Tables

Table 1-1 Libby Asbestos Site OUs 1-2

Table 3-1 Summary of Response Actions at OU2 3-3

Table 4-1 Status of IC Implementation 4-1

List of Figures

Figure 1-1 Site Location Map
Figure 2-1 Operable Unit Map
Figure 3-1 OU2 Site Layout Map
Figure 3-2 Location and Depth of Residual Contamination at OU2 Based on Investigation Activities and Removal-related Confirmation Soil Sampling
Figure 3-3 Location and Depth of Residual Contamination at OU2 Subareas 1 and 4 Based on Investigation Activities and Removal-related Confirmation Soil Sampling
Figure 3-4 Location and Depth of Residual Contamination at OU2 Subarea 2 Based on Investigation Activities and Removal-related Confirmation Soil Sampling
Figure 3-5 Location and Depth of Residual Contamination at OU2 Subarea 3 Based on Investigation Activities and Removal-related Confirmation Soil Sampling
Figure 3-6 Location of Protective Covers and Remedy Components at OU2

Appendices

Appendix A Montana Department of Transportation Encroachment Permit Application and Addendum

Appendix B Flyway (Subarea 2) Environmental Covenant

Appendix C Best Management Practices Guidance Manual

Acronyms and Abbreviations

ABS	activity-based sampling
ARP	Asbestos Resource Program
BMP	best management practice
BNSF	BNSF Railway Company
BOH	City/County Board of Health
COC	contaminant of concern
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
DEQ	Montana Department of Environmental Quality
EPA	U.S. Environmental Protection Agency
ESD	explanation of significant differences
Grace	W.R. Grace & Co. – Conn.
IC	institutional control
ICIAP	Institutional Control Implementation and Assurance Plan
IUR	inhalation unit risk
KDC	Kootenai Development Corporation
LA	Libby amphibole asbestos
MDT	Montana Department of Transportation
MCA	Montana Code Annotated
O&M	operations and maintenance
OU	operable unit
Rfc	reference concentration
ROD	record of decision
ROW	right-of-way
Site	Libby Asbestos Superfund Site
U-Dig	Montana utility locate service

This page intentionally left blank.

Section 1
Introduction

This institutional control implementation and assurance plan (ICIAP) was prepared by the U.S. Environmental Protection Agency (EPA) for the EPA Region 8 Libby Asbestos Superfund Site (Site) (Figure 1-1) in Libby, Montana. The Site has been divided into eight separate operable units (OUs) (Table 1-1). This plan discusses institutional controls (ICs) currently in place at OU2, the former Screening Plant and nearby areas. The EPA and Montana Department of Environmental Quality (DEQ) will continue to work with the community to further develop ICs that will help clarify the tools that will be used to implement them. This ICIAP will be updated upon any further development, addition, or modification to ICs. Investigation and response actions of OU2 were performed by the EPA, in consultation with the DEQ, under the Superfund law.

OU2 is the subject of this ICIAP and includes areas impacted by contamination from activities associated with mining, processing, and shipping of vermiculite by the W.R. Grace & Co. – Conn. (Grace). OU2 includes areas impacted by contamination released from the former Screening Plant. Remedial actions at OU2 included removal (excavation and disposal) and containment (with soil covers) of Libby amphibole asbestos (LA)-containing source materials (see Section 3). Exposure to vermiculite and LA was largely mitigated by removal of surface soils and the placement of an extensive clean soil cap. However, because residual contamination remains at varying depths over a considerable portion of OU2, ICs (as described in this ICIAP document) are in place that restrict subsurface activities (e.g., activities that involve soil excavation or earthwork) to protect the remedy and mitigate potential future exposures from contamination left at depth.

This ICIAP identifies and documents activities that are designed to implement, maintain, and enforce ICs at OU2, and the organizations responsible for conducting these activities. This ICIAP will help ensure that OU2 ICs are properly implemented to protect the remedy in place and continue to operate as intended.

Oversight of ICs will be included during the operation and maintenance (O&M) phase of the OU2 site; oversight of ICs is the responsibility of DEQ and is included in the OU2-specific O&M plan (EPA 2018a).

Table 1-1 Libby Asbestos Site OUs

OU#	Name
1	Former Export Plant
2	Former Screening Plant and Nearby Areas
3	Former Vermiculite Mine
4	Libby, Montana (residential, commercial, and public properties)
5	Former Stimson Lumber Mill
6	BNSF Railway
7	Troy, Montana (residential, commercial, and public properties)
8	U.S. and Montana State Highways and Secondary Highways (within the boundaries of the Site)

Section 2
Site Details

2.1 Site Description

The Site (Superfund Enterprise Management System #MT0009083840) is located in and around the Cities of Libby and Troy, Montana. Libby is the county seat of Lincoln County and is in the northwest corner of Montana, about 35 miles east of Idaho and 65 miles south of Canada.

Numerous hard rock mines have operated in the Libby area since the 1880s, but the dominant impact to human health and the environment in and near Libby has been from vermiculite mining and processing. The vermiculite deposit that was mined by Grace contains a distinct form of naturally occurring amphibole asbestos, LA, which is considered the contaminant of concern (COC) at the Site. EPA initiated an emergency response action in November 1999 to address questions and concerns raised by citizens and other interested parties regarding possible ongoing exposures to asbestos fibers as a result of historical mining, processing, and exportation of LA-containing vermiculite. To facilitate a multi-phased approach to remediation at the Site, eight separate OUs were established. These OUs are shown on Figure 2-1 and are described below:

OU1. The former Export Plant (OU1) is situated just north of downtown Libby. The property is bounded by the Kootenai River on the north, Montana Highway 37 on the east, BNSF Railway Company (BNSF) railroad thoroughfare on the south, and State of Montana property on the west. OU1 includes the Former Export Plant, Riverfront Park, and the embankments of City Service Road and Montana Highway 37. The Montana Highway 37 right-of-way (ROW) adjacent to the OU1 site was included due to the proximity to the OU1 site and the known contamination in the ROW.

OU2. OU2 is the subject of this plan and includes areas impacted by contamination released from activities at or associated with the former Screening Plant. The Montana Highway 37 ROW adjacent to the OU2 site was included due to its proximity to OU2 and the known contamination in the ROW. For the purposes of this ICIAP, the contaminated portion of the Montana Highway 37 ROW is considered part of Subareas 1, 2, and 3 within OU2.

OU3. The mine OU includes the former vermiculite mine and the geographic area (including ponds) surrounding the former vermiculite mine that has been impacted by releases from the mine, including Rainy Creek and the Kootenai River.

OU4. OU4 is defined as residential, commercial, industrial (not associated with former Grace operations), and public properties, including schools and parks in and around the City of Libby, or those that have received material from the mine not associated with Grace operations. OU4 includes only those properties not included in other OUs.

OU5. OU5 includes all properties that were part of the former Stimson Lumber Mill and that are now primarily owned and managed by the Lincoln County Port Authority.

OU6. The rail yard owned and operated by BNSF is defined geographically by the BNSF property boundaries and extent of contamination associated with BNSF rail operations. Generally, the boundary is as wide as the railroad right-of-way. Railroad transportation corridors are also included in this OU.

OU7. The Troy OU includes all residential, commercial, and public properties in and around the Town of Troy, approximately 20 miles west of downtown Libby.

OU8. OU8 is comprised of the US Highway 2, Montana Highway 37, and county roads (Kootenai River Road, County Highway 482 [Farm to Market Road], and County Highway 567 [Pipe Creek Road]).

Section 3

Operable Unit 2 – Former Screening Plant and Nearby Areas

3.1 OU2 Characteristics and History

OU2 covers approximately 43 acres on the north side of the Kootenai River, approximately 5 miles north of the Libby downtown area (Figure 2-1). OU2 includes areas impacted by contamination released from the former Screening Plant and is comprised of four subareas. These subareas include the former Screening Plant (Subarea 1), the Flyway property (Subarea 2), a privately-owned property (Subarea 3), and the Rainy Creek Road frontage and Montana Highway 37 ROW adjacent to Rainy Creek Road (Subarea 4).

The following four subareas within the OU are carried through all discussions of the ICs and are shown on Figure 3-1:

- **Former Screening Plant (Subarea 1) –** The former Screening Plant is located approximately 5 miles northeast of Libby on the north side of the Kootenai River (Figure 3-1). The area is approximately 21 acres, and is bordered by Montana Highway 37 to the northeast, privately owned property to the southeast, Flyway property to the south, and the Kootenai River to the west. The property is currently privately owned and is being used for residential purposes.

  From 1975 to 1990, the Screening Plant was used by Grace to screen mined vermiculite by size and grade. The vermiculite was transported from the mine to the site by truck, sorted, and bulk stored in two sheds at the facility. The vermiculite was then loaded onto a conveyor system and transported across the Kootenai River to a conveyor unloading station. Once the vermiculite was transported across the river, it was either trucked to the local Export Plant (currently OU1) for processing and shipping or loaded onto rail cars for transportation and distribution to expansion plants outside of Libby.

  From 1993 to 1999, the former Screening Plant was used as a fully-operational retail nursery (Raintree Nursery) business where plants, flowers, and trees were grown, stored, and sold. Related plant-care items were also stored and sold at the nursery. The owners of the property lived on the site in a one-story structure that served both as an office and a residence. The largest structure on the property was referred to as the long shed. Approximately one-third of the long shed was used to store nursery supplies, tools, and equipment for the nursery business; the remaining two-thirds were leased to outside parties for storing recreational vehicles, trailers, boats, automobiles, and other items. Five greenhouses were used for growing plants, flowers, and shrubs, and a number of smaller buildings and support structures were used in the nursery operation. Two reinforced concrete tunnels were used to grow mushrooms that were shipped to the Far East for use as medical treatments. A number of steel tanks, hoppers, silos, and other remnants of the former mining operations at the former Screening Plant were stored at the site.

  Due to the LA contamination associated with vermiculite from the Libby mine, the former Screening Plant has undergone extensive investigation and removal actions since EPA began

emergency response activities in Libby in 1999, details of which can be found in the OU2 Record of Decision (ROD) (EPA 2010). No removal or remedial actions were necessary on any structures currently existing on the property. The main residence was constructed in 2010 and three outbuildings were constructed in 2003, and one outbuilding was constructed in 2004, all following removal actions on the property.

- **Flyway (Subarea 2) –** Currently owned by Kootenai Development Corporation (KDC) (a subsidiary of Grace), the Subarea commonly referred to as the Flyway is comprised of approximately 19 acres northeast of Libby, immediately south of the former Screening Plant and the privately-owned parcel (Figure 3-1). The Flyway is bounded by Montana Highway 37 to the northeast, a residential subdivision (River Runs through It) to the south, the Kootenai River to the southwest, and the former Screening Plant and private property to the north. The Flyway is accessed through a gated entrance to the adjacent private property off Montana Highway 37. For this plan, the Flyway subarea includes the Montana Highway 37 ROW adjacent to the west side of Montana Highway 37. The ROW is used and maintained by the Montana Department of Transportation (MDT). The Flyway is currently used by Grace contractors to stage equipment. The property contains undeveloped land.

  The Flyway housed a pump that was used during vermiculite mining operations to convey water from the Kootenai River to the mine site. The pump house, located close to the Kootenai River, has since been abandoned and the pump is no longer functional. The interior insulation of this metal structure was removed and all parts of the building were washed. The empty structure was left onsite for possible future use.

  In 1999, when the EPA first visited the property, the Flyway was found to contain several vermiculite piles. One portion of the property had been covered with imported fill and it was suspected that vermiculite-containing material had been moved from the former Screening Plant and used as fill to level parts of the Flyway where drainages existed. Following investigation work performed by the EPA as part of the Libby emergency response, a portion of the Flyway was remediated in 2001 by Grace at the direction of the EPA. In 2003, remediation at the site was performed by the EPA; in 2004, additional remediation was performed by Grace at the direction of the EPA; and in 2005, the Montana Highway 37 ROW was remediated by the EPA. Details of investigation and remediation activities conducted at the Flyway are explained in the OU2 ROD (EPA 2010).

- **Private Property (Subarea 3) –** The private property of Subarea 3 consists of an approximate 1-acre parcel situated between the former Screening Plant and the Flyway, and bordered by Montana Highway 37 to the northeast (Figure 3-1). For this plan, this private property includes the Montana Highway 37 ROW adjacent to the west side of Montana Highway 37. A continuation of the Flyway ROW, this ROW is used and maintained by the MDT. The private property is currently vacant, undeveloped land.

  Under Grace's ownership, the property was likely used for vermiculite mining-related activities such as the storage or staging of equipment and materials. In recent history, portions of the property were used for equipment decontamination during remediation work at the former Screening Plant and the Flyway (the property was vacant and not in use at the time of cleanup activities). The property underwent EPA investigation and remediation. Details of investigation and remediation activities conducted are explained in the OU2 ROD (EPA 2010).

- **Rainy Creek Road Frontages (Subarea 4) –** The Rainy Creek Road frontages are two privately owned areas that lie immediately north and south of Rainy Creek Road adjacent to Montana Highway 37 (Figure 3-1). Approximately 45,000 square feet of land comprises the north frontage; approximately 39,000 square feet comprises the south. For a short period, numerous trees were stored at the south frontage for use during restoration at the former Screening Plant. The Rainy Creek Road frontages were remediated by the EPA in 2005. The Rainy Creek Road frontages are currently vacant, undeveloped land.

3.2 Response Action Discussion

Response actions at OU2 are complete and included removal (excavation and disposal) and containment (with soil covers) of LA-containing source materials. These activities were conducted by the EPA or by Grace under EPA oversight. These activities are detailed in the *Final Remedial Investigation Report, Operable Unit 2 – Former Screening Plant and Surrounding Properties* (EPA 2009) and *Final Remedial Action Report, Operable Unit 2 – Former Screening Plant and Surrounding Properties* (CDM Smith 2012a), and summarized in Table 3-1 below.

Table 3-1. Summary of Response Actions at OU2

Year	Material Removed	Summary of Response Action
Subarea 1 – Former Screening Plant		
August through October 2000	Contaminated soil and building debris	Removal of contaminated soil and demolition of buildings.
August through November 2001	Contaminated soil and building debris	Removal of contaminated soil and demolition of long shed.
August through October 2002	Contaminated soil and debris	Trees, vegetation, and contaminated soil removal along lower reach of Rainy Creek and decontamination pad.
2002	None – Placement of agricultural fill (Restoration)	Agricultural fill placed and compacted above the existing common fill and structural fill placed in 2000 and 2001. Topsoil placed above the agricultural fill as coordinated with the property owners. Restoration work plan implemented, as negotiated between the EPA and property owners.
March through April 2003	None – Potable water well installation	Attempts to drill a new potable water well. Preliminary wells were never utilized due to LA contamination and elevated fluoride concentrations.
September 2003 through August 2004	Contaminated soil	Removal of contaminated soil along the west ROW of Montana Highway 37, 350 feet south to 270 feet north of the former Screening Plant entrance.
July 2005 and May 2006	None – Potable water well installation	New well was completed in the alluvial aquifer.
Subarea 2 – Flyway		
September 2001	Contaminated soil	Grace's contractor conducted contaminated soil removal under EPA oversight.
July through November 2004	Contaminated soil	Contaminated soil excavated from the northern portion of the Flyway and the Kootenai riverbank along the southern portion of the Flyway.
June 2005	Contaminated soil	Contaminated soils in the ROW excavated and a stockpile of contaminated soil removed.
September 2010	Contaminated soil	Removal of contaminated soil along the Montana Highway 37 ROW.
Subarea 3 – Private Property		
June 2005	Contaminated soil	Removal of contaminated soil
Subarea 4 – Rainy Creek Road Frontages		
August through October 2004	Contaminated soil	Removal of contaminated soil

Year	Material Removed	Summary of Response Action
August 2006	Contaminated soil	While excavating to repair a damaged water line at the north frontage, a contractor observed vermiculite. The contaminated soil was excavated and the damaged water line was repaired.

3.2.1 Institutional Control Elements

The following is a summary of response action IC elements in place to satisfy the remedial alternatives discussed in the OU2 ROD (EPA 2010). For OU2, ICs will be used to ensure that any future encounters with residual contamination are managed appropriately. ICs for OU2 include governmental and proprietary land use restrictions and informational devices. As additional site-wide ICs are established, this plan will be updated.

Below is the list of ICs currently or anticipated to be in place in near future; detailed descriptions of each of these ICs and the IC instruments for OU2 are included in Sections 4 and 5.

- Environmental covenant (Montana Code Annotated [MCA] Section 75-10-727)
- Montana utility locate service (U-Dig) (MCA Section 69-4-503).
- MDT encroachment permit and addendum
- Best management practices (BMP) manual
- EPA Libby Asbestos Superfund Site website (http://cumulis.epa.gov/supercpad/cursites/csitinfo.cfm?id=0801744)
- O&M plan
- City/County Board of Health[1] (BOH)-Asbestos Resource Program (ARP)
- Libby EPA Information Center

3.3 Contaminant of Concern

The COC and agent for potential exposure to the public, users, or owners at OU2 have been termed interchangeably by the EPA as Libby amphibole asbestos or LA. The EPA has established an inhalation unit risk (IUR) value and reference concentration (Rfc) value for exposure to LA at the Site. Information on the IUR value and Rfc value for exposure to LA is detailed in the *Final Site-wide Human Health Risk Assessment, Libby Asbestos Superfund Site, Libby, Montana* (EPA 2015).

The vermiculite deposit that was mined by Grace contains a distinct form of naturally-occurring amphibole asbestos that is comprised of a range of mineral types and morphologies. The term LA is used in this document to identify the mixture of amphibole mineral fibers of varying elemental composition (e.g., winchite, richterite, tremolite, etc.) that have been identified in the Rainy Creek complex near Libby (Meeker et al. 2003). LA is a hazardous substance under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). LA has the ability to form durable, long, and thin structures that are generally respirable and can reasonably be expected to cause disease, and hence is considered the COC at the Site.

Because vermiculite mined from Libby has been found to be contaminated with LA, which is known to cause human health effects, the EPA initiated an emergency response action in November 1999 to address questions and concerns raised by citizens of Libby regarding possible ongoing exposures to asbestos fibers because of historical mining, processing, and exportation of vermiculite.

[1] The City/County Board of Health will be involved in the process of developing and determining site-wide ICs. Site-wide ICs have yet to be fully established at this time.

3.3.1 Boundaries of Impacted Resources

OU2 is divided into four subareas (Subarea 1, Subarea 2, Subarea 3, and Subarea 4), each of which is described in Sections 3.1 and 3.2 and shown on Figure 3-1. Numerous investigations were conducted within OU2 and are summarized in Section 3.2. Based on those investigations, contamination is known to be present in surface and subsurface soil.

Exposure to the contamination has been mitigated by various response actions (see Section 3.2) to remove accessible source materials, and the placement of an extensive cap during removal activities. Residual contamination remains at varying depths over a considerable portion of OU2. The location and depth of contamination left in place at OU2, based on investigation activities and removal-related confirmation soil sampling, are shown on Figures 3-2, 3-3, 3-4, 3-5, and 3-6.

Specific sources of contamination, as described in the *Former Screening Plant and Surrounding Properties, Operable Unit 2, Final Remedial Action Report* (CDM Smith 2012a), include the following:

- Surface soil within the OU2 boundary containing visible vermiculite *and* LA at non-detect, trace, or less than 1 percent levels.
- Subsurface soil containing visible vermiculite *and* LA; the exact location and depths of vermiculite-containing soil are not fully documented or delineated.

In OU2, areas that have been remediated, and where surface soil is either capped or backfilled with clean soil, there are presently no complete exposure scenarios to LA. However, there are several areas within the Flyway where soils have not been remediated. There are two receptor populations that may be exposed to LA during soil disturbance activities at the Flyway—visitors that recreate or trespass (either intentionally or inadvertently) along the Kootenai River, and MDT outdoor workers that maintain the ROW along Montana Highway 37. A summary of post-construction activity-based sampling (ABS) conducted at OU2 and post-ROD risk assessment information is provided in Section 3.3.2.

3.3.2 Post-ROD Risk Assessment Discussion

In September and October of 2012, post-construction ABS was conducted to support a post-construction risk assessment to confirm the effectiveness of the remedy (CDM Smith 2012b). Property owners at Subarea 1 (former Screening Plant), Subarea 3 (parcel previously owned by different entity), and Subarea 4 opted not to participate in the post-construction sampling activities. Thus, the focus of the post-construction ABS was on Subarea 2 (the Flyway) in areas that had not been remediated and thus have the maximum (i.e., “worst case”) potential for exposure.

Two ABS scenarios representative of soil disturbance activities that may take place in the Flyway were evaluated. Scenario 1 was conducted to determine possible exposures to MDT workers that mow the ROW on the west side of Montana Highway 37. Scenario 2 was conducted to evaluate possible exposures to individuals that recreate (e.g., hike) or otherwise trespass along Kootenai River frontage in the Flyway. The results of the ABS air sampling were non-detect. These non-detect results indicate that the estimated reasonable maximum exposure and central tendency exposure cancer risks are therefore zero, and the non-cancer hazard quotient is also zero. The results are presented and discussed further in the *Final Site-wide Human Health Risk Assessment* (EPA 2015).

However, if future excavation or construction activities occur in areas of OU2 where residual contamination remains at depth, several potential exposure scenarios might become complete due to

the subsurface soil contamination. Disturbances of residual LA contamination in subsurface soils in OU2 have the potential to result in unacceptable exposures and risks.

Cleanup criteria for levels of concern and the basis for those levels are typically included in a ROD. However, a site-wide risk assessment had not been completed prior to the OU2 ROD and completion of response actions at OU2. Although an OU-specific human health risk assessment was conducted for OU2, it did not include LA-specific toxicity values. In the absence of established quantitative, risk-based cleanup levels, EPA removed and/or capped visible vermiculite and detectable LA thereby breaking complete exposure pathways and reducing future potential risk for LA exposure.

To address this uncertainty, the OU2 ROD (EPA 2010) stated:

> *"When the site-wide risk assessment is complete, the agencies will re-evaluate the remedy in accordance with the review requirements at CERCLA Section 121(c). New information concerning toxicity factors will also be evaluated in five-year reviews. If unacceptable exposures are identified, EPA will take action as necessary to ensure that the soil-to-air pathway is broken. Actions may include additional excavation, improving covers, and/or strengthening ICs. In addition, EPA will conduct five-year reviews as part of the ongoing O&M of the remedy."*

This site-wide, quantitative risk assessment was completed for the Site in 2015 (EPA 2015). Based on the findings of the site-wide risk assessment, the OU2 remedy is protective as long as residual contaminated subsurface soils are not disturbed. The ICs established for OU2, as described in this ICIAP, are therefore necessary for protection of the remedy. However, no changes to the ICs for OU2 are necessary based on the findings of the site-wide risk assessment.

3.4 Current OU2 Site Information

3.4.1 Parcel Ownership/Occupancy Information

Listed parcel ownership information is presented for those entities responsible for maintaining the four Subareas at OU2. The Listed parcel ownership information was collected from Montana Cadastral at the following web link: http://svc.mt.gov/msl/mtcadastral/.

3.4.1.1 Subarea 1 – Former Screening Plant Parcel Contact Information

Owner: Parker, Melvin G and Lerah Lorane
PO Box 609
Libby, MT 59923

The property is currently privately owned and is being used for residential purposes.

3.4.1.2 Subarea 2 – Flyway Parcel Contact Information

Owner: KDC
(Mail to: WR Grace Tax Acct Mgr)
Columbia, MD 21044-4009

Currently owned by KDC, the ROW is used and maintained by the MDT. The Flyway is currently used by Grace contractors to stage equipment. The Flyway contains undeveloped land.

3.4.1.3 Subarea 3 – Private Property Parcel Contact Information

Owner: W.R. Grace & Co. – Conn
7500 Grace Dr.

Columbia, MD 21044-4009

The private property is currently vacant, undeveloped land. There are currently no known plans to develop the property.

3.4.1.4 Subarea 4 – Rainy Creek Road Frontages Parcel Contact Information

Owner: Parker, Melvin G and Lerah Lorane
PO Box 609
Libby, MT 59923

The Rainy Creek Road Frontages are currently privately owned, vacant and undeveloped land. It is anticipated that the property will remain as such.

3.4.2 Property Interest and Resource Ownership

There are currently no additional property interests at OU2 that may impact the ICs.

3.4.3 Current and Reasonably Anticipated Future OU1 Land Use

3.4.3.1 Land Use

For all subareas of OU2, the ICs have been developed based on current land use, which is also the anticipated future land use (land use is not anticipated to change). Land use is discussed below.

Subarea 1, Former Screening Plant, is currently privately owned and includes the Montana Highway 37 ROW adjacent to the west side of Montana Highway 37. Subarea 1 is being used for residential purposes. It is anticipated that the property will continue to be used for residential and/or commercial purposes.

Subarea 2, Flyway, is currently owned by KDC (a subsidiary of Grace). The Flyway is accessed through a gated entrance to the adjacent private property off Montana Highway 37. The Flyway Subarea includes the Montana Highway 37 ROW, which is adjacent to the west side of Montana Highway 37. The ROW is used and maintained by the MDT. The Flyway contains undeveloped land that is currently used by Grace contractors to stage equipment. There are no known plans to further develop this property.

Subarea 3, Private Property, consists of an approximate 1-acre parcel situated between the former Screening Plant and the Flyway, and bordered by Montana Highway 37 to the northeast. This private property includes the Montana Highway 37 ROW adjacent to the west side of Montana Highway 37. A continuation of the Flyway ROW, this ROW is used and maintained by the MDT. The private property is currently vacant, undeveloped land. There are no known plans to develop this property.

Subarea 4, Rainy Creek Road Frontages, are currently privately owned and lie immediately north and south of Rainy Creek Road on the east (i.e., mine) side of Montana Highway 37. Approximately 45,000 square feet of land comprises the north frontage and approximately 39,000 square feet comprises the south. The Rainy Creek Road frontages are currently vacant, undeveloped land. It is anticipated that the properties will remain as such.

3.4.3.2 Groundwater Use

The EPA does not consider groundwater to be a viable pathway for LA exposure within OU2, therefore, groundwater use is not included under this ICIAP.

3.4.3.3 Surface Water Use

The EPA does not consider surface water to be a viable pathway for LA exposure within OU2, therefore, surface water use is not included under this IC plan. Although LA has been detected in surface waters at the Site including several creeks in the Rainy Creek watershed in OU3, other tributaries to the Kootenai River, and the Kootenai River, screening level estimates on the impact of a long-term water irrigation scenario indicate the increase in LA soil concentrations (resulting from hypothetical irrigation of soil with a LA-contaminated surface water source) are likely to be well below the limit of detection of traditional soil asbestos analysis methods (EPA 2015).

3.4.4 Responsible Parties and Stakeholders

There are currently no additional responsible parties or stakeholders other than those described in Section 3.4.1.

3.4.5 Local Government Information

The BOH has entered into a cooperative agreement with the EPA in which the ARP was developed. The BOH-ARP, under the direct supervision of the Lincoln County Environmental Health Department, was developed to assist with education, managing risks associated with asbestos exposure, and implementing initiatives to reduce the risk of asbestos exposure.

3.5 Site Mapping

Mapping of residual contamination, site boundaries, protective covers, remedy components, and site features for OU2 is shown on Figures 3-2 through 3-6.

Section 4

Institutional Control Implementation

Table 4-1 provides a brief summary of the implementation for all IC instruments for OU2 set forth by this plan. Details regarding IC instruments and IC objectives are provided in Section 5.

Table 4-1. Status of IC Implementation

Instrument Name	EPA Information Center	Environ-mental Covenant	U-Dig	MDT Encroachment Permit Application and Addendum	Lincoln County BOH-ARP	O&M Plan	BMP Manual
Instrument Category	Informational Device	Proprietary Control	Informational Device	Informational Device	Informational Device	Informational Device	Informational Device
IC Objectives (a)	1, 2, 3, 4, 5	1, 2, 3, 4, 5	1, 2, 3, 4, 5	1, 2, 3, 4, 5	1, 2, 3, 4, 5	2, 3, 4, 5	1, 2, 3, 4, 5
Use to Maintain Protectiveness of Remedy	Not applicable	Penetration of the protective cover, disturbance and transportation of potentially contaminated subsurface soil	Not applicable	Penetration of the protective cover, disturbance and transportation of potentially contaminated subsurface soil	Not applicable	Best management practices (BMPs) and engineering controls	BMPs and engineering controls
Implementation Prerequisites	Already in place	Already in place	Already in place	Already in place	Already in place	Already in place	Already in place
Implementation Complete	Already in place	Already in place	Already in place	Already in place	Already in place	Already in place	Already in place
Person or Organization Responsible for Performing Implementation	EPA	DEQ	EPA/BOH-ARP	MDT	EPA/BOH-ARP	EPA / DEQ	EPA / DEQ
Instrument Lifespan	Temporary	In perpetuity					
Conditions for Termination of IC	Throughout remedial action at the Site	Complete removal and disposal of all LA contamination at site					

(a) IC Objectives

1. *Notify future land owners of presence of subsurface contamination and IC requirements.*
2. *Mitigate the potential for inhalation exposures to LA fibers that would result in excess cancer risks that exceed the EPA's acceptable cancer risk range of 1E-06 to 1E-04 (one in one million to one in ten thousand) or non-cancer hazard quotients greater than 1.*
3. *Control dispersion/erosion of contaminated soil by wind and water from source locations to prevent the spread of contamination to un-impacted locations and media.*
4. *Implement controls to prevent uses of the site that could pose unacceptable risks to human health or the environment or compromise the remedy.*
5. *Implement controls to prevent uses of the site that could spread contamination to un-impacted or previously remediated locations and media.*

This page intentionally left blank.

Section 5

Institutional Control Instruments

The following section outlines IC components, the four types of IC instruments (categories), and those instruments that are in place at OU2. The IC instrument types include proprietary controls, governmental controls, enforcement documents, and informational devices.

5.1 Key Components

5.1.1 Institutional Controls Objectives

The following are the main objectives of the ICs in place at OU2:

1. Notify future land owners of the presence of subsurface contamination and IC requirements.
2. Mitigate the potential for inhalation exposures to LA fibers that would result in excess cancer risks that exceed the EPA's acceptable cancer risk range of 1E-06 to 1E-04 (one in one million to one in ten thousand) or non-cancer hazard quotients greater than 1.
3. Control dispersion/erosion of contaminated soil by wind and water from source locations to prevent the spread of contamination to un-impacted locations and media.
4. Implement controls to prevent uses of the site that could pose unacceptable risks to human health or the environment or compromise the remedy.
5. Implement controls to prevent uses of the site that could spread contamination to un-impacted or previously remediated locations and media.

5.1.2 Current and Reasonably Anticipated Future Land Use

The ICs in place at OU2 are expected to allow for the current and reasonably anticipated future land uses of residential and commercial use at the site. ICs are expected to serve to control any potential disturbance of protective remedies in place through such means as an environmental covenant (MCA Section 75-10-727), U-Dig, MDT encroachment permit application and addendum, BMPs, contacting the BOH-ARP, and the EPA Information Center. As additional site-wide ICs are established, this plan will be updated.

5.1.3 Instrument Duration

All IC instruments set forth for OU2 are expected to be in-place in perpetuity, except for the EPA Information Center. The EPA Information Center is a temporary informational device expected to be available throughout remedial action at the Site. The only condition for termination of other individual IC instruments will be the complete removal and proper disposal of all LA contaminated soil.

5.2 Instrument Categories

Institutional controls are typically divided into four distinct categories: proprietary controls, government controls, enforcement documents, and informational devices. The following sections identify the IC instruments associated with OU2 under each of these categories.

5.2.1 Proprietary Controls

Proprietary controls involve legal instruments placed in the chain of title of the site or property. Under MCA Section 75-10-727, DEQ has implemented an environmental covenant intended to notify future land owners of previous response actions completed at the site, the potential presence of contamination within soils, and IC requirements within the Flyway (Subarea 2). The landowner must agree to place the IC on the property. Under MCA Section 75-10-727, EPA and/or DEQ are third-party beneficiaries of the environmental covenant, with enforcement rights.

In the event additional IC instruments are implemented on other subareas of OU2 by DEQ, it will be appended to this plan.

5.2.1.1 Proprietary Controls Use Restrictions

Any use restrictions for this IC are identified in DEQ's environmental covenant pursuant to MCA Section 75-10-727.

5.2.2 Government Controls

There are currently no government controls related to OU2. Once site-wide ICs are further developed and any government controls are instituted, this ICIAP will be amended. Although Montana state law (MCA Section 69-4-503) requires that all parties planning to excavate, drill, or perform other sub-surface activities, notify the designated U-Dig (one-call) notification center prior to the start of these activities, U-Dig would normally be classified as a government control because it is required by Montana state law. However, U-Dig, as it currently applies to the Site, is used as an informational device because it only requires information be provided to users rather than requiring a restriction. Therefore U-Dig is described in Section 5.2.4 (Informational Devices) of this plan.

5.2.3 Enforcement Documents with Institutional Control Components

There are currently no enforcement documents with IC components related to OU2. Once site-wide ICs are further developed and enforcement documents are instituted, this ICIAP will be amended.

5.2.4 Informational Devices

Currently informational devices related to OU2 include the BOH-ARP, U-Dig, MDT encroachment permit application and addendum, EPA Libby Asbestos Superfund Site website, the EPA Information Center, and the BMP manual.

The BOH-ARP is a program currently staffed in Lincoln County, Montana and funded by the EPA. BOH-ARP was developed as an interim program to educate the public regarding the remaining risks of LA exposure, provide resources to manage the risks associated with LA exposure, and implement initiatives to reduce or prevent the risk of LA exposure. Assistance in managing contamination may include providing resource materials and best management practices, making contractor referrals, and/or removing LA (or sources of LA) contamination. The BOH-ARP is available for any persons interested in information regarding LA and/or resources available to minimize risks associated with LA. Persons are encouraged to contact the BOH-ARP at 406-291-5335, or visit the BOH-ARP website: www.LCARP.com.

Information for OU2 (historical and current site documents) and associated BMPs are currently available to the public at the EPA Information Center. Although it is anticipated that the EPA Information Center will not exist in perpetuity, information for OU2 will be maintained by the EPA or

Section 6

Institutional Control Maintenance

Institutional control maintenance consists of periodic monitoring and reporting to confirm that ICs are in place and providing protection as intended. Maintenance activities consist of notifications to new land owners or lessees, continuing education for landowners and property users through annual updates and information available through the EPA Information Center, and periodic review of the property and ICs by the implementing agency, entity, or organization.

In the event of a transfer of ownership, it is the transferor's responsibility to ensure that the new owner is informed of the ICs in place at the property. In the event of any change in ownership, it will be the new owner's responsibility to inform tenants of ICs in place at the property. In the case of a property transfer, the intended use of the property may need to be evaluated to determine if the existing ICs in place are sufficient to protect land users from exposure.

To facilitate monitoring of the ICs, roles and responsibilities, schedule, and corrective actions, reporting requirements will be performed in accordance with the O&M plan and its associated checklists.

In general, reports summarizing O&M activities, which include verifying the integrity of ICs, will be prepared by DEQ and submitted to the EPA remedial project manager and the OU2 property owners on an annual basis.

Currently, the BOH-ARP utilizes Response Manager to communicate property information regarding potential issues or response activities to the EPA. Response Manager is an EPA database that contains addresses, property identifiers, contacts, access and property statuses, and other property-specific investigation and response information. At the end of remedial action in OUs 4 and 7, EPA will transfer this data to DEQ for management within its current or similar database.

In addition, special reports may be prepared by DEQ to document unforeseen events or conditions. An example of a special report is an incident report, which is used to document unusual events such as fires, floods, or weather damage as may be required by the O&M plan. Another example of a special report is a record of modification or amendment to governing site documents. These special reports should be made available to the EPA, the OU2 property owners, and other interested persons in a timely manner.

Periodic monitoring will consist of at least yearly in-person inspections and annual contacts to the relevant property owners to remind them of the presence and requirements of the ICs. The monitoring will assess for changes in land use, property transfers, and failure of any implemented ICs. ICs will be evaluated and updated (if necessary) on an annual basis. The routine and critical evaluation of ICs will assess:

1. Whether the selected IC instruments remain in place

2. Whether the ICs are enforced such that they meet the stated objectives and performance goals and provide protection required by the response (EPA 2012)

Similar to employee education, public education can serve as an important tool for IC maintenance. A well-informed public can provide extra monitoring during use of the site. In the event a member of the public identifies a potential issue at OU2, a method of reporting should be made available. For OU2, the BOH-ARP and EPA Information Office are available to the community to respond to concerns and provide information and guidance.

Details regarding site inspections, which include the monitoring of ICs currently in place is included within the OU2-specific O&M plan.

Section 7

Institutional Control Enforcement

Institutional control enforcement consists of methods for addressing issues related to improper or incomplete implementation of ICs, maintenance of ICs, and breaches of ICs. If enforcement is not properly implemented, the EPA has the authority to request compliance, and if necessary, impose penalties for lack of compliance or in cases of ongoing non-compliance.

For OU2, the only current IC that requires enforcement is an environmental covenant within the Flyway (Subarea 2). At the site, enforcement of MCA Section 75-10-727 for institutional control environmental covenants is an administrative process that can be supported by legal action if necessary. Informational ICs are generally not an enforceable component, but if the responsible entity has failed to implement the ICs outlined, legal action may be used to ensure the ICs are implemented and maintained as designed.

Guidance recommends that often the most effective method of enforcement is early problem identification and communication. This can include site visits and issuing letters or notices to provide documentation of the problem.

Further details regarding site inspections for enforcing and monitoring ICs currently in place will be included within the OU2 O&M Plan (EPA 2018a).

This page intentionally left blank.

Section 8

Institutional Control Modification and Termination

At OU2, modification of ICs may be required in the event of further development of ICs, modification of existing ICs, or a change in land use or ownership. If an event occurs that could lead to a modification, this plan should be reviewed and revised accordingly to ensure the ICs at OU2 continue to provide adequate protection.

A site-wide ICIAP has not been developed for the Site, but will eventually encompass all OUs. Once developed, the EPA will accept public comment on the site-wide ICIAP and prepare a modification to the OUs 4-8 ROD known as an "Explanation of Significant Differences" (ESD). The ESD will reference the site-wide ICIAP and will identify the specific IC requirements and IC tools that EPA will use to implement the ICs selected.

Termination of ICs may occur if all remaining contamination at OU2 is removed to a level below that which poses an unacceptable risk to human health and the environment. The EPA is responsible for determining modification of this ICIAP. The EPA, DEQ (for MCA Section 75-10-727), and MDT are responsible for termination of ICs related to OU2.

Should the need for additional, or modification or termination of, ICs be identified prior to this OU2 ICIAP being superseded by a site-wide ICIAP, this ICIAP will be updated appropriately.

This page intentionally left blank.

Section 9
References

CDM Smith. 2012a. *Final Remedial Action Report, Operable Unit 2 – Former Screening Plant and Surrounding Properties*, *Libby Asbestos Superfund Site, Lincoln County, Montana*. Prepared for the U.S Environmental Protection Agency, Region 8.

_____. 2012b. *Sampling and Analysis Plan/Quality Assurance Project Plan: 2012 Post-Construction Activity-Based Sampling, Libby Asbestos Site, Operable Unit 2.* Revision 0. Prepared for the U.S Environmental Protection Agency, Region 8.

EPA. 2018a. *Operations and Maintenance Plan, The Former Screening Plant and Surrounding Properties, Operable Unit 2, Libby Asbestos Superfund Site, Lincoln County, Montana*. Revision 2. U.S. Environmental Protection Agency, Region 8.

_____. 2018b. *Libby Asbestos Site, Libby, MT*, accessed March 7, 2018, https://cumulis.epa.gov/supercpad/cursites/csitinfo.cfm?id=0801744

_____. 2015. *Final Site-wide Human Health Risk Assessment*, *Libby Asbestos Superfund Site, Libby, Montana*. U.S. Environmental Protection Agency, Region 8.

_____. 2012. *Institutional Controls: A Guide to Preparing Institutional Control Implementation and Assurance Plans at Contaminated Sites*, OSWER 9200.0-77, EPA-540-R-09-002.

_____. 2010. *Record of Decision for Libby Asbestos Superfund Site, The Former Screening Plant and Surrounding Properties, Operable Unit 2, Lincoln County, Montana*. U.S. Environmental Protection Agency, Region 8.

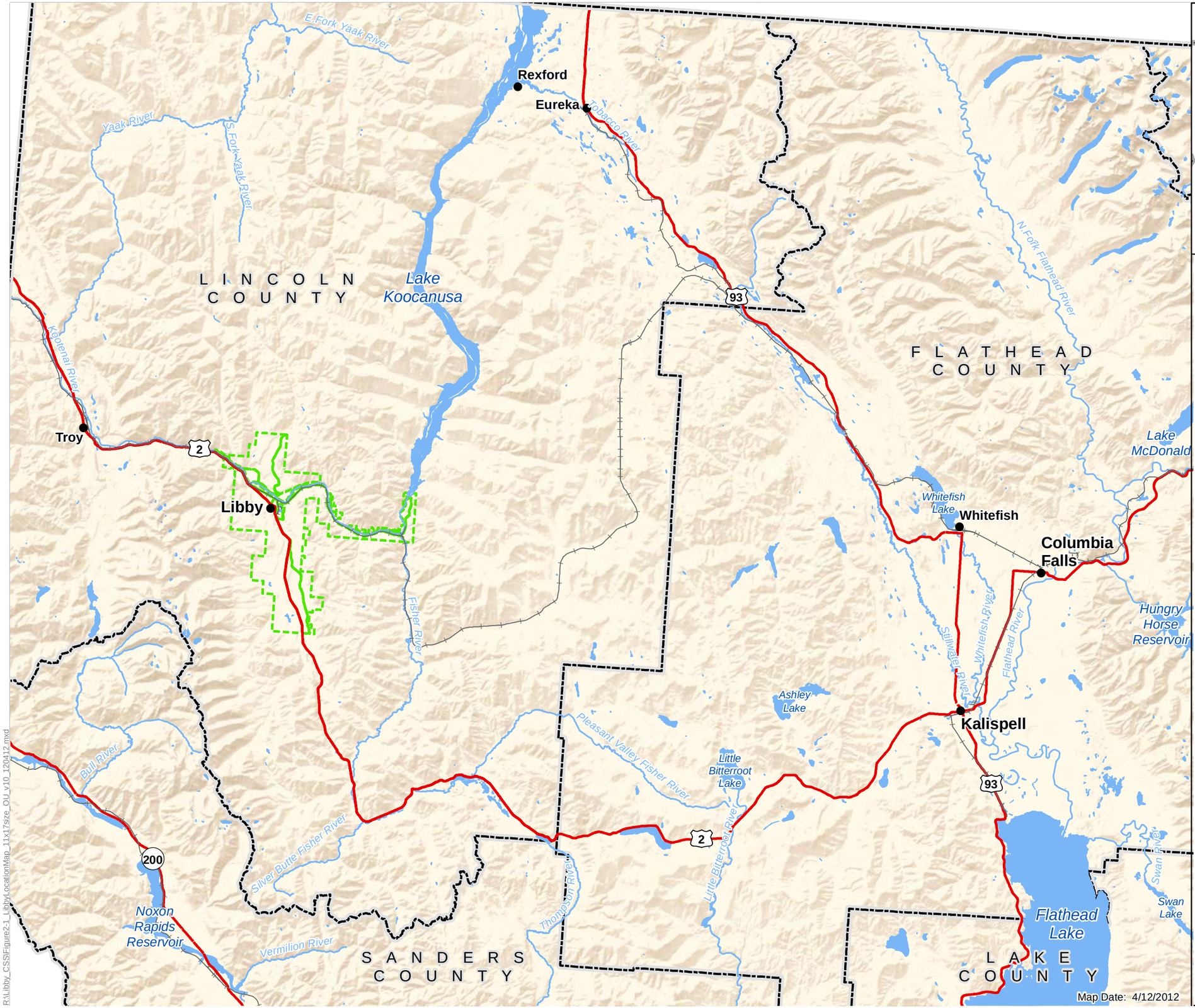
_____. 2009. *Final Remedial Investigation Report, Operable Unit 2 – Former Screening Plant and Surrounding Properties*, *Libby Asbestos Site, Libby, Montana*. U.S. Environmental Protection Agency, Region 8.

Meeker, G.P., A.M. Bern, I.K. Brownfield, H.A. Lowers, S.J. Sutley, T.M. Hoeffen, J.S. Vance. 2003. "The Composition and Morphology of Amphiboles from the Rainy Creek Complex, Near Libby, Montana." *American Mineralogist* (88):1955-1969.

Montana Code Annotated (MCA). 2017. *Montana Code Annotated 2017*, accessed March 7, 2018, http://leg.mt.gov/bills/mca/index.html

This page intentionally left blank.

Figures

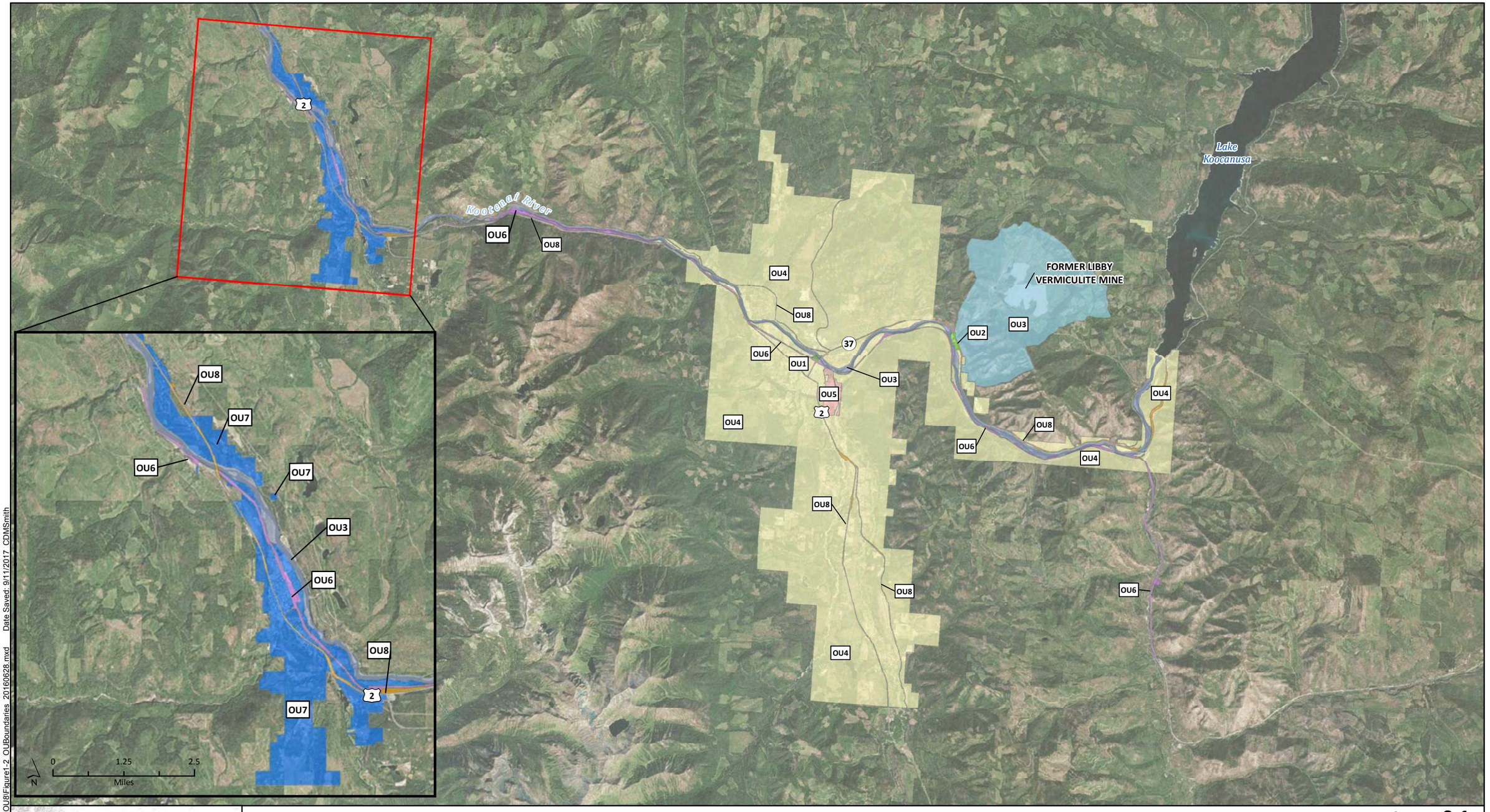


R:\Libby_CSSIFigure2-1_LibbyLocationMap_11x17size_OU_v10_120412.mxd

Figure 1-1

Site Location Map
Libby Asbestos Site
Lincoln County, Montana

CDM Smith



Note(s):
1. EPA established the preliminary study area boundary for the purposes of planning and developing the scope of the Remedial Investigation/Feasibility Study (RI/FS) for OU3. This study area boundary may be revised as data are obtained during the RI for OU3 on the nature and extent of environmental contamination associated with releases that may have occurred from the mine site. The final boundary of OU3 will be defined by the final EPA-approved RI/FS.

Aerial Sources: Esri, USGS, NOAA
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
Road and Railroad Source: US Census Tiger/Line
Waterways and Waterbodies Source: National Hydrography Dataset - USGS

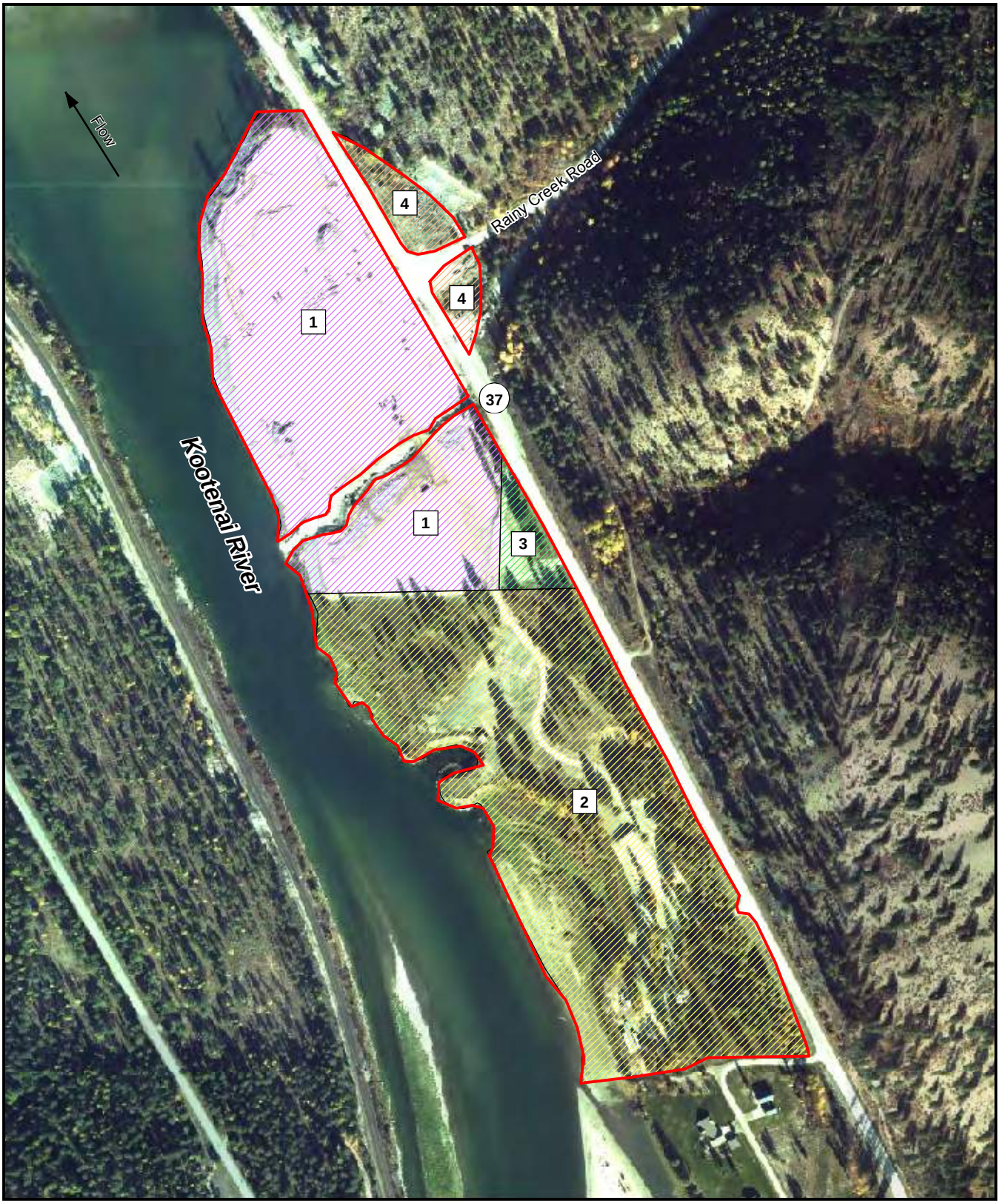
Figure 2-1

Operable Unit Boundaries
Libby Asbestos Superfund Site | Lincoln County, MT

N
0 1.5 3 6
Miles

CDM Smith

Document Path: R:\GIS_Support\MXD\OU8\Figure1-2_OUBoundaries_20160628.mxd Date Saved: 9/11/2017 CDMSmith



N

0 200 400 800

Feet

1 inch = 400 feet

Legend

- OU2 Boundary
- Subarea 1 - Former Screening Plant
- Subarea 2 - Flyway
- Subarea 3 - Private Property
- Subarea 4 - Rainy Creek Road Frontages

Figure 3-1
OU2 Site Layout
Libby Asbestos Superfund Site
Lincoln County, Montana

CDM Smith

Subarea 4
Rainy Creek Road (Frontage)

Note: Contamination may be found at shallow depths around utility poles and guy wire anchors (typically at a 1:1 slope).

Kootenai River

Rainy Creek (Lower Reach)

Subarea 3
Private Property

Subarea 1
Former Screening Plant

Subarea 3
Flyway

Legend

- ND for LA at < 1 foot
- ND for LA at 1-2 feet
- ND for LA at 2-3 feet
- ND for LA at > 4 feet
- ND at Surface
- TR at Surface
- Trace LA at 0 - 6 inches
- Trace LA at 6 - 12 inches
- < 1% LA at < 1 foot
- < 1% LA at 1-2 feet
- < 1% LA at 2-3 feet
- < 1% LA at 3-4 feet
- **Utility Poles** - Contamination may be Found at Shallow Depths
- < 1% LA at > 4 feet
- >= 1% LA at < 1 foot
- >= 1% LA at 1-2 feet
- Residual Contamination may be Found at 1-2 feet
- Residual Contamination may be Found at 2-3 feet
- Residual Contamination may be Found at 3-4 feet
- Residual Contamination may be Found at > 4 feet
- Seasonally Underwater Areas
- Rip Rap Cap
- OU2 Subareas
- OU2 Boundary
- Heavy Vegetation
- 2010 Removal Areas

All depths are measured from current existing ground surface.

N
W E
S

Scale of Feet
0 75 150 225
1 inch = 225 feet

Figure 3-2 Location and Depth of Residual Contamination at OU2 Based on Investigation Activities and Removal-related Confirmation Soil Sampling

CDM Smith

Figure 3-3
Location and Depth of Residual Contamination at OU2 Subareas 1 and 4 Based on Investigation Activities and Removal-related Confirmation Soil Sampling
Libby Asbestos Superfund Site
Lincoln County, Montana

CDM Smith

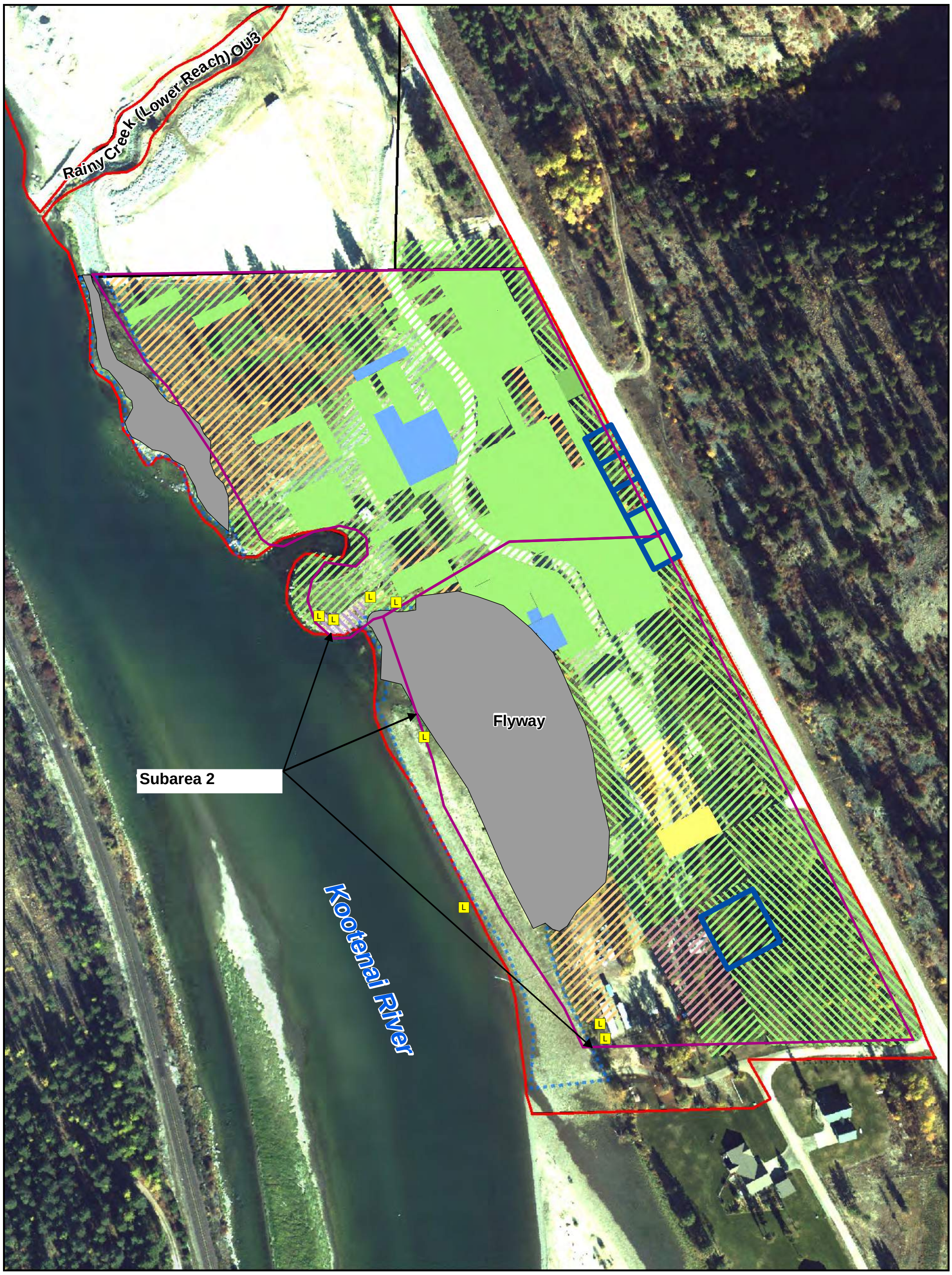
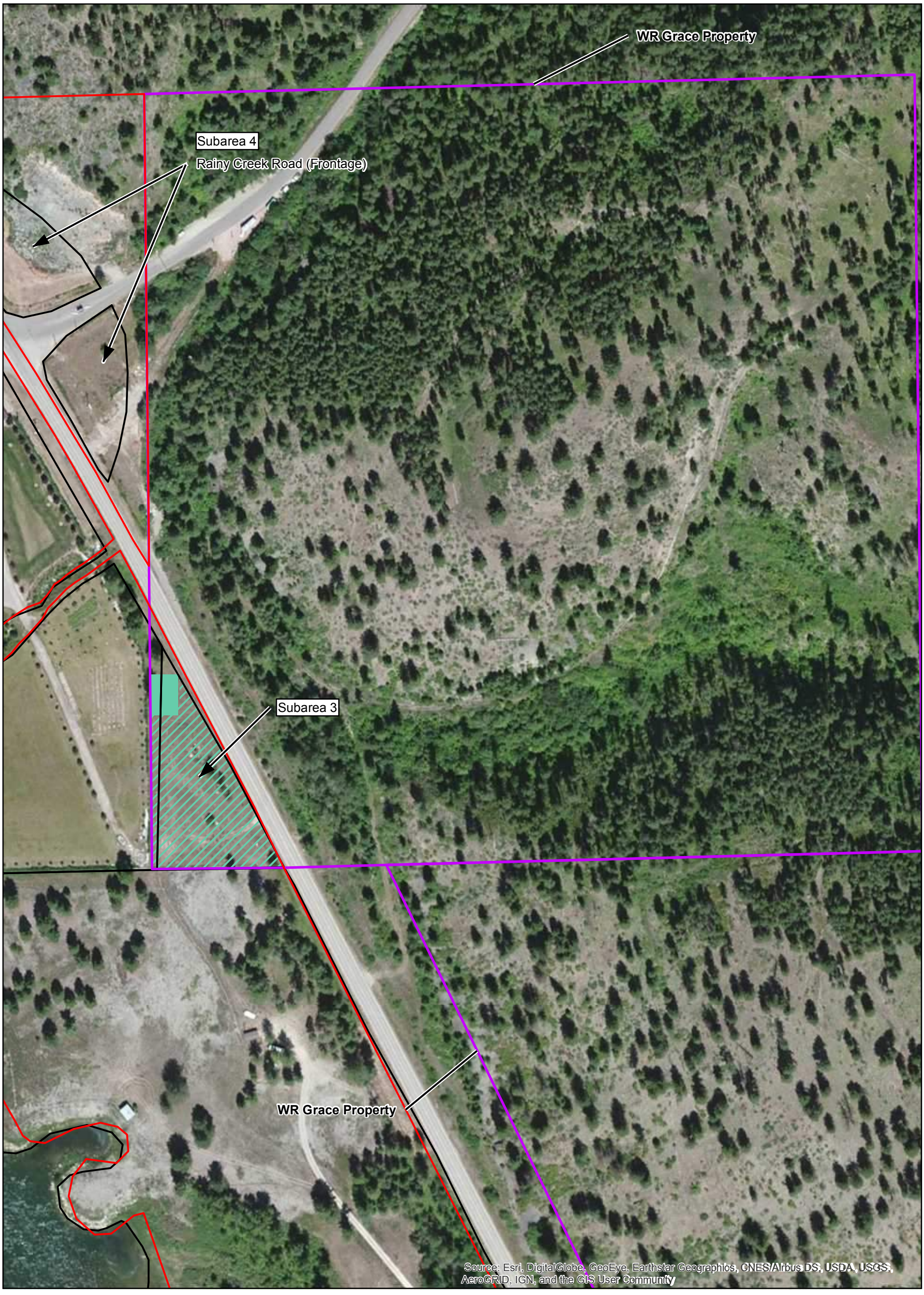


Figure 3-4
Location and Depth of Residual Contamination at OU2 Subarea 2 Based on Investigation Activities and Removal-related Confirmation Soil Sampling
Libby Asbestos Superfund Site
Lincoln County, Montana

CDM Smith



N

0 80 160 320

Feet

1 inch = 160 feet

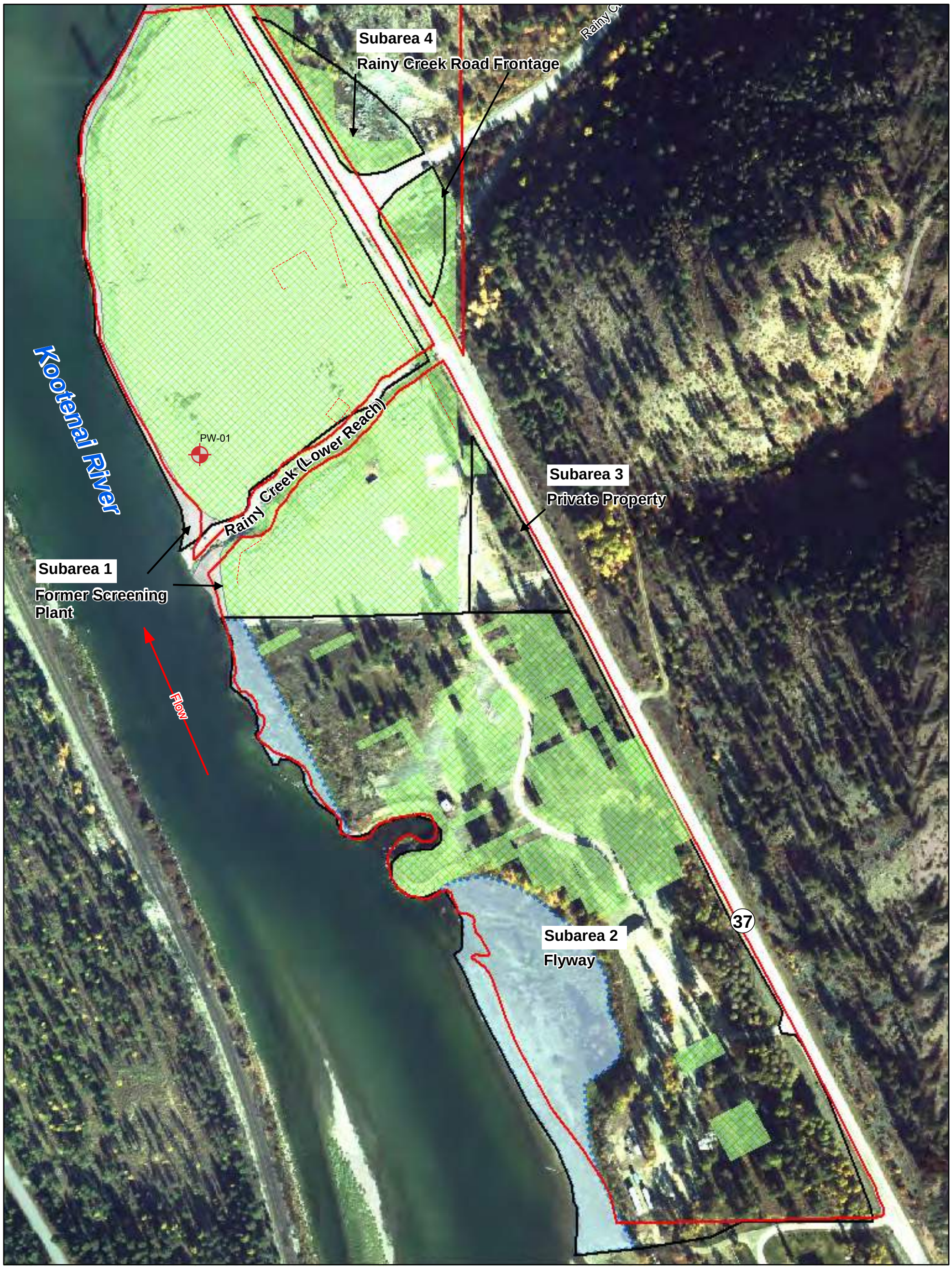
Legend

- ND for LA at 1-2 feet
- < 1% LA at 1-2 feet
- WR Grace Property
- OU2 Subareas
- OU2 Boundary

Figure 3-5
Location and Depth of Residual Contamination at OU2 Subarea 3 Based on Investigation Activities and Removal-related Confirmation Soil Sampling
Libby Asbestos Superfund Site
Lincoln County, Montana

CDM Smith

Map Path: R:\GIS_Support\MXD\Figure_3-5_OU2Subarea3_171222.mxd



N

0 100 200 400

Feet

1 inch = 200 feet

Existing Soil Cover

Seasonally Flooded Areas

Riprap Cap

Well Location

OU2 Subareas

OU2 Boundary

Fence Line

Figure 3-6
Location of Protective Covers and Remedy Components at OU2
Libby Asbestos Superfund Site
Lincoln County, Montana

CDM Smith

Appendix A
Montana Department of Transportation MDT Encroachment Permit Application and Addendum

STATE OF MONTANA - DEPARTMENT OF TRANSPORTATION
HELENA, MT 59620-1001
ENCROACHMENT APPLICATION AND PERMIT

– To be filled in by Department of Transportation Personnel –

AGREEMENT NO.: _____ **MAINTENANCE NO.:** _____

PROJECT NO.: _____ **SIGN ROUTE:** _____

PROJECT NAME: _____ **ID NUMBER:** _____

CORRIDOR: _____ **RB:** _____ **MP:** _____

COUNTY: _____

– To be filled in by Department of Transportation Personnel and the requesting Company –

_____	_____	_____	_____
COMPANY OR CORPORATION	**Date**	**MONTANA DEPARTMENT OF TRANSPORTATION**	**Date**
_____		_____	
TITLE		**TITLE**	
_____		_____	
SIGNATURE		**SIGNATURE**	

Subject to the terms and conditions shown on Page 2 hereof; this permit is hereby approved and granted.

The "Permittee" agrees to the terms of this permit.

APPLICANT (PROPERTY OWNER)

APPLICATION FOR PERMISSION TO: _____*
(Give sufficient detail to permit thorough understanding and submit blueprints or sketches in triplicate.)
***If work involves Environmental-Related cleanup or monitoring, also complete Section 7.**

Township _____ Range _____ Section _____

1. Name of Applicant: _____
2. Address of Applicant: _____
3. Applicant's Phone #: _____ Fax #: _____ Email: _____
4. If Applicant is a Corporation, give State of Incorporation and names of President and Secretary:
   _____
5. Highway survey stations, milepost, distances to centerline, and distance from right-of-way line (in metric units) near which installations or structures will be installed:
   _____
6. For how long a period is the permit desired?: _____
7. Nature of Permit: _____
8. Environmental actions involving hazardous waste sites? (Superfund, Spills, Underground Storage Tanks, Old Mines, etc.)

   YES: ☐ If YES is checked continue to **Page 3** to complete the **Environmental Questions Pertaining to #8 on Page #1.**

   NO: ☐ If No is checked continue to **Page 2**, **Instructions Concerning Use of this Form**.

(INSTRUCTIONS
CONCERNING USE OF THIS FORM)

Applicant will complete this form along with plans, sketches and an environmental checklist and send to the appropriate District Maintenance Chief for review and approval.

AN ENVIRONMENTAL CHECKLIST MUST BE COMPLETED BY APPLICANT AND MUST BE ATTACHED TO THIS PERMIT. THE PERMIT MUST NOT BE PROCESSED WITHOUT AN ENVIRONMENTAL CHECKLIST.

IF THE PROPOSED INSTALLATION WILL RESULT IN SIGNIFICANT, PERMANENT OR LONG TERM IMPACTS TO THE TRANSPORTATION NETWORK IN TERMS OF SUBSTANTIAL INCREASE TRAFFIC VOLUMES, WEIGHT OR DELAYS TO TRAFFIC ON STATE ROADWAYS, SUCH AS MAJOR MINES GREATER THAN FIVE ACRES, A RAILROAD AT–GRADE CROSSING, RAILROAD UNDER OR OVERPASS, OR STRIP MINES, OR IF THE PROPOSED ACTION HAS PERMANENT IMPACTS TO OTHER FORMS OF TRANSPORTATION (RAIL, TRANSIT, OR AIR MOVEMENT), THE ENCROACHMENT PERMIT MUST BE SUBMITTED TO THE TRANSPORTATION PLANNING DIVISION FOR REVIEW PRIOR TO ISSUANCE OF THIS PERMIT.

Subject to the following terms and conditions, the permit applied for upon the reverse side hereof, is hereby granted:

1. TERM. This permit shall be in full force and effect from the date hereof until revoked as herein provided.

2. FEE. The fee for issuance of this permit is ._____.

3. REVOCATION. This permit may be revoked by State upon giving **45** days notice to Permittee by ordinary mail, sent to the address shown herein. However, the State may revoke this permit without notice if Permittee violates any of its conditions or terms.

4. COMMENCEMENT OF WORK. No work shall be commenced until Permittee notifies the Maintenance Chief shown in application the date the Permittee proposes to commence work.

5. CHANGES IN HIGHWAY. If State highway changes necessitate changes in structures or installations installed under this permit, Permittee will make necessary changes without expense to State.

6. STATE SAVED HARMLESS FROM CLAIMS. As a consideration of being issued this permit, the Permittee, its successors or assigns, agrees to protect the State and save it harmless from all claims, actions or damage of every kind and description which may accrue to, or be suffered by, any person or persons, corporations or property by reason of the performance of any such work, character of materials used, or manner of installations, maintenance and operation, or by the improper occupancy of said highway right-of-way, and in case any suit or action is brought against the State and arising out of, or by reason of, any of the above causes, the Permittee, its successors or assigns, will, upon notice to them of the commencement of such action, defend the same at its sole cost and expense and satisfy any judgment which may be rendered against the State in any such suit or action.

7. PROTECTION OF TRAFFIC. The Permittee shall protect the work area with traffic control devices that comply with the Manual of Uniform Traffic Control Devices. The Permittee may be required to submit a traffic control plan to the Maintenance Chief for approval prior to starting work. During work, the Maintenance Chief or designee may require the Permittee to use additional traffic control devices to protect traffic or the work area. No road closure shall occur without prior approval from the District Engineer.

8. HIGHWAY AND DRAINAGE. If the work done under this permit interferes in any way with the drainage of the State highway affected. Permittee shall, at the Permittee's expense, make such provisions as the State may direct to remedy the interference.

9. RUBBISH AND DEBRIS. Upon completion of work contemplated under this permit, all rubbish and debris shall be immediately removed and the roadway and roadside left in a neat and presentable condition satisfactory to the State.

10. INSPECTION. The installation authorized by this permit shall be in compliance with the attached plan and the conditions of this permit. The Permittee may be required to remove or revise the installation, at sole expense of Permittee. If the installation does not conform with the requirements of this permit or the attached plan.

11. STATE'S RIGHT NOT TO BE INTERFERED WITH. All changes, reconstruction or relocation shall be done by Permittee so as to cause the least interference with any of the State's work, and the State shall not be liable for any damage to the Permittee by reason of any such work by the State, its agents, contractors or representatives, or by the exercise of any rights by the State upon the highways by the installations or structures placed under this permit.

12. REMOVAL OF INSTALLATIONS OR STRUCTURES. Unless waived by the State, upon termination of this permit, the Permittee shall remove the installations or structures installed under this permit at no cost to the State and restore the premises to the prior existing condition, reasonable and ordinary wear and tear and damage by the elements, or by circumstances over which the Permittee has no control, excepted.

13. MAINTENANCE AT EXPENSE OF PERMITTEE. Permittee shall maintain, at its sole expense, the installations and structures for which this permit is granted, in a condition satisfactory to the State.

14. STATE NOT LIABLE FOR DAMAGE TO INSTALLATIONS. In accepting this permit, the Permittee agrees that any damage or injury done to said installations or structures by a contractor working for the State, or by any State employee engaged in construction, alteration, repair, maintenance or improvement of the State highway, shall be at the sole expense of the Permittee.

15. STATE TO BE REIMBURSED FOR REPAIRING ROADWAY. Upon being billed, therefore, Permittee agrees to promptly reimburse State for any expense incurred in repairing surface of roadway due to settlement at installation, or for any other damage to roadway as a result of the work performed under this permit.

16. The Permittee shall not discharge or cause discharge of any hazardous or solid waste by the installation or operation of the facility of a State Right-of-Way.

17. The Permittee will control noxious weeds within the disturbed installation area for two (2) years.

18. In accordance with Mont. Code Ann. § 76-3-403(2), Permittee shall, at Permittee's expense, employ the services of a Montana Licensed Professional Land Surveyor to re-establish all existing survey monuments disturbed by work contemplated under this permit.

19. The use of explosives is prohibited for the installation.

20. Any condition of this permit shall not be waived without written approval of the appropriate District Engineer.

21. OTHER CONDITIONS AND/OR REMARKS: _____

Environmental Questions Pertaining to #8 on Page #1- Environmental actions involving hazardous waste sites? (Superfund, Spills, Underground Storage Tanks, Old Mines, etc.)

8a. Name of Facility:_____ Facility ID:_____

Address: _____

City: _____State:_____Zip: _____

8b. Leaking underground storage tank site? ☐ Yes ☐ No

If yes, provide MDEQ identification number: _____

Petro Fund Eligible? ☐ Yes ☐ No

8c. Remediation Response Sites (State Superfund Site)? ☐ Yes ☐ No

If yes, identification number and/or site name: _____

8d. Federal Superfund Site? ☐ Yes ☐ No

If yes, identification number and/or site name: _____

8e. Active Mine: ☐ Yes ☐ No **OR** Abandoned Mine: ☐ Yes ☐ No

If yes, list the Mine Site ID#: _____

Mine Description or Name: _____

8f. Spill: ☐ Yes ☐ No

Spill Site: _____

Spill Description: _____

8g. Other Environmental Action: _____

For each well installed in MDT R/W, provide GPS coordinates in state plane coordinates (preferred) or well survey information in another format (continue on another sheet if necessary).

NOTE: Each well request needs to be submitted on a separate application form.

Well Designation	**Easting**	**Northing**

Control Number	Project Identification Number	Name/ Location Description	Route/Corr.	Fed Funds Involved? Yes ☐ No ☐

(↑For MDT Use Only↑)

ENVIRONMENTAL CHECKLIST for:

☐ **Approach Permit** ☐ **Encroachment/Occupancy (incl. Utility)**

☐ **Maintenance Projects (with No Right-Of-Way Acquisition, Sale or Transfer)**

Location: Highway or Route: _____ Milepost(s): _____

Physical Address: _____ City: _____

Legal Description: County: _____ Township: _____ Range: _____ Section(s):

Applicant Information: Name: _____ Phone: _____

Company/Utility _____ Business Phone: _____

Mailing Address: _____ City _____ State _____ Zip Code _____

	Impact Questions Actions that qualify for Categorical Exclusion under MEPA and/or NEPA (See ARM 18.2.261 and 23 CFR 771.117)	**Yes**	**No**	**Comment, Explanation, and/or Informat Source (Attach supporting information, necessary.)**
1.	Will the proposed action impact any known historical or archaeological site(s)?	☐	☐	
2.	Will the proposed action impact any publicly owned parkland(s), recreation area(s), wildlife or waterfowl refuge(s)?	☐	☐	
3.	Will the proposed action impact prime farmlands? (If yes, attach a completed Farmland Conversion Impact Rating Ad-1006.)	☐	☐	
4.	a. Will the proposed action have an impact on the human environment that may result from relocations of persons or businesses, changes in traffic patterns, changes in grade, or other types of changes?	☐	☐	
	b. Has the proposed action received any preliminary or final approval from the local land use authority?	☐	☐	
5.	For the proposed action, is there documented controversy on environmental grounds? (For example, has the applicant received a letter of petition from an environmental organization?)	☐	☐	
6.	Will the proposed action require work in, across or adjacent to a listed or proposed Wild or Scenic River?	☐	☐	
7.	Will the proposed action require work in a Class I Air Shed or nonattainment area?	☐	☐	
8.	Will the proposed action impact air quality or increase noise, even temporarily?	☐	☐	
9.	Will the proposed action have potential to affect water quality, wetlands, streams or other water bodies? If the answer is YES, an environment-related permit or authorization may be required.	☐	☐	
10.	Are solid or hazardous wastes or petroleum products likely to be encountered? (For example, project occurs in or adjacent to Superfund sites, known spill areas, underground storage tanks, or abandoned mines.)	☐	☐	
11.	a. Are there any listed or candidate threatened or endangered species, or critical habitat in the vicinity of the proposed action?	☐	☐	
	b. Will the proposed action adversely affect listed or candidate threatened or endangered species, or adversely modify critical habitat?	☐	☐	
12.	Will the proposed action require an environmental-related permit or authorization? If the answer is "yes," please list the specific permits or authorizations.	☐	☐	
13.	a. Is the proposed action on or within approximately 1 mile of an Indian Reservation?	☐	☐	
	b. If "Yes", will a Tribal Water Permit be required	☐	☐	N/A ☐
14.	Will the proposed action result in increased traffic volumes, increased wait or delays on state highways, or have adverse impacts on other forms of transportation (rail, transit or air movements)?	☐	☐	
15.	Is the proposed action part of a project that may require other governmental permits, licenses or easements? If "Yes", describe the full extent of the project and any other permits, licenses or easements that may be necessary for the applicant to acquire.	☐	☐	

16. ☐ Attach a brief description of the work to be performed, including any subsurface work.

17. ☐ Attach representative photos of the site(s) where the proposed action would be implemented. Photos are to include any structures, streams, irrigation canals, and/or potential wetlands in the project area.

18. ☐ Attach map(s) showing the location(s) of the proposed action(s); Section, Township, Range; highway or route number and approximate route post(s).

Checklist preparer: _____

Applicant Title Date

Reviewed for completeness by:

MDT District Representative	Title	Date

Checklist Approved by:

Environmental Services Bureau (When any of the items 1 through 15 are checked "Yes")	Title	Date
Transportation Planning (When items 14 or 15 are checked "Yes")	Title	Date

Checklist Conditions and Required Approvals

A. The Applicant is **not** authorized to proceed with the proposed work until the checklist has been reviewed and approved, as necessary, and any requested conditions of approval have been incorporated.

B. Complete the checklist items 1 through 15, indicating "Yes" or "No" for each item. Include comments, explanations, information sources, and a description of the magnitude/importance of potential impacts in the right hand column. Attach additional and supporting information as needed. Ensure that information required for items 16, 17, and 18, is attached. The checklist preparer, by signing, certifies the accuracy of the information provided.

C. If "Yes" is indicated on any of the items, the Applicant must explain the impacts as applicable. Appropriate mitigation measures that will be taken to avoid, minimize, and/or mitigate adverse impacts must also be described. **Any proposed mitigation measures will become a condition of approval.** Use attachments if necessary. If the applicant checks "No" and the District concludes there may in fact be potential impacts, the Environmental Checklist must be forwarded to Environmental Services Bureau for review and approval.

D. If "Yes" is indicated in item 11 a. (threatened or endangered species), the Applicant should provide information naming the particular species and the expected location, distribution and habitat use in the proposed action area, i.e. within the immediate area of the proposed action; or, in the general area on occasion (seasonally passes through) but does not nest, den or occupy the area for more than a few days.

E. If the applicant checks "Yes" for any item, the approach permit, occupancy agreement or permit, along with the checklist and supporting information, including the Applicant's mitigation proposal, documentation, evaluation and/or permits must be submitted to MDT Environmental Services Bureau. Electronic format is preferred.

F. When the applicant checks "Yes" to any item, the Applicant cannot be authorized to proceed with the proposed work until the MDT Environmental Services Bureau and/or Transportation Planning, as appropriate, reviews the information and signs the checklist.

G. Applicant must obtain all necessary permits or authorizations from other entities with jurisdiction prior to beginning the proposed action or activity. The Applicant is solely responsible for any environmental impacts incurred as a result of the project; obtaining any necessary environmental permits, notifications, and/or clearances; and ensuring compliance with environmental laws and regulations.

Montana's Wild and Scenic Rivers system as published by the U.S. Department of Agriculture, or the U.S. Department of the Interior:

1. Middle Fork of the Flathead River (headwaters to South Fork of the Flathead River confluence)
2. North Fork of the Flathead River (Canadian Border to Middle Fork of the Flathead River confluence)
3. South Fork of the Flathead River (headwaters to Hungry Horse Reservoir)
4. Missouri River (Fort Benton to Charles M. Russell National Wildlife Refuge)

Stream Permitting Guidelines

To be used for informational purposes when filling out the Environmental Checklist for MDT approach permits, encroachment/occupancy permits or Maintenance projects.

The most commonly required permits or authorizations are listed below. **Other permits or authorizations may be required**, and other laws may apply depending on the type and the location of the proposed activity. For more information please refer to "A Guide to Stream Permitting in Montana" available on the Internet at http://www.dnrc.mt.gov/permits/ or from your local conservation district office. (The information provided below was adapted from "A Guide to Stream Permitting in Montana")

Montana Natural Streambed and Land Preservation Act (310 Permit)

Any private, nongovernmental individual or entity that proposes any activity that physically alters or modifies the bed or banks of a **perennially flowing stream** must obtain a 310 permit before beginning work.

Contact the conservation district office to obtain a permit application, fill the application out and submit it to the local conservation district prior to any activity in or near a perennial-flowing stream. Once an application is accepted, a team that consists of a conservation district representative; a Department of Fish, Wildlife and Parks biologist; and the applicant may conduct an on site inspection. The team makes recommendations to the conservation district board, which has 60 days from the time the application is accepted to approve, modify, or deny the permit. Local rules apply. There is no charge for a 310 permit.

For more information, contact your local conservation district or the Conservation Districts Bureau – MT Department of Natural Resources and Conservation at (406) 444-6667, or the Montana Association of Conservation Districts (406) 443-5711

Montana Stream Protection Act (SPA 124 Permit)

Any agency or subdivision of federal, state, county, or city government proposing a project that may affect the natural existing shape and form of **any stream** or its banks or tributaries must obtain a SPA 124 permit before beginning work.

Any agency or unit of government planning a project must submit a Notice of Construction (application) to the Department of Fish, Wildlife and Parks, which has up to 60 days to review the application, perform an on-site investigation, and approve, modify, or deny the application. There is no application fee.

For more information contact the Habitat Protection Bureau – MT Fish, Wildlife and Parks (406) 444-2449.

Montana Floodplain and Floodway Management Act (Floodplain Development Permit)

Anyone planning new construction **within a designated l00 year floodplain** must obtain a floodplain development permit before beginning work. New construction includes, but is not limited to, placement of fill, roads, bridges, culverts, transmission lines, irrigation facilities, storage of equipment or materials, and excavation; new construction, placement, or replacement of manufactured homes; and new construction, additions, or substantial improvements to residential and commercial buildings. Check with local planning officials or the Floodplain Management Section of the Department of Natural Resources and Conservation to determine whether a 100-year floodplain has been designated for the stream of interest.

Floodplain Development Permits are available from the local floodplain administrator, who may be the city/county planner, sanitarian, building inspector, town clerk, or county commissioner.
Permit applications are available from the local floodplain administrator or from the Department of Natural Resources and Conservation. Application fees are established by the local government and vary widely throughout the state. The application process may take up to 60 days. Joint application participant-see Permitting Tips section.

For more information contact the Floodplain Management Section – MT Department of Natural Resources and Conservation (406) 444-0860.

Federal Clean Water Act (404 Authorization or Permit)

Anyone proposing a project that will result in the **discharge or placement of dredged or fill material into waters of the United States** must obtain a 404 authorization or permit before beginning work. "Waters of the United States" include lakes, rivers, streams (including perennial, intermittent, and ephemeral channels with an ordinary high water mark), wetlands, and other aquatic sites.

Anyone planning a project must submit an application to the U.S. Army Corps of Engineers (Corps). The U.S. Environmental Protection Agency also has regulatory review and enforcement functions under the law. Permit authorization varies depending on the size and scope of the intended project.

Activities that meet the conditions for a Nationwide or Regional General Permit may be approved in 10 to 45 days. Individual Permits require more extensive review and require a public notice period. Permit approval may take 90 to 120 days. Application fees for Individual Permits may vary from $10 for private individuals to $100 for commercial applicants. Do not send money with the application. Applicants will be notified if a fee applies.

For more information contact the U.S. Army Corps of Engineers, 10 West 15th Street, Suite 2200, Helena, MT 59626, Phone (406) 441-1375.

Short-term Water Quality Standard for Turbidity (318 Authorization)

Anyone initiating construction activity that will cause **short term or temporary violations of state surface water quality standards for turbidity in any "State water"** must obtain a 318 Authorization before beginning work. "State water" includes any body of water, irrigation system, or drainage system, either surface or underground, including wetlands, except for irrigation water where the water is used up within the irrigation system and the water is not returned to other state water.

A 318 Authorization must be obtained prior to initiating a project. The authorization may be obtained from the Department of Environmental Quality, or may be waived by the Department of Fish, Wildlife and Parks during its review process under the Natural Streambed and Land Preservation Act (310 Permit) or the Stream Protection Act (SPA 124 Permit).

Individual applications submitted to the Department of Environmental Quality are normally processed within 30 to 60 days. Authorizations waived under the 310 or SPA 124 permit processes correspond to the time frame under each permit system, usually 30 to 60 days. There is an application fee of $150.00 (make check or money order payable to Water Protection Bureau, Department of Environmental Quality).

For more information contact the Water Protection Bureau – MT Department of Environmental Quality (406) 444-3080.

Storm Water Discharge General Permits

Anyone proposing a construction **activity that will disturb one or more acres**, a defined industrial activity; a mining or oil and gas activity in which storm water will come into contact with overburden, raw material, intermediate products, finished products, or waste products located on the site of such operations (including active and inactive mine sites); or other defined activity that **has a discharge of storm water into surface waters**. Permit authorization is typically obtained under a Montana Pollutant Discharge Elimination System (MPDES) "General Permit".

For storm water discharges associated with construction activity, permit authorization is effective upon Department receipt of a complete Notice of Intent (NOI), Storm Water Pollution Prevention Plan (SWPPP), and fee. This must be received no later than the construction activity start date. For other regulated storm water discharges, a complete Application Form, SWPPP (except for Small MS4s), and fee must be received for review at least 30 days prior to the discharge of storm water from the facility or activity. Fees vary depending on the type of permit. Contact the Department or visit the website listed below for various storm water discharge "General Permits," Application/NOI Forms, fee schedule, and other permitting forms/information.

For more information contact the Water Protection Bureau – MT Department of Environmental Quality, (406) 444-3080, http://www.deq.mt.gov.

ADDENDUM TO MDT APPROACH AND ENCROACHMENT/OCCUPANCY PERMIT
NOTIFICATION OF LIBBY AMPHIBOLE ASBESTOS

MDT right-of-way surface soil located within the boundaries of the Libby Asbestos National Priorities List Superfund site and in yet unidentified areas of MDT right-of-way in Lincoln Co., Montana may contain ubiquitous amounts of amphibole asbestos contamination. This contamination is sourced from the historic mining, processing, and transport of vermiculite from the former W.R. Grace Mine located north of Libby, MT. The releases of Libby amphibole asbestos (LA) to the environment have caused a range of adverse health effects in exposed people, including not only workers at the mine and processing facilities, but also residents of Lincoln County.

Testing by MDT and the U.S. Environmental Protection Agency (EPA) has confirmed the presence of LA in both asphalt aggregate and in MDT right-of way surface soil on MT 37 north of the Kootenai River Bridge to past the junction with Rainy Creek Road. Though not yet tested, LA may also be present in trees and vegetation. Testing also indicates that other transportation corridors in Lincoln Co. also contain varying amounts of LA in both surface soil and vegetation.

(Name of Permittee) is hereby put on notice that undiscovered areas of LA contamination may be present in MDT right-of-way surface soil in the permit area. Permittee should take all appropriate precautions to guard against potential exposure to LA contamination by its agents, employees, or other third parties while conducting any soil or vegetation disturbance in MDT right-of-way in the permit area. Permittee shall notify the EPA to report any planned disturbance of soil or vegetation within the permit area, at (406) 291-5335. For additional information or questions, Permittee may contact the EPA or MDT Environmental Services in Helena, MT at (406) 444-7632.

Permittee, its agents and employees, agree to protect, defend and indemnify the State of Montana, MDT, its agents, and employees, and save and hold each of them harmless from and against all claims, demands and causes of action of any kind or character, including defense costs, arising from activities conducted under this permit, from any claims or causes of action from the Permittee's agents, employees, or other third parties arising from or allegedly due to activities under this permit, and from any claims, demands and causes of action of any kind or character, including defense costs, or damages due to or allegedly caused to any third parties for personal injuries, property damage, loss of life or property, civil penalties, or criminal fines resulting from or in any way connected with activities pertaining to this permit.

This Addendum constitutes an addition to said permit. All other provisions of said permit remain unchanged.

Appendix B
Flyway (Subarea 2) Environmental Covenant

252538 BOOK: 354 RECORDS PAGE: 15 Pages: 8
STATE OF MONTANA LINCOLN COUNTY
RECORDED: 07/28/2014 2:30 KOI: COVENANTS
TAMMY D. LAUER CLERK AND RECORDER
FEE: $66.00 BY: Deputy
FOR:W.R. GRACE & CO.

DECLARATION OF RESTRICTIVE COVENANTS ON REAL PROPERTY

1. This Declaration of Restrictive Covenants on real property ("Institutional Controls") is made this 11TH day of JULY, 2014, by Kootenai Development Company ("Owner", which term includes its successors and assigns), pursuant to Section 75-10-727, Montana Code Annotated ("MCA"), with the approval of the United States Environmental Protection Agency ("EPA") and the Montana Department of Environmental Quality ("DEQ"), third-party beneficiaries of these Institutional Controls.

2. WHEREAS, Owner is the owner of real property located in the County of Lincoln, State of Montana that comprises approximately 18 acres, hereinafter referred to as the "Property" (also known as the Flyway), which lies within Operable Unit No. 2 (OU2) of the Libby Asbestos Superfund site ("Site") [EPA ID No. #MT0009083840] located approximately four (4) miles east of Libby, Montana, in Section 32, Township 31N, Range 30W of Lincoln County as further particularly described by the Site Legal Description (Attachment A); and

3. WHEREAS, Kootenai Development Company entered into settlement agreements with the U.S. Government and with the DEQ regarding the Site that were entered by the United States Bankruptcy Court for the District of Delaware, *In re W. R. Grace & Co., et al.*, No. 01-01139 (JKF), on June 2, 2008 and July 21, 2008, respectively (collectively, the "Settlement Agreements").

4. WHEREAS, in the Record of Decision dated May 10, 2010 as amended (the "ROD"), the Assistant Regional Administrator, Office of Ecosystems Protection and Remediation, for EPA Region VIII, selected a Remedial Action for OU2 which allows for waste to be left on Site above levels that allow for unlimited use and unrestricted exposure providing these Institutional Controls are employed to mitigate a risk to the public health, safety, and welfare and the environment, limit land/resource use, and/or protect the integrity of the remedy. "Remedial Action" shall mean the Remedial Action described in the Libby Superfund Site OU2 ROD, and amendments thereto; and

5. WHEREAS, asbestos in the soil has been left in place on the Property, and the entire Property may contain asbestos at varying depths; and

6. WHEREAS, on certain portions of the Property, excavation has occurred up to four feet below ground surface; and

7. WHEREAS, Owner agrees to restrict the use of the Property to mitigate a risk to the public health, safety, and welfare and the environment by imposing appropriate institutional controls on the Property, the purpose of which is to ensure the permanent preservation and maintenance of remedial structures that are required to minimize human exposure and/or protect the integrity of the remedy; and

NOW, THEREFORE, Owner hereby agrees and declares:

8. Restrictions on Use: The following covenants, conditions and restrictions apply to the use of the Property, run with the land, and are binding on the Owner:

    a) Except as provided in subsection 8(b), below, no soil or other materials shall be disturbed in any manner by Owner, including without limitation drilling or excavation, without the express prior written approval of EPA and DEQ. It is Owner's intent that this limitation be construed as broadly as possible to prohibit any type of excavation on the entire Property whatsoever without written approval from EPA and DEQ.

    b) Prior to excavating, constructing, or otherwise disturbing any portion of the Property, Owner shall first obtain written approval from EPA and DEQ for a written plan that:

        1. Indicates (a) how a Montana-accredited inspector will sample and inspect for asbestos prior to disturbing the Property; (b) how members of the public will be protected from exposure to asbestos (including wetting and other best management practices); (c) how asbestos in soil will be managed, transported, and disposed to ensure protection of public health, safety, and welfare and the environment; (d) that samples of any cover must be collected and analyzed in accordance with EPA's most current practices; and (e) provides that transportation and disposal of soil that contains asbestos must be consistent with then-current state and federal laws governing asbestos-containing waste/material (e.g., the requirements contained in ARM 17.74.369), even if such requirements are not directly applicable;
        2. Specifies that all workers with access to the areas of the Property where the work is being conducted must be Montana-accredited asbestos workers and have the appropriate OSHA Hazardous Waste Operations and Emergency Response Standard (HAZWOPER) training;
        3. Explains how the integrity of the cover will be maintained following the excavation or disturbance; and
        4. Details how the health and safety of the excavation/construction workers will be managed by mitigating exposure to asbestos; however, EPA and DEQ will not provide written approval of such health and safety plan.

    c) Protection of the Integrity of Remedial Action. Owner shall not take, allow, or permit action on the Property if such action is reasonably likely to create an excessive risk of migration of hazardous or deleterious substances or a potential hazard to public health, safety, or welfare or the environment or will result in a disturbance of the structural integrity of any engineering controls designed or utilized at the Site to contain hazardous or deleterious substances or to limit

human or environmental exposure to the hazardous or deleterious substances.

9. Owner agrees to provide DEQ and EPA (including their representatives and contractors, and all representatives and contractors of any person conducting DEQ or EPA-approved remedial actions on the Property) access at reasonable times to the Property. Nothing in this document shall limit or otherwise affect EPA's rights of entry and access or EPA's authority to take response actions under CERCLA, the National Contingency Plan, or other federal law, to the extent such actions are consistent with the Settlement Agreements.

10. Any conveyance of all or a portion of the Property by Owner must clearly state that Kootenai Development Company shall remain an intended beneficiary of these Institutional Controls. The conveyance shall specify that the remedy of "specific performance" will be available to Kootenai Development Company for violations of these Institutional Controls, but that Kootenai Development Company is not required by this document to exercise the right of "specific performance." The conveyance shall also specify that at all times after Owner conveys its interest in the Property and no matter what person or entity is in title to or in possession of the Property, Kootenai Development Company and its agents shall retain the right, but not the obligation, to enter the Property at reasonable intervals and at reasonable times of the day, with reasonable advance notice, in order to inspect for violations of the Institutional Controls contained herein.

11. Except as provided in any state or federal law, including, but not limited to, CECRA, Sections 75-10-701 *et seq.*, MCA, and/or CERCLA as amended 42 U.S.C. § 9601, *et seq*, no Owner shall be liable for violations of the terms of these Institutional Controls occurring after its ownership in the Property has ceased. Liability for any acts occurring wholly before any transfer and liability for any transfer if in violation of these Institutional Controls shall survive the transfer. Any new Owner shall cooperate in the restoration of the Property or removal of violations caused by prior Owner(s) and may be held responsible for any continuing violations.

12. Owner shall notify DEQ and EPA within thirty (30) calendar days of receiving actual or constructive notice of any violation or potential violation of these Institutional Controls.

13. The provisions of these Institutional Controls of the Property shall run with the land and bind all holders, owners, lessees, occupiers, and purchasers of the Property. These Institutional Controls apply in perpetuity and every subsequent instrument conveying an interest in all or any portion of the Property shall include these Institutional Controls. Owner will notify DEQ and EPA of any proposed conveyance of all or a portion of the Property at least thirty (30) days prior to any such conveyance. DEQ and EPA need not be notified of conveyances of easements that are solely overhead (e.g., easements for utility lines) and do not involve any prohibited activities specified in Section 8 of these Institutional Controls, and such

conveyances do not need to include these Institutional Controls. Any conveyance by Owner shall require any future owner(s) to provide notice to all potential purchasers, as provided in Sections 15 and 16, below.

14. The rights provided to DEQ and EPA in these Institutional Controls include any successor agencies of DEQ and EPA.

15. Filing Notice of Institutional Controls. Owner shall cause the requirements of these Institutional Controls to be placed in all instruments that convey an interest in the Property, except as provided in Section 13, above. This requirement will be satisfied by Owner satisfying the requirement of Section 16, below. Owner shall file these Institutional Controls and any DEQ-approved modifications thereto in the land records of the Clerk and Recorder's Office, Lincoln County, Montana, within thirty (30) days of the date it is executed by the Owner. Owner must provide EPA and DEQ with a certified true copy of said instrument and its recording reference.

16. Notice Requirement. Owner agrees to include in any instrument conveying any portion of the Property, including, but not limited to, deeds, leases and mortgages, a notice that is in substantially the following form:

> NOTICE: THE INTEREST CONVEYED HEREBY IS SUBJECT TO AN INSTITUTIONAL CONTROL, DATED _____2014, RECORDED IN THE PUBLIC LAND RECORDS ON _____2014, IN BOOK___, PAGE___ , IN LINCOLN COUNTY. DOCUMENT _____

Within sixty (60) days of the date any such instrument or conveyance is executed, Owner must provide EPA and DEQ with a certified true copy of said instrument and, if it has been recorded in the public land records, its recording reference. Any conveyance of all or a portion of the Property must include a requirement to include the language in this Paragraph 16 in all future conveyances.

17. Enforcement of Institutional Controls. EPA and DEQ, as well as Kootenai Development Company upon its transfer of ownership of this Property, shall be entitled to enforce the terms of these Institutional Controls by resort to specific performance or other legal process as third-party beneficiaries including, but not limited to, the authority provided by CECRA and CERCLA. Owner specifically agrees that the remedy of "specific performance" of these Institutional Controls shall be available to DEQ and EPA in such proceedings. All remedies available hereunder shall be in addition to any and all other remedies at law or in equity, including CERCLA and CECRA. Any forbearance, delay or omission to exercise rights under this instrument in the event of a breach of any term of this instrument shall not be deemed to be a waiver of such term or of any subsequent breach of the same or any other term, or of any of the rights under this instrument. Venue for enforcement of these Institutional Controls by EPA and/or DEQ shall be in the First Judicial District Court,

Montana.

18. Notices. Any notice, demand, request, consent, approval or communication that any party desires or is required to give to the others shall be in writing and shall either be served personally or sent by first class mail, postage prepaid, addressed as follows:

Owner:	Kootenai Development Company c/o W. R. Grace & Co.-Conn. 6401 Poplar Avenue, Suite 301 Memphis, TN 38119
Courtesy Copy to:	W. R. Grace & Co.-Conn. Environmental Legal Counsel 7500 Grace Drive Columbia, MD 21044
EPA:	Program Director, Remedial Response Program U.S. Environmental Protection Agency 1595 Wynkoop Street Denver, CO 80202
DEQ:	Bureau Chief, Federal Superfund Bureau Montana Department of Environmental Quality Attn: Libby Asbestos Superfund Site P.O. Box 200901 Helena, MT 59620-0901
	Legal - Remediation Division Montana Department of Environmental Quality Attn: Libby Asbestos Superfund Site P.O. Box 200901 Helena, MT 59620-0901

19. Controlling Law. The interpretation and performance of this instrument shall be governed by the laws of the United States and the laws of the State of Montana.

20. These Institutional Controls were approved by DEQ under the provisions of Section 75-10-727, MCA, on July 1, 2014. These Institutional Controls shall run with the land and be binding on all successors in interest to the Property until the Institutional Controls are removed or modified in accordance with Section 75-10- 727 MCA and recorded in the land records referenced in Sections 15 and 16 above.

21. Owner agrees that these Institutional Controls may need to be modified following the

completion of the site-wide risk assessment for the entire Libby Superfund Site (based upon the final toxicity data), or based upon a five-year review conducted pursuant to CERCLA, as provided in the ROD.

IN WITNESS WHEREOF, Kootenai Development Company, has caused this instrument to be executed this 11 day of JULY, 2014.

By: Karen Ethier
Karen E. Ethier, solely in her capacity as Vice President of Kootenai Development Company, and not her individual capacity.

STATE OF MARYLAND
COUNTY OF HOWARD

The foregoing instrument was acknowledged before me this 11TH day of JULY, 2014, by Karen E. Ethier on behalf of Kootenai Development Company, a MONTANA Corporation, and not in her individual capacity, and acknowledged the said instrument to be the free and voluntary act and deed of said corporation, for the uses and purposes therein mentioned, and on oath stated that they are authorized to execute said instrument.

Witness my hand and official seal hereto affixed the day and year written above

SHIRLEY H. HEWITT
Notary Public
Baltimore County
Maryland
My Commission Expires Feb. 17, 2017

Shirley H. Hewitt
Notary Public

6818 HOLABIRD AVE.
BALTIMORE MD 21222
Address
My commission expires: FEB. 17, 2017

Attachments

A Property Description and Map

After Recording, Mail to:
WR Grace
7500 Grace Drive
Columbia, MD 21044

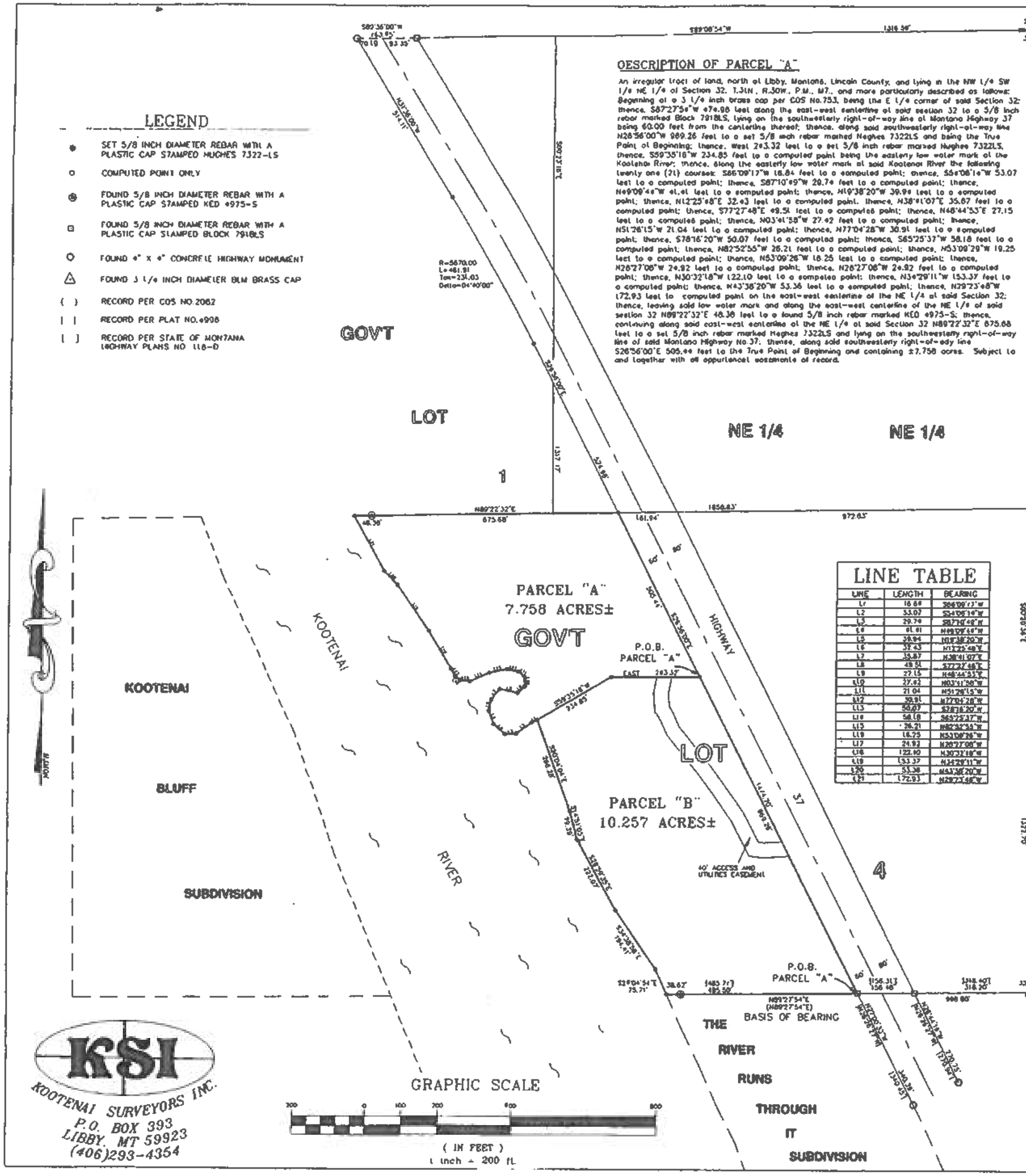
DESCRIPTION OF PARCEL "A"

An irregular tract of land, north of Libby, Montana, Lincoln County, and lying in the NW 1/4 SW 1/4 NE 1/4 of Section 32, T.31N., R.30W., P.M., MT., and more particularly described as follows: Beginning at a 3 1/4 inch brass cap per COS No.753, being the E 1/4 corner of said Section 32; thence, S87°27'54"W 474.68 feet along the east-west centerline of said section 32 to a 5/8 inch rebar marked Block 7918LS, lying on the southwesterly right-of-way line of Montana Highway 37 being 60.00 feet from the centerline thereof; thence, along said southwesterly right-of-way line N26°56'00"W 969.26 feet to a set 5/8 inch rebar marked Hughes 7322LS and being the True Point of Beginning; thence, West 243.32 feet to a set 5/8 inch rebar marked Hughes 7322LS; thence, S59°35'18"W 234.85 feet to a computed point being the easterly low water mark of the Kootenai River; thence, along the easterly low water mark of said Kootenai River the following twenty one (21) courses: S66°09'17"W 16.84 feet to a computed point; thence, S54°06'14"W 53.07 feet to a computed point; thence, S87°10'49"W 29.74 feet to a computed point; thence, N49°09'44"W 41.41 feet to a computed point; thence, N19°38'20"W 39.94 feet to a computed point; thence, N12°25'48"E 32.43 feet to a computed point; thence, N38°41'07"E 35.87 feet to a computed point; thence, S77°27'48"E 49.51 feet to a computed point; thence, N48°44'53"E 27.15 feet to a computed point; thence, N03°41'58"W 27.42 feet to a computed point; thence, N51°26'15"W 21.04 feet to a computed point; thence, N77°04'28"W 30.91 feet to a computed point; thence, S78°16'20"W 50.07 feet to a computed point; thence, S65°25'37"W 58.18 feet to a computed point; thence, N82°52'55"W 26.21 feet to a computed point; thence, N53°09'26"W 16.25 feet to a computed point; thence, N53°09'26"W 16.25 feet to a computed point; thence, N28°27'08"W 24.92 feet to a computed point; thence, N28°27'08"W 24.92 feet to a computed point; thence, N30°32'18"W 122.10 feet to a computed point; thence, N34°29'11"W 153.37 feet to a computed point; thence, N43°38'20"W 53.36 feet to a computed point; thence, N29°23'48"W 172.93 feet to computed point on the east-west centerline of the NE 1/4 of said Section 32; thence, leaving said low water mark and along the east-west centerline of the NE 1/4 of said section 32 N89°22'32"E 48.38 feet to a found 5/8 inch rebar marked KED 4975-S; thence, continuing along said east-west centerline of the NE 1/4 of said Section 32 N89°22'32"E 675.68 feet to a set 5/8 inch rebar marked Hughes 7322LS and lying on the southwesterly right-of-way line of said Montana Highway No.37; thence, along said southwesterly right-of-way line S26°56'00"E 505.44 feet to the True Point of Beginning and contoining ±7.758 acres. Subject to and together with all appurtenant easements of record.

DESCRIPTION OF PARCEL "B"

An irregular tract of land, north of Libby, Montana, Lincoln County, and lying in the NW 1/4 SW 1/4 NE 1/4 of Section 32, T.31N., R.30W., P.M., MT., and more particularly described as follows: Beginning at a 3 1/4 inch brass cap per COS No.753, being the E 1/4 corner of said Section 32; thence, S87°27'54"W 474.68 feet along the east-west centerline of said section 32 to a 5/8 inch rebar marked Block 7918LS, lying on the southwesterly right-of-way line of Montana Highway 37 being 60.00 feet from the centerline thereof, and being the True Point of Beginning; thence, continuing along said east-west centerline S89°27'54"W 485.50 feet to a 5/8 inch rebar marked KED 4975-S; thence, S89°27'54"W 38.62 feet to a computed point on the easterly low water mark of the Kootenai River; thence, along the easterly low water mark of said Kootenai River the following five (5) courses: N24°04'54"W 75.71 feet to a computed point; thence, N34°38'58"W 194.41 feet to a computed point; thence, N28°59'35"W 222.07 feet to a computed point; thence, N14°51'05"W 79.39 feet to a computed point; thence, N20°04'04"W 266.28 feet to a computed point; thence, leaving said low water mark N59°35'18"E 234.85' to a set 5/8 inch rebar marked Hughes 7322LS; thence, East 243.32 feet to a set 5/8 inch rebar marked Hughes 7322LS and lying on the southwesterly right-of-way line of said Montana Highway No.37; thence, along said southwesterly right-of-way line S26°56'00"E 969.26 feet to the True Point of Beginning and contoining ±10.257 acres. Subject to a 40.00 foot access and utilities easement as shown hereon, and together with all appurtenant easements of record.

Attachment A



LEGEND

- ● SET 5/8 INCH DIAMETER REBAR WITH A PLASTIC CAP STAMPED HUGHES 7322-LS
- ○ COMPUTED POINT ONLY
- ◉ FOUND 5/8 INCH DIAMETER REBAR WITH A PLASTIC CAP STAMPED KED 4975-S
- ◻ FOUND 5/8 INCH DIAMETER REBAR WITH A PLASTIC CAP STAMPED BLOCK 7918LS
- ○ FOUND 4" X 4" CONCRETE HIGHWAY MONUMENT
- △ FOUND 3 1/4 INCH DIAMETER BLM BRASS CAP
- ( ) RECORD PER COS NO.2062
- | | RECORD PER PLAT NO.4998
- [ ] RECORD PER STATE OF MONTANA HIGHWAY PLANS NO 118-D

DESCRIPTION OF PARCEL "A"

An irregular tract of land, north of Libby, Montana, Lincoln County, and lying in the NW 1/4 SW 1/4 NE 1/4 of Section 32, T.31N., R.30W., P.M., MT., and more particularly described as follows: Beginning at a 3 1/4 inch brass cap per COS No.753, being the E 1/4 corner of said Section 32; thence, S87°27'54"W 474.98 feet along the east-west centerline of said section 32 to a 5/8 inch rebar marked Block 7918LS, lying on the southwesterly right-of-way line of Montana Highway 37 being 60.00 feet from the centerline thereof; thence, along said southwesterly right-of-way line N28°56'00"W 989.26 feet to a set 5/8 inch rebar marked Hughes 7322LS and being the True Point of Beginning; thence, West 243.32 feet to a set 5/8 inch rebar marked Hughes 7322LS, thence, S59°35'18"W 234.85 feet to a computed point being the easterly low water mark of the Kootenai River; thence, along the easterly low water mark of said Kootenai River the following twenty one (21) courses: S86°09'17"W 18.84 feet to a computed point; thence, S54°08'14"W 53.07 feet to a computed point; thence, S87°10'49"W 29.74 feet to a computed point; thence, N49°09'44"W 61.61 feet to a computed point; thence, N19°38'20"W 39.94 feet to a computed point; thence, N12°25'48"E 32.43 feet to a computed point. thence, N38°41'07"E 35.87 feet to a computed point; thence, S77°27'48"E 49.51 feet to a computed point; thence, N48°44'53"E 27.15 feet to a computed point; thence, N03°41'58"W 27.42 feet to a computed point; thence, N51°26'15"W 21.04 feet to a computed point; thence, N77°04'28"W 30.91 feet to a computed point; thence, S78°16'20"W 50.07 feet to a computed point; thence, S65°25'37"W 58.18 feet to a computed point; thence, N82°52'55"W 26.21 feet to a computed point; thence, N53°09'29"W 19.25 feet to a computed point; thence, N53°09'26"W 18.25 feet to a computed point; thence, N28°27'08"W 24.92 feet to a computed point; thence, N28°27'08"W 24.92 feet to a computed point; thence, N30°32'18"W 122.10 feet to a computed point; thence, N34°29'11"W 153.37 feet to a computed point; thence, N43°38'20"W 53.36 feet to a computed point; thence, N29°23'48"W 172.93 feet to computed point on the east-west centerline of the NE 1/4 of said Section 32; thence, leaving said low water mark and along the east-west centerline of the NE 1/4 of said section 32 N89°22'32"E 48.38 feet to a found 5/8 inch rebar marked KED 4975-S; thence, continuing along said east-west centerline of the NE 1/4 of said Section 32 N89°22'32"E 875.68 feet to a set 5/8 inch rebar marked Hughes 7322LS and lying on the southwesterly right-of-way line of said Montana Highway No.37; thence, along said southwesterly right-of-way line S26°56'00"E 505.44 feet to the True Point of Beginning and containing ±7.758 acres. Subject to and together with all appurtenant easements of record.

LINE TABLE

LINE	LENGTH	BEARING
L1	18.84	S86°09'17"W
L2	53.07	S54°08'14"W
L3	29.74	S87°10'49"W
L4	61.61	N49°09'44"W
L5	39.94	N19°38'20"W
L6	32.43	N12°25'48"E
L7	35.87	N38°41'07"E
L8	49.51	S77°27'48"E
L9	27.15	N48°44'53"E
L10	27.42	N03°41'58"W
L11	21.04	N51°26'15"W
L12	30.91	N77°04'28"W
L13	50.07	S78°16'20"W
L14	58.18	S65°25'37"W
L15	26.21	N82°52'55"W
L16	18.25	N53°09'26"W
L17	24.92	N28°27'08"W
L18	122.10	N30°32'18"W
L19	153.37	N34°29'11"W
L20	53.36	N43°38'20"W
L21	172.93	N29°23'48"W

LINCOLN COUNTY, MONTANA

CERTIFICATE OF SURVEY

A PART OF GOV'T LOT 4 IN SECTION 32
T. 31N., R. 30W., P.M., MT.
FOR: KOOTENAI DEVELOPMENT CO.
DATE: OCTOBER 1999

PURPOSE OF SURVEY

I, Mark G. Owens, President of Kootenai Development Company, hereby certify that the purpose of this survey is to create 2 tracts of land for agricultural purposes, Parcel "A" and Parcel "B" containing ±7.758 acres and ±10.257 acres respectively and is exempt from review by the Department of Environmental Quality pursuant to 17.16.605(1)(h).

Mark G. Owens ____ Date 11-23-99

DESCRIPTION OF PARCEL "B"

An irregular tract of land, north of Libby, Montana, Lincoln County, and lying in the NW 1/4 SW 1/4 NE 1/4 of Section 32, T.31N., R.30W., P.M., MT., and more particularly described as follows: Beginning at a 3 1/4 inch brass cap per COS No.753, being the E 1/4 corner of said Section 32; thence, S87°27'54"W 474.68 feet along the east-west centerline of said section 32 to a 5/8 inch rebar marked Block 7918LS, lying on the southwesterly right-of-way line of Montana Highway 37 being 90.00 feet from the centerline thereof, and being the True Point of Beginning; thence, continuing along said east-west centerline S89°27'54"W 485.50 feet to a 5/8 inch rebar marked KED 4975-S; thence, S89°27'54"W 38.92 feet to a computed point on the easterly low water mark of the Kootenai River; thence, along the easterly low water mark of said Kootenai River the following five (5) courses: N24°04'54"W 75.71 feet to a computed point; thence, N34°38'58"W 194.61 feet to a computed point; thence, N28°59'35"W 222.07 feet to a computed point, thence, N14°51'05"W 79.39 feet to a computed point; thence, N20°04'04"W 266.28 feet to a computed point; thence, leaving said low water mark N59°35'18"E 234.85' to a set 5/8 inch rebar marked Hughes 7322LS; thence, East 243.32 feet to a set 5/8 inch rebar marked Hughes 7322LS and lying on the southwesterly right-of-way line of said Montana Highway No.37; thence, along said southwesterly right-of-way line S28°56'00"E 969.26 feet to the True Point of Beginning and containing ±10.257 acres. Subject to a 40.00 foot access and utilities easement as shown hereon, and together with all appurtenant easements of record.

ACKNOWLEDGEMENT

The foregoing Exemption was subscribed and acknowledged before me, a Notary Public, State of Montana, County of Lincoln, by the above named person(s), on ____ 1999. In witness whereof, I have hereunto set my hand and affixed my seal.

Bart McCully ____, Notary Public for the State of Montana,
residing in: Troy ____ My Commission expires: 3/24/2002

NOTARIAL SEAL STATE OF MONTANA

HISTORY OF SURVEY

1979 – COS No. 753, by 5612-S
1993 – COS No. 2080, by KED 4975-S
1993 – Plat No 4998, by 7918-S

METHOD OF SURVEY

A total station and data collector was used with closed traverse procedures to tie the previously set controlling corners and right-of way monuments

BASIS OF BEARING

The basis of bearing for this survey is N89°27'54"E, as shown on COS No. 2082, between found 5/8" rebar and found 3 1/4 inch brass cap.

COUNTY TREASUER CERTIFICATION

I hereby certify, pursuant to Section 76-3-611(1)(b), MCA, that all real property taxes and special assessments assessed and levied on the parcel shown hereon are paid.

____ 12/14/99
Lincoln County Treasurer, Lincoln County, Montana ____ Date

LAND SURVEYOR'S CERTIFICATION

I hereby certify that I am a Registered Land Surveyor in the State of Montana, that the survey shown on this Certificate of Survey has been prepared under my supervision and in accordance with the Montana Code Annotated, Sections 76-3-101 through 79-3-625, and the Lincoln County regulations adopted pursuant thereto.

Alvah F. Hughes 7322LS ____ 11-23-99
Alvah F. Hughes, Montana Reg No. 7322LS ____ Date

EXAMINING OFFICIAL'S CERTIFICATION

Approved this 15th day of Dec. 1999. A.D
____
Examining Official

COUNTY COMMISSIONER'S CERTIFICATION

Marianne B. Roose ____ 12/15/99
Chairman, Lincoln County Commissioners ____ Date

CLERK AND RECORDER'S CERTIFICATION

State of Montana, County of Lincoln, filed this 16th day of December 1999. A.D. at 10:15 o'clock A.M.

Corallie Cummings ____ by Jeannie Alexia
County Clerk Recorder ____ Deputy

CERTIFICATE OF SURVEY NO. 2891

Doc# 144383

Appendix C
Best Management Practices Manual

Libby Asbestos Superfund Site – Operable Unit 2

Best Management Practices Manual

This document has been prepared to outline best management practices (BMPs) for working within the Environmental Protection Agency (EPA) Libby Asbestos Superfund Site, operable unit 2 (OU2), the former Screening Plant and nearby properties. Discussion of the contaminant of concern (COC), BMPs, and where to find additional information pertaining to OU2, including, previous response actions, investigations, institutional controls (ICs), and the Site-wide Human Health Risk Assessment are provided within this document.

Contents

Section 1 Introduction 1-1

1.1 Contaminant of Concern 1-1

Section 2 Best Management Practices 2-1

2.1 Excavation 2-1

2.2 New Construction Projects 2-2

2.3 Importing of Materials 2-3

2.4 Exporting of Materials 2-4

Section 3 Additional Information and Resources 3-1

Section 4 References 4-1

Section 1 Introduction

OU2 includes areas impacted by contamination released from the Former Screening Plant. Remedial actions at OU2 included removal (excavation and disposal) and containment (with soil covers) of asbestos-containing source materials.

Exposure to vermiculite and Libby amphibole asbestos (LA) was largely mitigated by removal of soil and the placement of clean soil backfill cover during removal activities. Buried residual vermiculite and contaminated subsurface soil remains at OU2. Should excavation or other subsurface work be necessary at OU2, this BMP manual provides guidance on how to safely mitigate exposures to these LA-contaminated soils.

Numerous hard rock mines have operated in the Libby area since the 1880s, but the dominant impact to human health and the environment in the City of Libby has been from vermiculite mining and processing. The vermiculite deposit that was mined by Grace contains a distinct form of naturally occurring amphibole asbestos, LA, which is considered the COC at the Libby Asbestos Superfund Site. EPA initiated an emergency response action in November 1999 to address questions and concerns raised by citizens of the City of Libby regarding possible ongoing exposures to asbestos fibers as a result of historical mining, processing, and exportation of asbestos-containing vermiculite.

1.1 Contaminant of Concern

As previously stated, the COC for the site is LA. Asbestos fibers are odorless and tasteless and vary in length, structure, and chemical composition. Fibers are microscopic and environmentally persistent. They do not evaporate, burn, or dry out from heat or degrade in water. The toxicity of different types of asbestos fibers varies, but chronic and acute exposure to any one of them potentially can be fatal. While some chrysotile asbestos is likely present, it is not due to Site-related contamination and is not considered a COC. EPA actions at the Site have not focused on the removal of chrysotile or other forms of asbestos, only LA (EPA 2015).

Section 2 Best Management Practices

For the purposes of this document, BMPs are defined as means and methods when used in combination of developed ICs, provide guidance to owners, contractors, and land users for the prevention or reduction in the release and exposure to LA within OU2. The information within this section is grouped by the type of activities anticipated to take place in OU2 which could cause a release and potential exposure to LA.

2.1 Excavation

Excavation for the purpose of this document refers to any action of cutting, digging, or scooping soil, debris, or other materials from the ground surface or below.

BMP Guidance

1. Notify the Montana One-call (U-Dig) utility locate service prior to any excavation activity. Do not attempt to excavate any area prior to all utilities having been marked. The BOH-ARP is notified by the U-Dig call center for all activities planned within OU2 boundaries.
2. Obtain most current information on where contamination was removed or may remain. This information will be available from EPA developed documents as listed within the Additional Information and Resources section of this document.
3. Review the most current version of the *Former Screening Plant Operable Unit 2 Institutional Control Implementation and Assurance Plan* for the site to ensure any listed proprietary controls, government controls, enforcement tools, or informational devices have been adhered to prior to conducting work. The appropriate landowner or agency should be notified of the work to ensure all clearance and applicable permits are completed prior to work commencing.
4. Notify the property owner well in advance and in writing of any known plans to conduct excavation activities. Do not attempt to conduct excavation activities without prior notification or consent from the property owner.
5. When excavating, keep soil, debris, or other materials wet during work to minimize dust migration or potential exposure to LA.
6. Wear protective clothing while performing excavation activities (i.e., appropriate disposable protective clothing, gloves, and booties). Dispose of protective clothing appropriately (i.e., double bag and dispose in household garbage; check with local landfill for disposal options).
7. Common dust or surgical masks are not effective against asbestos fibers! Wearing a respirator with a HEPA filter is the best way to avoid breathing asbestos fibers. However, they must be used properly or exposure may still occur. For information on respirator requirements, visit OSHA's website: www.osha.gov/SLTC/respiratoryprotection.
8. If a change of condition occurs whereby LA contaminated material is observed, contact the property owner or entity responsible for operation and maintenance (O&M) for advice on how to manage the material.
9. See details regarding importing and exporting of materials below.

2.2 Construction Projects

The following lists BMPs for any new construction or road construction projects planned by either the owner, tenant, or contractor involved in the overall construction of any new area located within OU2. New construction refers to any site preparation for and construction of entirely new areas, new buildings, or new structures on the site which would cause a change of condition to the ground surface, regardless of size or scale.

BMP Guidance

1. Notify the Montana One-call (U-Dig) utility locate service prior to any excavation activity. Do not attempt to excavate any area prior to all utilities having been marked.
2. Obtain most current information on where contamination was removed or may remain. This information will be available from EPA developed documents as listed within the Additional Information and Resources section of this document.
3. Review the most current version of the *Former Screening Plant Operable Unit 2 Institutional Control Implementation and Assurance Plan* for the site to ensure any listed proprietary controls, government controls, enforcement tools, or informational devices have been adhered to prior to conducting work. The appropriate agency should be notified to ensure all clearance and applicable permits are completed prior to work commencing.
4. Notify the property owner well in advance and in writing of any known plans to conduct excavation activities. Do not attempt to conduct excavation activities without prior notification or consent from the property owner.
5. The entity performing new construction projects should develop a contingency plan for cases where contamination is encountered during activities.
6. Follow BMPs for importing and exporting of materials below.

2.3 Importing of Materials

Importing of materials refers to the hauling or transporting of any material for use, placement or disposal within the boundary of OU2. Materials include, but are not limited to, soil, rock, mulch, organic or non-organic debris, or building materials.

BMP Guidance

1. The property owner or entity responsible for maintaining control of the site should have a system in place to ensure importation of any materials does not have the potential to increase risk of LA exposure to land users. This may be satisfied through the use of a site management plan.
2. Any entity importing materials shall notify the property owner when importing materials to the site either through written documentation or in person. Entities shall make available any documentation confirming importation of materials will not have the potential to increase the risk of LA exposure or impact any protective remedy in place on the site.
3. Review IC plan for the site to ensure any listed proprietary controls, government controls, enforcement tools, or informational devices have been adhered to prior to conducting work.

2.4 Exporting of Materials

Exporting of materials refers to the hauling or transporting of any material for use, placement or disposal from OU2 to another location. Materials include, but are not limited to, soil, rock, mulch, organic or non-organic debris, or building materials.

BMP Guidance

1. The property owner or entity responsible for maintaining control of the site should have a system in place to ensure exportation of any materials does not have the potential to increase risk of LA exposure to areas outside of OU2. This may be satisfied through the use of a site management plan. The BOH-ARP may be contacted for assistance in evaluating materials for the potential presence of LA.
2. Any entity exporting materials should notify the property owner when exporting materials from the site either through written documentation or in person. Entities should make available any documentation confirming exportation of materials will not have the potential to increase the risk of LA exposure or impact any protective remedy in locations outside of OU2.
3. Review IC plan for the site to ensure any listed proprietary controls, government controls, enforcement tools, or informational devices have been adhered to prior to conducting work.
4. Check local, state and federal regulations regarding disposal or transportation of material.

Section 3 Additional Information and Resources

The following resources are available to provide information to property owners, tenants, land users, or visitors while conducting activities within OU2.

Record of Decision for Libby Asbestos Superfund Site, The Former Screening Plant Site, Operable Unit 2 (EPA 2010)
This document discusses the final decision and explains the remediation plan at the end of the detailed investigation and evaluation of conditions at the Site.

Site-Wide Human Health Risk Assessment – Libby Asbestos Superfund Site (EPA 2015)
The purpose of this document is to quantify potential human health risks from exposures to LA at the Site under current and future conditions. Results of this risk assessment are intended to help Site managers determine if past removal actions have been sufficient to mitigate risk, if additional remedial actions are necessary to address risks, and if so, which exposure scenarios would need to be addressed in future remedial actions.

Remedial Investigation Report – Operable Unit 2 (EPA 2009)
This document describes the nature and extent of LA at OU2, focused primarily on investigative measures taken on the site to characterize the level of contamination.

Remedial Action Report – Operable Unit 2 (CDM Smith 2012)
This document details the response actions and activities that have taken place at OU2.

Institutional Control Implementation and Assurance Plan – Operable Unit 2 (CDM Smith 2018a)
This document identifies activities that are designed to implement, maintain, and enforce ICs at OU2, and the organizations responsible for conducting these activities.

Operation and Maintenance Plan – Operable Unit 2 (CDM Smith 2018b)
This document presents the administrative, financial, and technical details and requirements for inspecting, operating, and maintaining at OU2.

Libby - EPA Information Center
108 E 9th St
Libby, MT 59923
(406) 293-6194

Asbestos Resource Program
418 Mineral Ave
Libby, MT 59923
(406) 291-5335
www.LCARP.com

The EPA Libby Asbestos Superfund Site website
http://cumulis.epa.gov/supercpad/cursites/csitinfo.cfm?id=0801744

Other guidance resources may be found at the following:

https://www.epa.gov/superfund/asbestos-superfund-sites

https://www.osha.gov/SLTC/asbestos/

http://deq.mt.gov/Public/asbestos

Section 4 References

CDM Smith. 2012. *Final Remedial Action Report, Operable Unit 2 – Former Screening Plant and Surrounding Properties*, Libby Asbestos Superfund Site, Lincoln County, Montana. April 20.

CDM Smith. 2018a. *The Former Screening Plant, Operable Unit 2, Institutional Control Implementation and Assurance Plan,* Libby Asbestos Superfund Site. Libby Montana. Revision 2, March.

CDM Smith. 2018b*. Operations and Maintenance Plan, The Screening Export Plant, Operable Unit 2*, Libby Asbestos Superfund Site, Lincoln County, Montana, March.

EPA. 2009. *Final Remedial Investigation Report, Operable Unit 2 – Former Screening Plant and Surrounding Properties*, Libby Asbestos Site, Libby Montana. August 24.

EPA. 2010. *Record of Decision for Libby Asbestos Superfund Site, The Former Screening Plant and Surrounding Properties,* Operable Unit 2, Lincoln County Montana. May.

EPA. 2015. *Final Site-wide Human Health Risk Assessment*, Libby Asbestos Superfund Site, Libby, Montana. November.

Attachment 1

Reducing Asbestos Exposure

Libby Amphibole Asbestos

Libby amphibole asbestos (LA) is a naturally occurring mineral but should be handled with extreme care. Exposure to LA can lead to serious asbestos-related diseases, such as asbestosis, lung cancer or mesothelioma.

The health risk from exposure to all asbestos depends greatly on the amount of asbestos in the material you are disturbing and length of time that exposure lasts; therefore, precautions should be exercised to limit asbestos exposures.

Vermiculite

Vermiculite was mined in Libby, MT and was commonly used in and around homes in Lincoln County for a variety of reasons, including as a soil additive, construction aggregate and attic insulation. If vermiculite is present, it may contain LA.

If you encounter vermiculite on your property, it is possible that it is contaminated with asbestos. The disturbance of vermiculite that is contaminated with asbestos may cause the LA to become airborne. **Cover or wet the vermiculite and call the ARP Hotline**. The ARP will help determine if the vermiculite is contaminated with LA.

You may come into contact with asbestos on your property even if the EPA has investigated the property or completed a removal.

High efficiency particulate air, **HEPA**, filter vacuums are effective for asbestos containing vermiculite insulation. Never vacuum vermiculite with a regular vacuum. Also, use a HEPA vacuum for household cleaning and to remove dust from inaccessible areas, such as under carpets, appliances or furniture.

EDUCATION • RESOURCES • INITIATIVES
LINCOLN COUNTY ARP
ASBESTOS RESOURCE PROGRAM

ARP Hotline – 406-291-5335

Call if you plan to remodel, demolish, excavate OR if you find vermiculite on your property. The Asbestos Resource Program (ARP) will send personnel out to inspect the situation, provide information, and make recommendations. The ARP may also serve as a liaison during those activities.

You may come into contact with Libby amphibole asbestos during:

Renovating – removing old carpets or drywall, installing ceiling fans or removing wall outlets, taking down walls, putting in windows

Routine landscaping – gardening, rototilling or mowing

Extensive digging – septic systems, sprinklers or water lines

Should I be worried about asbestos if the EPA has already been to my property?

Even though the EPA has visited your property, you could still come into contact with asbestos.

Call the ARP for more information on the investigation and removal activities completed by the EPA and for details about the asbestos that may remain on your property.

REMEMBER, regular dust masks are not effective in reducing exposure to LA.

Reducing Asbestos Exposure

Vermiculite in soil

Processed vermiculite often seen as insulation.

Additional Resources

Lincoln County Asbestos Resource Program
418 Mineral Avenue
Libby, MT 59923
406-283-2442
www.lcarp.org

United States
Environmental Protection Agency
Information Center
108 E. 9th St
Libby, MT 59923
406-293-6194
www2.epa.gov/region8/libby-asbestos

Montana
Department of Environmental Quality
Asbestos Control Program
406-444-5300

Steps to take while renovating or demolishing:

- **Do** contact the ARP Hotline before renovating or demolishing.
- **Do** check local, state and federal regulations regarding renovation and demolition of buildings.
- **Do** use point-of-cut ventilation techniques when pulling, cutting or accessing behind boards or wall coverings.
- **Do** use a HEPA vacuum at the point of access or disturbance to minimize dust migration and lessen potential exposure.

Demolition:

- **Do** use water to moisten the area being demolished to minimize dust.
- **Do** rinse off any equipment within the work area.
- **Do** keep all debris wet and covered with a tarp during transportation.
- **Do** dispose of debris according to local, state and federal laws including landfill specific requirements.

Steps to take while working outside of your home:

- **Do** water your lawn often, a healthy lawn reduces dust.
- **Do** rinse gardening tools outside within your work area after every use.
- **Do** wipe your feet and/or take your shoes off at the door and leave them outside, if possible. Try not to bring any contaminated clothing or material back inside.
- **Do** wash your hands outdoors after any yard work, if possible.
- **Do not** disturb areas where you can see vermiculite. If it is a place you intend to work in, cover the vermiculite and call the ARP Hotline.
- **Do not** dig, cultivate, mow, rake or rototill your yard or garden when it is dry and dusty.
- **Do not** bring dusty or dirty things inside.

CALL THE ARP HOTLINE IF YOU SEE ANY VERMICULITE ON YOUR PROPERTY, EVEN IF YOU ARE UNSURE.

Contractors & Tradesmen Working Indoors

What To Do If You Find Vermiculite and Asbestos In A Home or Business

Lincoln County Asbestos Resource Program (ARP) – (406) 291-5335
EPA Information Center— 108 E. 9th Street, Libby, MT 59923— (406) 293-6194

Revised: January 2014

Vermiculite in Libby & Troy

For several decades, vermiculite was commonly used in and around homes in Lincoln County for a variety of applications, including as a soil additive, construction aggregate, and attic insulation.

If vermiculite is present, it might contain Libby Amphibole (LA) asbestos which is toxic. Exposure to LA could lead to such serious diseases as asbestosis, lung cancer, or mesothelioma. It will take several years for EPA to complete its cleanup, and workers might encounter vermiculite during that time and even after EPA has finished its work. It is not possible for EPA to remove (or to even know about) *all* the vermiculite in the area. In some cases, vermiculite might be intentionally left in sealed walls, home foundations, and other relatively inaccessible areas. Remodeling, repair, electrical, or plumbing work might uncover vermiculite that was otherwise sealed in place. **Always ask the homeowner if they know where you might find vermiculite.**

It is possible that you might unexpectedly find vermiculite after starting your work, perhaps by cutting into a wall (drill a pilot test hole first) or uncovering something that EPA or the homeowner did not know about. **EPA strongly cautions you not to work with vermiculite or disturb it any way.**

Improper work practices can contaminate the interior of the home or building where you are working! It is your responsibility to know the state and local laws and regulations.

Raw and Popped Vermiculite Ore

Precautionary Steps to Take So You Can Get On With Your Job

If you encounter vermiculite, it is likely that you will be exposed to Libby Amphibole asbestos. If you choose to continue working, take the following minimal steps:

1. **Always notify the resident**. If they haven't already told you about it, they might not know.

2. **For very small quantities, such as a handful, or if you are unsure as to whether it's vermiculite or not,** you can call the **Asbestos Resource Program (ARP).** If you do not want to call the ARP, as a precaution, use a damp paper towel to scoop up the material into a sealable plastic bag or jar. Then use another damp towel to wipe down the area. Place the used paper towels in the container and throw everything away in a proper receptacle (a covered trash can is OK).

3. **Never vacuum vermiculite with a regular vacuum**. HEPA filter vacuums are effective on small quantities of vermiculite. Residents who have had a cleanup done should have a HEPA vacuum. If you do not have access to a HEPA vacuum, call the EPA Information Center.

4. **For larger quantities, such as what you might find in a breached wall, or if you are unsure as to whether it's vermiculite or not,** do not disturb the material. Do not vacuum large amounts of vermiculite - even with a HEPA vacuum. Isolate and cover the area and **call the ARP immediately**.

5. **No matter the volume or location of known or suspected vermiculite, contact the ARP** Please notify the ARP early to protect yourself and your workers and to ensure the most appropriate action is taken.

Libby Asbestos is toxic. It should be avoided or handled with extreme care. Exposure to Libby Amphibole asbestos has resulted in disease in workers and non-workers who have had contact with contaminated materials. Take care not to bring any contaminated clothing or material back to your home or business. Treat any asbestos containing material as regulated material and comply with all state and local regulations. The health risk from exposure to **all** asbestos depends greatly on the amount of asbestos in the material you are disturbing and how long the exposure lasts. **There is no known threshold risk level for asbestos-related materials, and any exposure will increase the risk of asbestos-related disease.** If you take the basic precautions outlined in this fact sheet, your risk from exposure will be less.

Who Can I Contact With Questions About Asbestos?

Common dust or surgical masks are not effective against asbestos fibers! Wearing a respirator with a HEPA filter is the best way to avoid breathing asbestos fibers. However, they must be used properly or exposure may still occur. For information on respirator requirements, visit OSHA's website: www.osha.gov/SLTC/respiratoryprotection.

EPA Information Center— (406) 293-6194
ARP— (406) 291-5335

The EPA, the ARP, or DEQ might send personnel out to inspect a situation involving vermiculite or LA. That guidance might include advising the owner to allow EPA or a licensed asbestos contractor or inspector to take samples, conduct cleanup, or take other special measures to reduce the risk of asbestos exposure. A list of licensed contractors and inspectors can be found at the Information Centers.

Montana Department of Environmental Quality—Asbestos Control Program
(406) 444-5300

Montana law requires that employers hire a licensed inspector to determine if asbestos is present before doing any work. Asbestos that is not associated with the Libby vermiculite mine is still regulated by the Montana DEQ. If non-Libby asbestos is found, it should be dealt with according to Montana regulations. Explore Montana DEQ's Asbestos web site at: **www.deq.mt.gov/Asbestos**

Please learn about the risks of asbestos exposure and basic precautions by reviewing the fact sheets available at the EPA **Information Center** or the website listed below:

- **HEPA Vacuum Cleaner Program** – *Revised January, 2014*. Provides information on the effectiveness of HEPA vacuums and describes their role in Libby's cleanup.
- **Lincoln County Do-It-Yourselfers** – *Revised January, 2014.*
- **Contractors & Tradesmen Working Outdoors** – *Revised January, 2014.*
- **Demolition Activities** – Revised *January, 2014.*
- **Libby and Troy Residents: Vermiculite or Asbestos In or Around Your Home or Business** – *Revised*
- *January, 2014*
- **Yard Work and Gardening Activities** – *Revised July 2013*

Explore the EPA web site and its links at: http://www2.epa.gov/region8/libby-asbestos

Contractors & Tradesmen Working Outdoors

What To Do If You Find Vermiculite and Asbestos Around A Home or Business

Lincoln County Asbestos Resource Program (ARP) – Libby (406) 291-5335
EPA Information Center— 108 E. 9th Street, Libby, MT 59923— (406) 293-6194

Revised January 2014

Vermiculite in Libby

For several decades, vermiculite was commonly used in and around homes in Lincoln County for a variety of applications, including as a soil additive, construction aggregate, and attic insulation.

If vermiculite is present, it might contain Libby Amphibole asbestos (LA). Exposure to LA could lead to such serious diseases as asbestosis, lung cancer, and mesothelioma. It will take several years for EPA to complete the cleanup, and workers might encounter vermiculite during that time and even after EPA has finished its work. It is not possible for EPA to remove (or to even know about) *all* the vermiculite in the area. In some cases, vermiculite might be intentionally left in sealed walls, home foundations, and other relatively inaccessible areas. Construction, remodelling, or landscaping involving digging might uncover vermiculite either before or after EPA cleans the property.

Always ask the homeowner if they know where buried vermiculite might be. EPA might have information on the property based on the investigation, design, and cleanup that has been completed. When calling EPA, you will need to provide the address, location of the work, and the likely depth of excavation.

It is possible that you might unexpectedly find vermiculite after starting your work, perhaps by uncovering it while doing any major outdoor project. EPA strongly cautions you not to disturb it in any way that might cause LA to become airborne.

Precautionary Steps to Take So You Can Get On With Your Job

If you encounter vermiculite, it is likely that you will be exposed to Libby Amphibole asbestos. If you choose to continue working, take the following minimal steps:

1. **Always notify the resident**. If they haven't already told you about it, they might not know.

2. **Stop work to assess the volume** of vermiculite. Cover or wet down the material, if possible.

3. **For very small quantities** of vermiculite, such as handful, EPA recommends you wet the area and contact the **Asbestos Resource Program (ARP) for appropriate evaluation and possible removal. If possible, leave it alone.** If the material is buried, leave it there. It's better to have it buried than at the surface.

4. **For larger quantities** of vermiculite such as when it was used as fill around pipes, around other structures, or as bulk fill (you may have sparkling soil) **do not to disturb the material – call the Asbestos Resource Program (ARP) immediately.**

5. **No matter the volume or location of known or suspected vermiculite, contact the ARP. Lincoln County, and EPA are considering a formal notification requirement. Please notify us early to protect yourself and your workers and to ensure the most appropriate action is taken.**

Raw and Popped Vermiculite Ore

Libby Asbestos is toxic. It should be avoided or handled with extreme care. Exposure to Libby Amphibole asbestos has resulted in disease in workers and non-workers who have had contact with contaminated materials. Take care not to bring any contaminated clothing or material back to your home or business. Treat any asbestos containing material as regulated material and comply with all state and local regulations. The health risk from exposure to **all** asbestos depends greatly on the amount of asbestos in the material you are disturbing and how long the exposure lasts. **There is no known threshold risk level for asbestos-related materials, and any exposure will increase the risk of asbestos-related disease.** If you take the basic precautions outlined in this fact sheet, your risk from exposure will be much less.

Common dust or surgical masks are not effective against asbestos fibers! Wearing a respirator with a HEPA filter is the best way to avoid breathing asbestos fibers. However, they must be used properly or exposure may still occur. For information on respirator requirements, visit OSHA's website: www.osha.gov/SLTC/respiratoryprotection.

Who Can I Contact With Questions About Asbestos?

EPA Information Center— (406) 293-6194
ARP— (406) 291-5335

The EPA, the ARP, or DEQ might send personnel out to inspect a situation involving vermiculite or LA. That guidance might include advising the owner to allow EPA or a licensed asbestos contractor or inspector to take samples, conduct cleanup, or take other special measures to reduce the risk of asbestos exposure. A list of licensed contractors and inspectors can be found at the Information Centers.

Montana Department of Environmental Quality—Asbestos Control Program
(406) 444-5300

Montana law requires that employers hire a licensed inspector to determine if asbestos is present before doing any work. Asbestos that is not associated with the Libby vermiculite mine is still regulated by the Montana DEQ. If non-Libby asbestos is found, it should be dealt with according to Montana regulations. Explore Montana DEQ's Asbestos web site at: **www.deq.mt.gov/Asbestos**

Please learn about the risks of asbestos exposure and basic precautions by reviewing the fact sheets available at the **Information Centers** or the website listed below:

- **HEPA Vacuum Cleaner Program** – *January 2014*. Provides information on the effectiveness of HEPA vacuums and describes their role in Libby's cleanup.
- **Lincoln County Do-It-Yourselfers** – *Revised January 2014*
- **Contractors & Tradesmen Working Indoors** – *Revised January 2014*
- **Demolition Activities** – *January 2014*
- **Libby and Troy Residents: Vermiculite or Asbestos In or Around Your Home or Business** – *Revised January 2014*
- **Yard Work and Gardening Activities** – *January 2014*

Explore the EPA web site and its links at: http://www2.epa.gov/region8/libby-asbestos

Demolition Activities

What To Do If You Are Tearing Down Structures That Contain Vermiculite or Asbestos

Lincoln County Asbestos Resource Program (ARP); Libby and Surrounding Area – (406) 291-5335
EPA Information Center - 108 E. 9th St.; Libby, MT 59923 - (406) 293-6194

Revised: January 2014

Vermiculite In Libby & Troy

Raw and Popped Ore

For several decades, vermiculite was commonly used in and around homes in Lincoln County for a variety of applications, including as a soil additive, construction aggregate, and attic insulation.

If vermiculite is present, it might contain Libby Amphibole asbestos (LA). Exposure to LA could lead to serious diseases such as asbestosis, lung cancer, and mesothelioma. It will take several more years for EPA to complete the cleanup, and workers might encounter vermiculite during that time or even after EPA has finished its work. It is not possible for EPA to remove (or to even know about) *all* the vermiculite in the area. In some cases, vermiculite might be intentionally left in sealed walls, home foundations, and other relatively inaccessible areas. Demolition of any existing structure in the Libby/Troy area might uncover vermiculite either before or after EPA has completed its work.

It is possible that you might unexpectedly find vermiculite after starting your demolition project. EPA strongly cautions you not to disturb it in any way that might cause LA to become airborne.

Precautionary Steps To Take So You Can Get On With Your Job

Before Demolition:

1. **Contact the Asbestos Resource Program (ARP) for a free assessment of the situation.**
2. Check **local, state and federal regulations** regarding demolition of buildings.
3. Check with the local landfill to learn if inspection of your debris is required.

During Demolition:

1. **Use water to moisten the area being demolished to minimize dust generation.** There should be no offsite migration of dust during demolition activities.
2. **Stop work to assess the volume** of vermiculite. Call the ERS immediately if something unusual is encountered.
3. **Utilize point-of-cut ventilation techniques** when pulling, cutting, or accessing behind boards or wall coverings, use a HEPA vacuum at the point of access or disturbance to minimize dust migration to lessen potential exposure.
4. **For a small quantity** of vermiculite, such as a very isolated area or a few random flakes, EPA recommends you wet and place it in a sealable plastic bag (remember to rinse any tools used to transfer vermiculite) and put the bag in the trash.

After Demolition:

1. **Keep larger quantities of vermiculite wet** – vermiculite that was used as fill around pipes, in walls, as bulk fill, etc.
2. Keep all debris wet and covered with a tarp during transportation.
3. Dispose of debris according to local, state, and federal laws.

Libby Amphibole asbestos (LA) should be avoided or handled with extreme care. Exposure to LA has resulted in disease in workers and non-workers who have had contact with contaminated materials. Take care not to bring any contaminated clothing or material back to your home or business. Treat any asbestos containing material as regulated material and comply with all state and local regulations. There is no known threshold risk level for asbestos-related materials, and any exposure will increase the risk of asbestos-related disease. The health risk from exposure to **all** asbestos depends greatly on the amount of asbestos in the material you are disturbing and how long the exposure lasts. If you take the basic precautions outlined in this fact sheet, your project will be completed with minimal exposure to LA.

Common dust or surgical masks are not effective against asbestos fibers! Wearing a respirator with a HEPA filter is the best way to avoid breathing asbestos fibers. However, they must be used properly or exposure may still occur. For information on respirator requirements, visit OSHA's website: www.osha.gov/SLTC/respiratoryprotection.

Who Can I Contact With Questions About Asbestos?

EPA Information Center - (406) 293-6194
ARP for the Libby area – (406) 291-5335

EPA, the ARP, or DEQ may send personnel out to inspect a situation involving vermiculite or LA. They might advise the owner to allow EPA or a licensed asbestos contractor or inspector to take samples, conduct cleanup, or take other special measures to reduce the risk of asbestos exposure. A list of licensed inspectors and contractors can be found at the Information Centers.

Montana Department of Environmental Quality - Asbestos Control Program (406) 444-5300

Montana law requires that employers hire a licensed inspector to determine if asbestos is present before doing any work. Asbestos that is not associated with the Libby vermiculite mine is still regulated by Montana DEQ. If non-Libby asbestos is found, it should be dealt with according to Montana regulations. Visit Montana DEQ's Asbestos web site at: **www.deq.mt.gov/Asbestos**

Please learn about the risks of asbestos exposure and basic precautions by reviewing the fact sheets available at the **Information Centers** or the website listed below:

- **HEPA Vacuum Cleaner Program** – *Revised January 2014*. Provides information on the effectiveness of HEPA vacuums and describes their role in Libby's cleanup.
- **Lincoln County Do-It-Yourselfers** – *Revised January 2014*
- **Contractors & Tradesmen Working Indoors** – *Revised January 2014*
- **Contractors & Tradesmen Working Outdoors** – *Revised January 2014*
- **Libby and Troy Residents: Vermiculite or Asbestos In or Around Your Home or Business** – *Revised January 2014*
- **Yard Work and Gardening Activities** – Revised *January 2014*
- **Explore the EPA web site and its links at: http://www2.epa.gov/region8/libby-asbestos**

Libby and Troy Residents

Vermiculite or Asbestos
In or Around Your Home or Business

EPA Information Center • 108 E. 9th Street, Libby, MT 59923 • 406-293-6194
Lincoln County Asbestos Resource Program (ARP) • 406-291-5335

Revised: January 2014

Vermiculite in Libby & Troy

Vermiculite was used in a variety of forms for decades in and around Libby homes as a soil additive, a lightweight aggregate for concrete, and attic insulation, among other things.

If vermiculite is present, it may contain Libby asbestos. It will take several years to complete the cleanup and people may encounter vermiculite during that time. Vermiculite will continue to be discovered from time to time long into the future and even after cleanup by the EPA. It is not possible for EPA to remove all the contaminated vermiculite. Vermiculite may be left in sealed walls, home foundations, and other relatively inaccessible areas.

Some encounters with vermiculite will be small and may include:

- **minor renovations –** removing old carpets, installing ceiling fans, or removing wall outlets
- **minor landscaping –** replacing bedding for plants and mowing

There will be times when a large pocket of vermiculite is discovered. Such situations may include:

- **intrusive digging** – septic systems, sprinklers, and water lines.
- **major renovations –** taking walls down, putting in windows, etc.
- **fires –** fire-fighting and subsequent cleanup.

Protect Yourself

Hiring a licensed asbestos contractor to clean up vermiculite spilled while doing home improvements is recommended to minimize your exposure.

Take Steps to Avoid Exposure

1. For a small quantity, such as a handful of vermiculite, wet wipe it and throw it away. For a small quantity of vermiculite in surface soil, such as a very isolated area or a few random flakes, we recommend you wet it and have it removed by contacting the **Asbestos Resource Program (ARP)**. **If possible, leave it alone.** If the material is buried, keep it that way – it's better buried than at the surface.
2. HEPA filter vacuums are effective on small quantities of vermiculite indoors. **Never vacuum vermiculite with a regular vacuum.** HEPA vacuums and wet wiping can be used periodically to remove any small amounts of asbestos containing dust that is introduced into your home or to vacuum dust from previously inaccessible locations such as under recently removed carpets, appliances, and furniture.
3. For larger quantities of vermiculite, such as what you may find in a breached wall, do not disturb the material. **Do not vacuum large amounts of vermiculite – even with a HEPA vacuum.**
4. Dry mowing or rototilling in yards and gardens, where vermiculite is found may cause asbestos to become airborne. If possible, sprinkle your yard or garden with water before mowing or tilling.
5. If you encounter a large amount of vermiculite in soil that cannot be avoided, such as when it was used around pipes, around other structures, or as bulk fill – you may have

sparkling soil – **do not disturb the material. Contact ERS for appropriate evaluation and removal.**

6. If you are planning on remodeling your home, find out if there is vermiculite in the attic or walls, or any of the materials that will be taken out, disturbed, or are likely to create dust. You can call the EPA Information Center at 293-6194, if you are unsure. You should also be aware of specific regulations regarding remodeling, demolition, and disposal that may impact your work, especially big projects.

7. Renters – You have a right to know about any adverse conditions at your rental. Ask your landlord about the presence of vermiculite. If you do not receive the information you request, contact the EPA Information Center or Lincoln County Sanitarian.

Libby asbestos is toxic. It should be avoided or handled with extreme care. The health risk from exposure to all asbestos depends greatly on the amount of asbestos in the material you are disturbing and how long the exposure lasts. Frequent exposures to high levels of asbestos for lengthy periods of time pose a significant risk. Little disturbance of small amounts of vermiculite insulation or other products containing a low level of asbestos poses a smaller risk, especially if you take basic precautions.

Who Can I Contact With Questions About Asbestos?

EPA Information Center – (406) 293-6194

ARP for the Libby/Troy areas – (406) 291-5335

EPA, the ERS, or DEQ may send personnel out to inspect a situation involving vermiculite or LA. They might advise the owner to allow EPA or a licensed asbestos contractor or inspector to take samples, conduct cleanup, or take other special measures to reduce the risk of asbestos exposure. A list of licensed inspectors and contractors can be found at the Information Center.

Montana Department of Environmental Quality
Asbestos Control Program
(406) 444-5300

Montana law requires that employers hire a licensed inspector to determine if asbestos is present before doing any work. Asbestos that is not associated with the Libby vermiculite mine is still regulated by Montana DEQ. If non-Libby asbestos is found, it should be dealt with according to Montana regulations. Visit Montana DEQ's Asbestos web site at:

www.deq.mt.gov/Asbestos

Please learn about the risks of asbestos exposure and basic precautions by reviewing the fact sheets available at the **Information Centers** or the website listed below:

- **HEPA Vacuum Cleaner Program** – *Revised, January 2014*. Provides information on the effectiveness of HEPA vacuums and describes their role in Libby's cleanup.
- **Lincoln County Do-It-Yourselfers** – *Revised January 2014*
- **Contractors & Tradesmen Working Indoors** – *Revised January 2014*
- **Contractors & Tradesmen Working Outdoors** – *Revised January 2014*
- **Yard Work and Gardening Activities** – *Revised January 2014*
- **Demolition Activities** – *Revised January 2014*
- **Explore the EPA web site and its links at: http://www2.epa.gov/region8/libby-asbestos**

Yard Work and Gardening Activities

What To Do If You Are Working In Your Yard and Come Across Soil That Contains Vermiculite or Asbestos

Revised: January 2014

Vermiculite In Libby & Troy

For several decades, vermiculite was commonly used in and around homes in Lincoln County for a variety of applications, including as a soil additive, construction aggregate, and attic insulation. If vermiculite is present, it might contain Libby Amphibole asbestos (LA).

Exposure to LA could lead to serious diseases such as asbestosis, lung cancer, and mesothelioma. It will take several more years for EPA to complete the cleanup, and property owners might encounter vermiculite during that time or even after EPA has finished its work. It is not possible for EPA to remove (or to even know about) *all* the vermiculite in the area.

It is possible that you might unexpectedly find vermiculite after starting your yard work or gardening activities. If you do, EPA strongly cautions you not to disturb it further and cause LA to become airborne.

Precautionary Steps To Take While Working In Your Yard

The Do's:

1. **Do** water often. A healthy lawn reduces dust and contact with bare soil.
2. **Do** mow your lawn or roto-till your garden when it's damp—not when it's dry or dusty.
3. **Do** rinse off any rental equipment within your work area before returning the equipment.
4. **Do** rinse off gardening tools outside within your work area after every use.
5. **Do** wipe your feet and/or take your shoes off at the door and leave them outside, if possible.
6. **Do** wash your hands outdoors after any yard work, if possible.
7. **Do** call the **Lincoln County Asbestos Resource Program (ARP)** **at no cost to you** if you see ANY vermiculite on your property, even if you are unsure. While waiting for ARP to arrive, take precautions to not disturb the area.

The Don'ts:

1. **Don't** disturb areas where you can see vermiculite. If it's a place you intend to work in, cover the vermiculite and call **ARP**.
2. **Don't** dig, cultivate, mow, rake or roto-till your yard or garden when it's dry and dusty.
3. **Don't** bring dusty or dirty things inside.

The photo on the immediate right is an example of raw vermiculite in soils. When heated, vermiculite exfoliates (or pops), forming a lightweight material ideal for packing, insulation, and as a soil additive as shown in the far right photo.

Cautions regarding Libby Amphibole:

- LA should be avoided or handled with extreme care.
- Exposure to Libby Amphibole asbestos has resulted in disease in workers and non-workers who have had contact with contaminated materials. Take care not to bring any contaminated clothing or material back to your home or business.
- Treat any asbestos containing material as regulated material and comply with all state and local regulations.

There is no known threshold risk level for asbestos-containing materials, and any exposure will increase the risk of asbestos-related disease. The health risk from exposure to **all** asbestos depends greatly on the amount of asbestos in the material you are disturbing and how long the exposure lasts. If you take the basic precautions outlined in this fact sheet, your project will be completed with minimal exposure to LA.

Who Can I Contact With Questions About Asbestos?

EPA Information Center – 108 E. 9th Street; Libby, MT 59923 – (406) 293-6194
Lincoln County Asbestos Resource Program (ARP) – (406) 291-5335
Montana Department of Environmental Quality –
Asbestos Control Program (406) 444-5300

Please learn about the risks of asbestos exposure and basic precautions by reviewing the fact sheets available at the **Information Centers** or the website listed below:

- **HEPA Vacuum Cleaner Program** – *Revised May January 2014.*
- **Lincoln County Do-It-Yourselfers** – *Revised January 2014*
- **Contractors & Tradesmen Working Indoors** – *Revised January 2014*
- **Contractors & Tradesmen Working Outdoors** – *Revised January 2014*
- **Libby & Troy Residents: Vermiculite or Asbestos In or Around Your Home or Business** – *Revised January 2014*
- **Demolition Activities** — *Revised January 2014*

Explore the EPA web site and its links at: http://www2.epa.gov/region8/libby-asbestos

Indoors:

DO wipe your feet and/ or take your shoes off at the door and leave them outside, if possible.

DO wash your hands after gardening, playing outdoors, or doing other messy things.

DO vacuum frequently, and only use a HEPA* vacuum.

*High Efficiency Particulate Air - learn more about these vacuums at the EPA Info Center

DO call the Lincoln County ***Asbestos Resource Program (ARP)*** if you see ANY vermiculite on your property **(406) 291-5335.**

If you are unsure about material you are bringing onto your property, call the **ARP** to have it sampled first.

DON'T bring dusty or dirty things inside.

DO keep your pets clean.

DO use a HEPA vacuum to remove dust from clothing, furniture, drapes, etc.

Photo of raw (left) and processed (right) vermiculite. *View samples at the EPA Info Center.*

Libby Asbestos Superfund Site
EPA Information Center
108 E. 9th ST., Libby, MT 59923
(406) 293-6194

Revised January 2014

Don’t

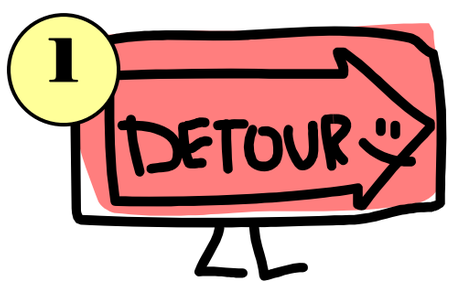
let an unwanted visitor into your home!!

13 simple steps to protect yourself and your loved ones from Libby Amphibole Asbestos (LA)

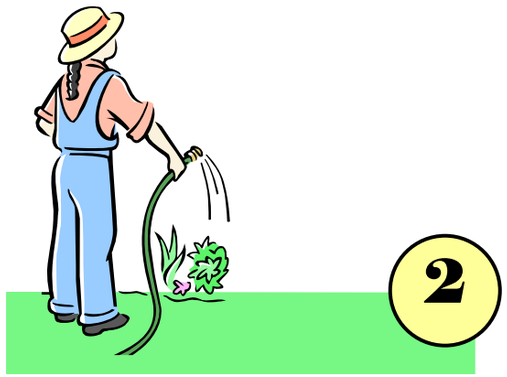
Reducing contact with disturbed, contaminated soil is important in reducing your exposure to LA. LA poses the greatest threat when it is airborne.
For a lower risk of exposure, focus on keeping contaminated soil from being disturbed in your yard and trapped in your home.

This flyer gives some common sense tips on avoiding exposure to LA on your property.

Outdoors:



DON’T disturb areas where you can see vermiculite *(see picture on back)*. Find other places to play or garden.

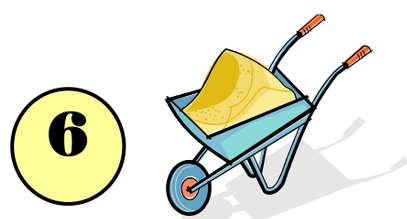


DO water often. A healthy lawn reduces dust and contact with bare soil.

DO mow your lawn when it’s damp – not when it’s dry and dusty.

DON’T dig, cultivate, or roto-till your garden soil when it is dry and dusty, and do suppress any dust with water.

DO rinse off gardening tools outside.



DON’T buy or accept free topsoil or fill from an unknown source. If you are unsure, call the EPA Info Center.