

**Highways & Roadways
Operable Unit 8
Institutional Control
Implementation and Assurance Plan
Revision 0**

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

U.S. Environmental Protection Agency



Libby Asbestos Superfund Site
Libby, Montana

September 2017



**CDM
Smith**

**Libby Asbestos Superfund Site
Highways & Roadways
Operable Unit 8
Lincoln County, Montana**

Institutional Control Implementation and Assurance Plan, Revision 0

USACE Contract No. W912DQ-15-D-3013

Task Order No. DK03


Reviewed by:


Geoffrey McKenzie, P.E.
CDM Smith Technical Reviewer

Date:

9/20/17

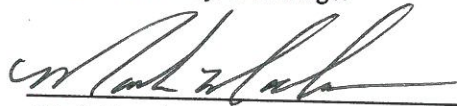
Approved by:


Thomas Cook, CHMM, PMP
CDM Smith Project Manager

Date:

9/20/17


Approved by:


Mark Meacham
USACE Omaha District, Program Manager

Date:

9/20/17

Approved by:


Dania Zinner
EPA Region VIII Remedial Project Manager

Date:

9/21/17

Document Revision Log

Revision No.	Date	Description
0	9/2017	---

Table of Contents

Section 1	Introduction	1-1
Section 2	Site Details	2-1
	2.1 Site Description	2-1
Section 3	Operable Unit 8 – Highways & Roadways.....	3-1
	3.1 OU8 Characteristics and History	3-1
	3.2 Response Action Discussion	3-1
	3.2.1 Institutional Control Elements	3-1
	3.3 Contaminant of Concern	3-2
	3.3.1 Boundaries of Impacted Resources	3-2
	3.4 Current OU8 Site Information	3-4
	3.4.1 Parcel Ownership/Occupancy Information.....	3-4
	3.4.1.1 Montana Highway 37, US Highway 2, County Roads (Kootenai River Road, County Highway 482 [Farm to Market Road], and County Highway 567 [Pipe Creek Road])	3-4
	3.4.2 Property Interest and Resource Ownership.....	3-4
	3.4.3 Current and Reasonably Anticipated Future OU8 Land Use.....	3-4
	3.4.3.1 Land Use	3-4
	3.4.3.2 Groundwater Use.....	3-4
	3.4.3.3 Surface Water Use	3-4
	3.4.4 Responsible Parties and Stakeholders	3-4
	3.4.5 Local Government Information.....	3-5
	3.5 Site Mapping.....	3-5
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	5-1
	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.....	1-1
Table 4-1	Status of IC Implementation	4-1

List of Figures

Figure 1-1	Site Location Map
Figure 2-1	Operable Unit Boundary Map
Figure 3-1	LA in Surface Soil at OU8

Appendices

Appendix A	Montana Department of Transportation Encroachment Permit Application and Addendum
Appendix B	Best Management Practices Guidance Manual
Appendix C	Supporting Figures from Reference Documents

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
DEQ	Montana Department of Environmental Quality
EPA	U.S. Environmental Protection Agency
ESD	explanation of significant differences
Grace	W.R. Grace
HHRA	human health risk assessment
HQ	hazard quotient
IC	institutional control
ICIAP	Institutional Control Implementation and Assurance Plan
IUR	inhalation unit risk
LA	Libby amphibole asbestos
MDT	Montana Department of Transportation
MCA	Montana Code Annotated
O&M	operations and maintenance
OU	operable unit
PLM-VE	polarized light microscopy using visual estimation
R _{fc}	reference concentration
RME	reasonable maximum exposure
ROD	record of decision
ROW	right-of-way
SEMS	Superfund Enterprise Management System
Site	Libby Asbestos Superfund Site
U-Dig	Montana utility locate service
VCI	vermiculite-containing insulation

This page was 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 on OU8. 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 OU8 were performed by the EPA, in consultation with the DEQ, under the Superfund law.

OU8 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). Exposure to vermiculite and Libby amphibole asbestos (LA) was largely mitigated by removal of surface soil and the placement of clean soil backfill in areas of OU8 (known as the Highways & Roadways operable unit) during removal activities. For residential and commercial properties abutting the state and federal highway corridor, through OU1, OU2, OU4, and OU7, investigation and response actions were performed based on the residential and/or commercial use of the property, which sometimes extended into the highway right-of-way (ROW).

This ICIAP identifies and documents activities that are designed to implement, maintain, and enforce ICs at OU8, and the organizations responsible for conducting these activities. This ICIAP will help ensure that OU8 ICs are properly implemented to protect the remedies in place, and continue to operate as intended.

Oversight of ICs will be included during operation and maintenance (O&M) phase on the OU8 site and is included in the OU8-specific O&M plan.

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 that lie within the boundaries of the Site.

This page was intentionally left blank.

Section 2

Site Details

2.1 Site Description

The Libby Asbestos Superfund 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 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 contaminant of concern (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. To facilitate a multi-phase approach to remediation of the Libby Asbestos Superfund 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 the downtown area of the City of Libby, Montana. The property is bounded by the Kootenai River on the north, Highway 37 on the east, the 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 Highway 37. The Highway 37 right-of-way adjacent to the OU1 site was included due to the proximity to the OU1 site and the known contamination in the ROW.

OU2. OU2 includes areas impacted by contamination released from the Former Screening Plant. The Highway 37 right-of-way adjacent to the OU2 site was included due to the proximity to the OU2 site and the known contamination in the ROW. For the purposes of this ICIAP, the contaminated portion of the Highway 37 right-of-way 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 the subject of this plan and is comprised of the US Highway 2, MT 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 8 – Highways & Roadways

3.1 OU8 Characteristics and History

During the time the former Vermiculite Mine operated, MT Highway 37, US Highway 2, and county roads (Kootenai River Road, County Highway 482 [Farm to Market Road], and County Highway 567 [Pipe Creek Road]) included in this OU were used to transport vermiculite and vermiculite products from the mine to the former Screening Plant and Export Plant as well as other mining-related areas. They were also used by workers and industries servicing the mine. LA-contaminated materials may also have been used as fill in some instances to build or repair the road embankments. Aggregate used in asphalt construction may also represent potential sources of LA within OU8.

3.2 Response Action Discussion

Designated an OU in 2009, multiple investigation, pre-removal, and removal events have occurred within OU8. Systematic soil sampling was performed in support of the Remedial Investigation report along the ROW. The EPA has addressed some parts of OU8 along with response actions for other OUs. Portions of MT Highway 37 adjacent to OUs 1 and 2 have been addressed as part of their respective removal and remedial actions; these areas are depicted in the figures provided in Appendix C. The activities associated with investigations and response actions within OU8 are detailed in the *Final Remedial Investigation Report, Operable Unit 8 – Local and State Highways in Libby and Troy, Libby Asbestos National Priorities List Site* (HDR 2013) and the *Final Remedial Action Report, Operable Unit 8 – Highways* (CDM Smith 2017). In addition, response actions performed in other OUs sometimes extended onto highway rights-of-way and thus OU8. These response actions (OU1 and OU2) are discussed in more detail in the RA Report for the respective OU for which the response action was performed (EPA 2013, EPA 2012a). For residential and commercial properties abutting the county, state and federal highway corridors, investigation and response actions were performed based on the residential and/or commercial use of the property, which sometimes extended into the highway right-of-way. These investigations and response actions will be documented in the OU4 and OU7 RA Report.

3.2.1 Institutional Control Elements

The following is a list of response action IC elements currently in place to satisfy the remedial alternatives discussed in the *Record of Decision for Libby Asbestos Superfund Site, Libby and Troy Residential and Commercial Properties, Parks and Schools, Transportation Corridors, Industrial Park, Operable Units 4-8* (EPA 2016):

For OU8, ICs will be used to ensure that any future encounters with residual contamination are managed appropriately. Currently, ICs for OU8 include 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 the near future; detailed descriptions of each of these ICs and the IC instruments for OU8 is available in Section 4 and 5.

- Montana utility locate service (U-Dig) [Montana Code Annotated (MCA) 2013, 69-4-503].
- Montana Department of Transportation (MDT) encroachment permit and addendum
- Best management practices (BMP) manual

- EPA Libby Asbestos Superfund Site website (OU8 information source)
- O&M Plan
- City/County Board of Health¹ (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 OU8 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* (CDM Smith 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, MT (Meeker et al. 2003). LA is a hazardous substance under the Comprehensive Environmental Response, Compensation, and Liability Act. LA has the ability to form durable, long, and thin structures that are generally respirable, can reasonably be expected to cause disease, and hence is considered the contaminant of concern 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 as a result of historical mining, processing, and exportation of vermiculite.

3.3.1 Boundaries of Impacted Resources

Numerous investigations, removals, and remedial actions have been conducted within OU8 and are discussed in Section 3.2. As discussed, removals and remedial actions conducted within OU8 have been done as part of other OUs (e.g., OU1, OU2, and OU4/OU7). Based on those response actions, contamination is known to be present in the following media:

- Soil (surface/subsurface)
- Air (Activity-based sampling [ABS] air and ambient air)

Exposure to the contamination has been mitigated by various removal actions (see Section 3.2) conducted at OU8 primarily to remove accessible source materials.

Location of LA in the surface soil at OU8, based on investigation and other response activities, are shown on Figure 3-1. Further details of investigations and other response actions are discussed within the *Final Remedial Investigation Report, Operable Unit 8 – Local and State Highways in Libby and Troy, Libby Asbestos National Priorities List Site* (HDR 2013) and the *Highways, Operable Unit 8, Remedial Action Report* (CDM Smith 2017)

¹ 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.

Specific sources of contamination, as described in the *Final Remedial Investigation Report, Operable Unit 8 – Local and State Highways in Libby and Troy, Libby Asbestos National Priorities List Site* (HDR 2013) and the *Highways, Operable Unit 8, Remedial Action Report* (CDM Smith 2017) include the following:

- Soil – Surface soil (i.e., 0 to 6 inches below ground surface [bgs] for specific use areas [driveway] or 0 to 3 inches bgs for non-specific use areas [yard]), is known to contain LA concentration ranges of Bin A by polarized light microscopy using visual estimation (PLM-VE) (i.e., LA is not observed), Bin B1 by PLM-VE (i.e., LA is present at levels greater than non-detect and less than 0.2 percent [by mass]), and Bin B2 by PLM-VE (i.e., LA is present at levels less than 1 percent). As previously mentioned, residential and commercial properties abutting the OU8 corridors, investigation and response actions were performed based on the residential and/or commercial use of the property, which sometimes extended into the OU8 ROW. It is possible for subsurface (i.e., at or below excavation depth) levels within the ROW to contain LA concentrations of Bin A by PLM-VE to Bin C by PLM-VE (LA is present at levels 1% or greater). Investigations and response actions will be documented in the OU4 and OU7 RA Report for residential and commercial properties abutting the OU8 ROW.
- ABS Air – ABS is considered to be the most direct way to estimate potential exposures from inhalation of asbestos. ABS activities for ATV riding, brush hogging and grass cutting were conducted along OU8 corridors and are discussed further in the *Final Remedial Investigation Report, Operable Unit 8 – Local and State Highways in Libby and Troy, Libby Asbestos National Priorities List Site* (HDR 2013). LA was not detected in air during grass cutting activities. However, LA was detected during ATV riding and brush hogging. Concentrations associated with these activities ranged between <0.0020 LA s/cc to 0.0180 s/cc (HDR 2013).

For OU8, exposures from driving on roads in Libby and Troy resulted in estimated reasonable maximum exposure (RME) hazard quotients (HQs) at or below 0.3, even when based on upper-bound exposure estimates. These results indicate risks from this scenario alone are below a level of concern and not likely to be an important contributor to cumulative risks (EPA 2016).

Exposures to recreational visitors while riding all-terrain vehicles along the ROW and to outdoor workers during brush-clearing, mowing, and rotomilling activities in OU8 resulted in estimated RME HQs ranging from 0 to 0.9, with brush-clearing activities resulting in the highest exposures. As discussed in the site-wide human health risk assessment (HHRA), because ABS activities were conducted on smaller segments of the ROWs in OU8, it was necessary to extrapolate ABS results to ROW segments that had not been sampled using ABS. This was done by assessing the degree to which soil results from the ABS areas were similar to the soil results for areas without ABS data. Figure 6-15 of the site-wide HHRA, included in Appendix C, illustrates the measured LA soil concentrations in OU8. The site-wide HHRA concluded that, because the segments selected for ABS were selected to be representative of the highest soil concentrations (LA soil concentrations ranged from Bin A to Bin B2 by PLM-VE) potential risks along the ROW in segments without ABS, where LA soil concentrations are lower, are likely to be lower (EPA 2016).

- Ambient Air – Stationary sampling included ambient air proximal to a person or piece of equipment conducting ABS activities. Such stationary air samples were collected to represent conditions in the breathing zone as a surrogate for a personal air sample (e.g., a person walking on the sidewalk during roto-milling operations on the adjacent street) (HDR 2013). Of the 52 inner perimeter field samples collected, LA was detected in one of samples at a concentration of 0.0030 s/cc (HDR 2013). Detection limits ranged from 0.0017 s/cc to 0.0247 s/cc (HDR 2013).

3.4 Current OU8 Site Information

3.4.1 Parcel Ownership/Occupancy Information

The Listed parcel ownership information is presented for those entities who are responsible for maintaining the respective highway corridors. The MDT maintains an interactive map gallery showing maintenance responsibilities for roadways in Montana; this information can be accessed at <http://www.mdt.mt.gov/publications/map-gallery.shtml>.

3.4.1.1 Montana Highway 37, US Highway 2, County Roads (Kootenai River Road, County Highway 482 [Farm to Market Road], and County Highway 567 [Pipe Creek Road])²³

Owner: State of Montana
2701 Prospect Ave
Helena, MT 59601

The property is currently classified and is anticipated to remain as a transportation corridor.

3.4.2 Property Interest and Resource Ownership

Although ownership and maintenance responsibilities within OU8 are listed as that of the state of Montana, as mentioned previously, residential and commercial properties abutting the county, state and federal highway corridor ROWs, have undergone investigation and response actions. Therefore, those residential and commercial properties may impact the insurance of carrying out ICs in those areas.

3.4.3 Current and Reasonably Anticipated Future OU8 Land Use

3.4.3.1 Land Use

For all transportation corridor areas of OU8, the ICs have been developed based upon the current land use, which is the reasonably anticipated future land use.

3.4.3.2 Groundwater Use

The EPA does not consider groundwater to be a viable pathway for LA exposure within OU8, therefore, groundwater use is not included under this IC plan.

3.4.3.3 Surface Water Use

The EPA does not consider surface water to be a viable pathway for LA exposure within OU8, therefore, surface water use is not included under this IC plan.

3.4.4 Responsible Parties and Stakeholders

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

² Not all land associated with these highway ROWs are owned by MDT. There is a patchwork of federal, state, and local land ownership along these highway corridor ROWs.

³ State Secondary highways maintained by MDT.

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 for OU8 is shown on Figure 3-1.

Section 4

Institutional Control Implementation

The following table (Table 4-1) provides a brief summary of the implementation for all IC instruments for OU8 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	U-Dig	Encroachment Permit and Addendum	BOH-ARP	Information Center	BMP Manual	O&M Plan
Instrument Category	Informational Device	Informational Device	Informational Device	Informational Device	Informational Device	Informational Device
IC Objectives (a)	1, 2	1, 2	1, 2	1, 2	1, 2	2
Use to Maintain Protectiveness of Remedy	Not Applicable	Penetration of the protective physical remedy, disturbance and transportation of potential contaminated sub-surface soil	Not Applicable	Not Applicable	Best Management Practices and Engineering Controls	Best Management Practices and Engineering Controls
Implementation Prerequisites	Already in place	Already in place	Already in place	Already in place	Already in place	Not currently in place
Implementation Complete	Already in place	Already in place	Already in place	Already in place	Already in place	Not currently in place
Person or Organization Responsible for Performing Implementation	EPA/BOH-ARP	MDT	EPA/BOH-ARP	EPA / DEQ	EPA / DEQ / Property owner	EPA / DEQ
Instrument Lifespan	In perpetuity			Temporary	In perpetuity	
Conditions for Termination of IC	Complete removal and disposal of all LA contamination at the subject property			Throughout Remedial Action at the Site	Complete removal and disposal of all LA contamination at the subject property	

(a) IC Objectives

1. *Soil – Prevent LA fibers that may remain in soil within OU8 after meeting remedial criteria for the land use category from becoming a future source of unacceptable risk.*
2. *Land Use – Track changes in land use and develop a notification system to ensure that property owners, prospective property owners, and workers are aware of remaining or potential LA, which could become a future source of unacceptable exposure.*

Section 5

Institutional Control Instruments

The following section outlines IC components and the types of IC instruments (categories) in place at OU8: informational devices.

5.1 Key Components

5.1.1 Institutional Controls Objectives

The following are the main objectives of the ICs in place at OU8 based on the *Record of Decision for Libby Asbestos Superfund Site, Libby and Troy Residential and Commercial Properties, Parks and Schools, Transportation Corridors, Industrial Park. Operable Units 4-8* (EPA 2016):

1. **Soil** – Prevent LA fibers that may remain in soil within OU8 after meeting remedial criteria for the land use category from becoming a future source of unacceptable risk.
2. **Land Use** – Track changes in land use and develop a notification system to ensure that property owners, prospective property owners, and workers are aware of remaining or potential LA, which could become a future source of unacceptable exposure.

5.1.2 Current and Reasonably Anticipated Future Land Use

The ICs in place at OU8 are expected to allow for the current and reasonably anticipated future land uses of transportation and maintenance activities at the site. ICs are expected to serve to control any potential disturbance of any protective remedy through such means as U-Dig, MDT encroachment permit 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 OU8 are expected to be in-place in perpetuity, with the exception of 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 OU8 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. Although not anticipated for OU8, the DEQ may implement an environmental covenant for other OUs at the Site. Under Section 75-10-727, MCA, a DEQ-approved IC could be instituted to restrict the property, as necessary, to mitigate the risk to public health by way of an environmental covenant. This IC would notify future land owners/users of previous response actions completed at OU8 and of

known or potential LA contamination within the soils at the site. In the event any such instrument would receive final approval by DEQ, it will be included within this plan as an appendix. The landowner must agree to place this IC on the property. No environmental covenants currently exist.

5.2.2 Government Controls

The only government control at OU8 is U-Dig. Montana state law (MCA 2013, 69-4-503) requires that all parties planning to excavate, drill, or perform other subsurface activities, notify the designated U-Dig (one-call) notification center prior to the start of these activities. However, currently U-Dig as it applies to the site is utilized as an informational device and is described in section 5.2.4 of this plan. Persons intending to disturb any protective physical remedy in place at OU8 will be required to notify a designated "One-call" center (i.e., U-Dig) prior to conducting the activities. The BOH-ARP will then provide advice on performing the activities according to best management practices, and provide assistance with management of contamination encountered.

5.2.3 Enforcement Documents with Institutional Control Components

There are currently no enforcement documents with institutional components related to OU8. In the event enforcement documents with IC components are developed in the future, this plan will be revised.

5.2.4 Informational Devices

Currently informational devices related to OU8 include the BOH-ARP, U-Dig, MDT encroachment permit and addendum, EPA Libby Asbestos Superfund Site website, and 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, but is not limited to, providing resource materials and best management practices, contractor referrals, and/or removal of contamination. The BOH-ARP is available for any persons interested in information regarding LA and/or resources available to minimize risks associated with LA and/or resources available are encouraged to contact the BOH-ARP at 406-291-5335, or visit the BOH-ARP website: www.LCARP.com.

The BOH-ARP is notified by the U-Dig call center for all activities planned within OU8 boundaries in the event the U-Dig call center has been called. Advice on how to address the contamination, if disturbance is required, may be obtained from the BOH-ARP. In addition to providing advice and instruction, the BOH-ARP will assist with management of contamination encountered, as necessary. Assistance in managing contamination may include, but is not limited to, providing resource materials and best management practices, contractor referrals, and/or removal of contamination.

All individuals and organizations intending to perform work within the ROW of the OU8 corridor must apply for an encroachment permit with the MDT. Any permit application along the OU8 ROW must be accompanied by an addendum, which notifies the permittee to take precautions to guard against potential exposure to LA contamination. Although the Administrative Rules of Montana 18.7.102 defines MDT encroachment permits and statutory rules exist that dictate associated violations, the addendum which accompanies any such permit along the OU8 corridor is site specific and acts as an informational device. No specific enforcement or penalty currently exists relating to the protection of

a remedy placed within OU8 specific to this encroachment permit and addendum. A copy of the MDT encroachment permit application and addendum, is included in this document as Appendix A.

The EPA Libby Asbestos Superfund Site website

(<http://cumulis.epa.gov/supercpad/cursites/csitinfo.cfm?id=0801744>) is also a source for information about the Libby Asbestos Superfund Site (EPA 2016). The EPA currently manages the website, which provides a source for information to the public regarding current activities at the Libby Asbestos Superfund Site. If necessary, additional informational sources may be established and maintained including advertisements, handouts, and training classes.

All information for OU8 (historical and current site documents) and any associated best management practices, are available to the public at the EPA Information Center. This informational device will be maintained by the EPA or another government organization throughout the lifespan of IC instrument implementation at OU8.

A manual has been developed for the purpose of outlining BMPs for working within the EPA Libby Asbestos Superfund Site. This BMP manual discusses guidance provided for means and methods to assist in the prevention or reduction in the release and exposure to LA within OU8 and is attached as Appendix B.

For information handouts and contractor training classes individuals may contact the EPA Information Center or the BOH-ARP at the following:

Libby - EPA Information Center	City/County Board of Health-Asbestos Resource Program
108 E 9 th St	418 Mineral Ave
Libby, MT 59923	Libby, MT 59923
(406) 293-6194	(406) 291-5335

5.2.4.1 Informational Devices Use Restrictions

No use restrictions are associated with these informational devices. The EPA Information Center (or other government organization) will simply act as an informational resource.

This page was intentionally left blank.

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 OU8 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 a database which contains addresses, property identifiers, geographical unit, contacts, access and property statuses, and other property specific response information.

In addition, special reports may be prepared by the DEQ, to document unforeseen events or conditions. An example of a special report is an incident report, which is used to document the details of accidents involving site personnel, and other 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 OU8 property owner, and other interested parties in a timely manner.

Periodic monitoring will consist of at least yearly in-person investigations 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 2012b).

In the event of a property transfer or change of use, more frequent monitoring may be necessary.

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 OU8, a method of reporting should be made available. For OU8, 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 OU8-specific O&M plan.

This page was intentionally left blank.

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. In the event that 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. There are currently no enforcement documents with institutional components related to OU8.

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 the purpose of enforcing and monitoring ICs currently in place will be included within the OU8 O&M Plan.

This page was intentionally left blank.

Section 8

Institutional Control Modification and Termination

At OU8, 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 OU8 continue to provide adequate protection. In addition, the EPA will accept public comment on the site-wide ICIAP once it has been developed and prepare a modification to the record of decision (ROD) for the Site 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 in the ROD. Termination of ICs may occur if all remaining contamination at OU8 is removed to a level below that which poses an unacceptable risk to health and the environment. The EPA is responsible for determining modification of this document. The EPA, DEQ (for Section 75-10-727, MCA, institutional controls), and/or MDT are responsible for termination of ICs related to OU8.

This page was intentionally left blank.

Section 9

References

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

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

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

_____. 2013. *Final Remedial Action Report*, Libby Asbestos Superfund Site, The Former Export Plant Site, Operable Unit 1, Lincoln County, Montana. July 8.

_____. 2016. *Record of Decision for Libby Asbestos Superfund Site, Libby and Troy Residential and Commercial Properties, Parks and Schools, Transportation Corridors, Industrial Park. Operable Units 4-8*, Lincoln County, Montana. January.

_____. 2017. *Final Remedial Action Report, Operable Unit 8 – Highways*, Libby Asbestos Superfund Site, Lincoln County, Montana. September.

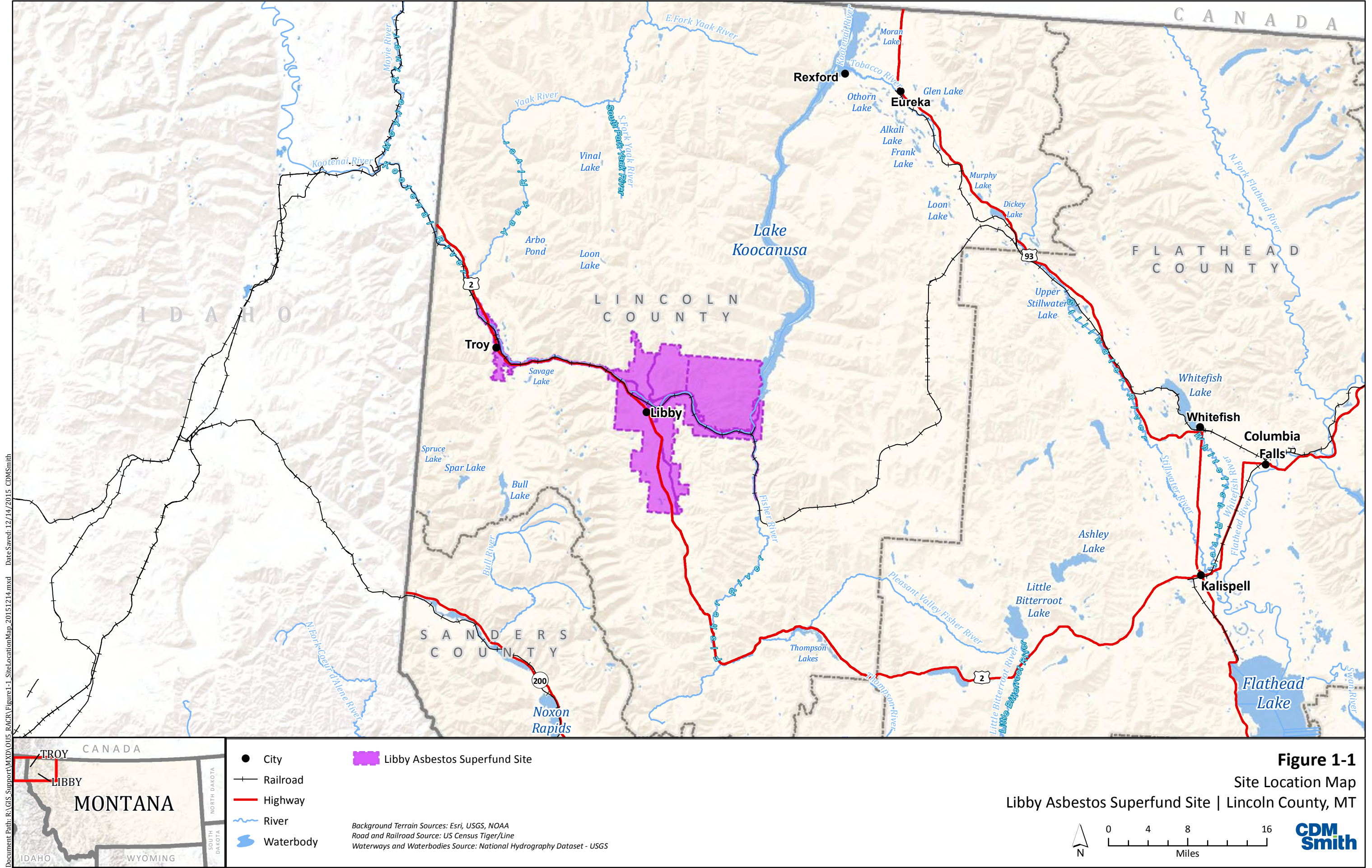
HDR. 2013. *Final Remedial Investigation Report, Operable Unit 8*, Libby Asbestos National Priorities List Site, Libby, Montana. June.

Meeker GP, Bern AM, Brownfield IK, Lowers HA, Sutley SJ, Hoeffen TM, Vance JS. 2003. The Composition and Morphology of Amphiboles from the Rainy Creek Complex, Near Libby, Montana. *American Mineralogist*. 88:1955-1969.

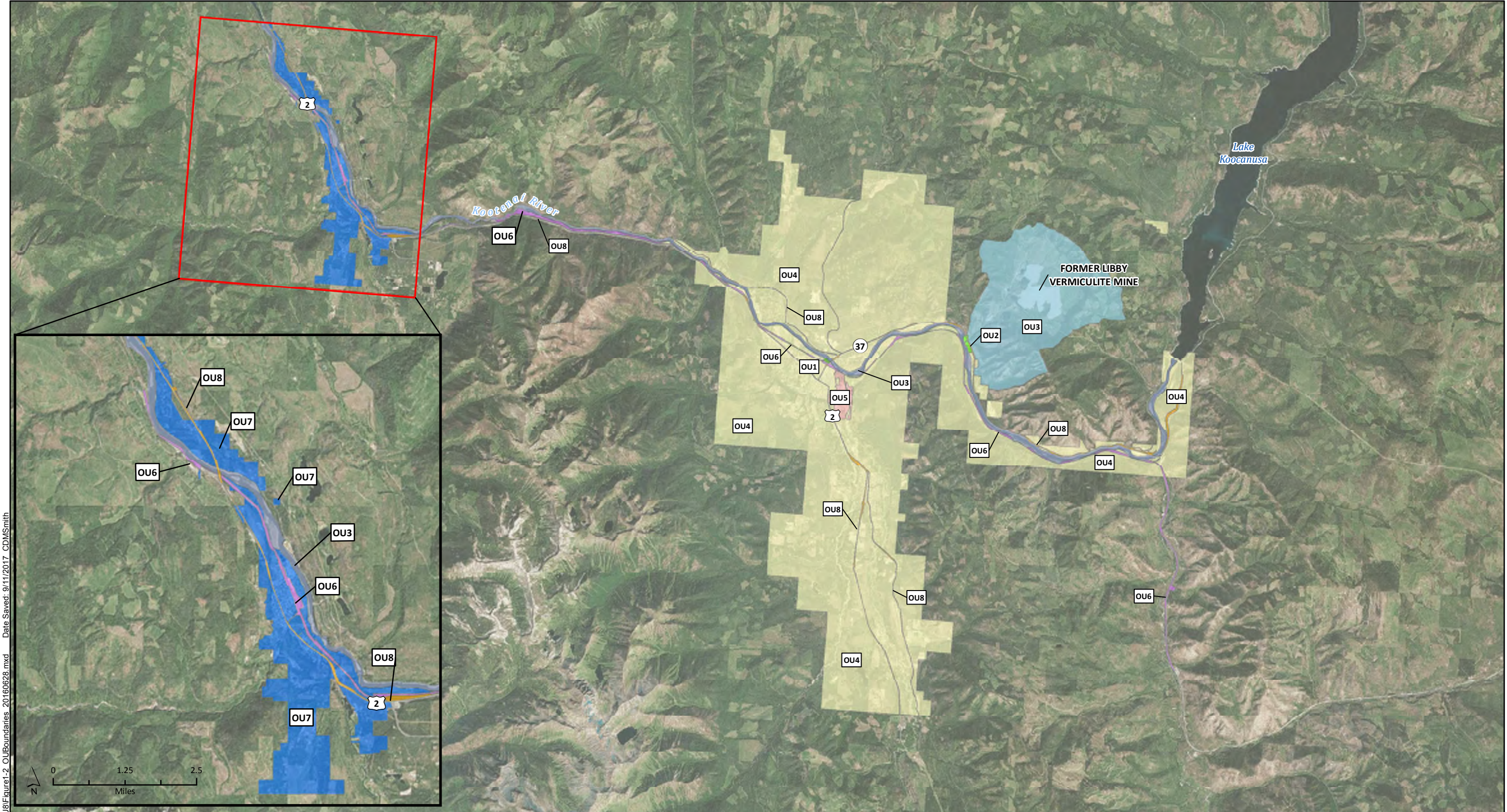
MCA. 2013. Title 69. Public Utilities and Carriers, Chapter 4. Utility Lines and Facilities, Part 5. Excavations Near Underground Facilities, 69-4-501. Definitions.

This page was intentionally left blank.

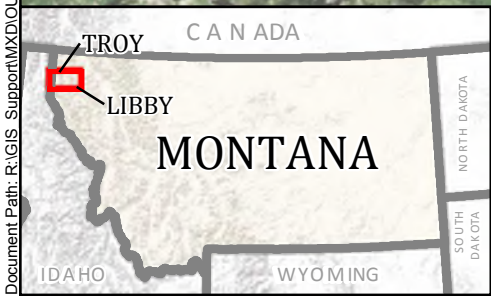
Figures



Document Path: R:\GIS\Support\MDX\OUS RACR\Figure 1-1 SiteLocationMap 20151214.mxd Date Saved: 12/14/2015 CDMSmith



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

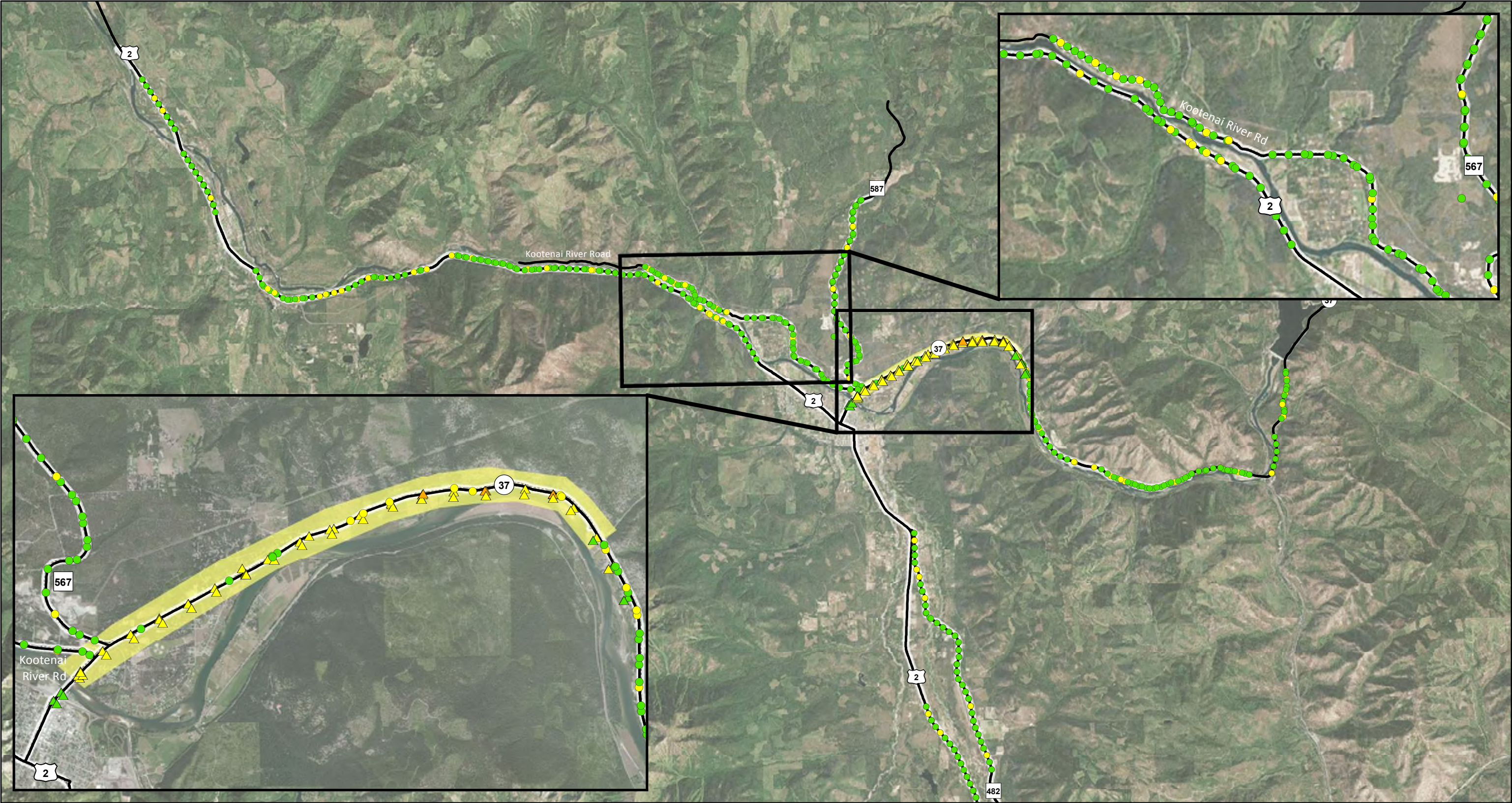


- | | |
|---|---|
| OU1 - Former Export Plant | OU5 - Former Stimson Lumber Mill |
| OU2 - Former Screening Plant | OU6 - Burlington Northern and Santa Fe Railroad |
| OU3 Phase 1 (Forest) | OU7 - Residential/Commercial Areas within Troy |
| OU3 Phase 2 (Kootenai River) | OU8 - Highways |
| OU4 - Residential/Commercial Areas within Libby | |

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
OU8 ICIAP
September 2017



LA in Surface Soil

Results

- Non-Detect
- Trace
- < 1%
- Detect; >= 1%

Legacy Data - 2003 & 2005

- ▲ Non-Detect
- ▲ Trace
- ▲ < 1%
- ▲ Detect; >= 1%

OU8 Boundary

ABS Area

Major Road

GRZ-Geographic Removal Zone

Aerial Source: Esri, DigitalGlobe, GeoEye, Earthstar
Geographics, CNES/Airbus DS, USDA, USGS, AEX,
Getmapping, Aerogrid, IGN, IGP, swisstopo, and the
GIS User Community

Figure 3-1

LA in Surface Soil at OU8

Libby Asbestos Superfund Site | Libby, MT

N

01.252.55

Miles

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 <input type="checkbox"/> No <input type="checkbox"/>																																																																																																				
(↑For MDT Use Only↑)																																																																																																								
<div>ENVIRONMENTAL CHECKLIST for:</div> <div><input type="checkbox"/> Approach Permit</div> <div><input type="checkbox"/> Encroachment/Occupancy (incl. Utility)</div> <div><input type="checkbox"/> Maintenance Projects (with No Right-Of-Way Acquisition, Sale or Transfer)</div>																																																																																																								
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 _____																																																																																																								
<table><tr><th colspan="2">Impact Questions</th><th>Yes</th><th>No</th><th>Comment, Explanation, and/or Informat Source (Attach supporting information, necessary.)</th></tr><tr><td colspan="5">Actions that qualify for Categorical Exclusion under MEPA and/or NEPA (See ARM 18.2.261 and 23 CFR 771.117)</td></tr><tr><td>1.</td><td>Will the proposed action impact any known historical or archaeological site(s)?</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td></td></tr><tr><td>2.</td><td>Will the proposed action impact any publicly owned parkland(s), recreation area(s), wildlife or waterfowl refuge(s)?</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td></td></tr><tr><td>3.</td><td>Will the proposed action impact prime farmlands? (If yes, attach a completed Farmland Conversion Impact Rating Ad-1006.)</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td></td></tr><tr><td>4.</td><td>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?</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td></td></tr><tr><td></td><td>b. Has the proposed action received any preliminary or final approval from the local land use authority?</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td></td></tr><tr><td>5.</td><td>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?)</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td></td></tr><tr><td>6.</td><td>Will the proposed action require work in, across or adjacent to a listed or proposed Wild or Scenic River?</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td></td></tr><tr><td>7.</td><td>Will the proposed action require work in a Class I Air Shed or nonattainment area?</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td></td></tr><tr><td>8.</td><td>Will the proposed action impact air quality or increase noise, even temporarily?</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td></td></tr><tr><td>9.</td><td>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.</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td></td></tr><tr><td>10.</td><td>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.)</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td></td></tr><tr><td>11.</td><td>a. Are there any listed or candidate threatened or endangered species, or critical habitat in the vicinity of the proposed action?</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td></td></tr><tr><td></td><td>b. Will the proposed action adversely affect listed or candidate threatened or endangered species, or adversely modify critical habitat?</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td></td></tr><tr><td>12.</td><td>Will the proposed action require an environmental-related permit or authorization? If the answer is "yes," please list the specific permits or authorizations.</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td></td></tr><tr><td>13.</td><td>a. Is the proposed action on or within approximately 1 mile of an Indian Reservation?</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td></td></tr><tr><td></td><td>b. If "Yes", will a Tribal Water Permit be required</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td>N/A <input type="checkbox"/></td></tr><tr><td>14.</td><td>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)?</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td></td></tr><tr><td>15.</td><td>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.</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td></td></tr></table>					Impact Questions		Yes	No	Comment, Explanation, and/or Informat Source (Attach supporting information, necessary.)	Actions that qualify for Categorical Exclusion under MEPA and/or NEPA (See ARM 18.2.261 and 23 CFR 771.117)					1.	Will the proposed action impact any known historical or archaeological site(s)?	<input type="checkbox"/>	<input type="checkbox"/>		2.	Will the proposed action impact any publicly owned parkland(s), recreation area(s), wildlife or waterfowl refuge(s)?	<input type="checkbox"/>	<input type="checkbox"/>		3.	Will the proposed action impact prime farmlands? (If yes, attach a completed Farmland Conversion Impact Rating Ad-1006.)	<input type="checkbox"/>	<input type="checkbox"/>		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?	<input type="checkbox"/>	<input type="checkbox"/>			b. Has the proposed action received any preliminary or final approval from the local land use authority?	<input type="checkbox"/>	<input type="checkbox"/>		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?)	<input type="checkbox"/>	<input type="checkbox"/>		6.	Will the proposed action require work in, across or adjacent to a listed or proposed Wild or Scenic River?	<input type="checkbox"/>	<input type="checkbox"/>		7.	Will the proposed action require work in a Class I Air Shed or nonattainment area?	<input type="checkbox"/>	<input type="checkbox"/>		8.	Will the proposed action impact air quality or increase noise, even temporarily?	<input type="checkbox"/>	<input type="checkbox"/>		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.	<input type="checkbox"/>	<input type="checkbox"/>		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.)	<input type="checkbox"/>	<input type="checkbox"/>		11.	a. Are there any listed or candidate threatened or endangered species, or critical habitat in the vicinity of the proposed action?	<input type="checkbox"/>	<input type="checkbox"/>			b. Will the proposed action adversely affect listed or candidate threatened or endangered species, or adversely modify critical habitat?	<input type="checkbox"/>	<input type="checkbox"/>		12.	Will the proposed action require an environmental-related permit or authorization? If the answer is "yes," please list the specific permits or authorizations.	<input type="checkbox"/>	<input type="checkbox"/>		13.	a. Is the proposed action on or within approximately 1 mile of an Indian Reservation?	<input type="checkbox"/>	<input type="checkbox"/>			b. If "Yes", will a Tribal Water Permit be required	<input type="checkbox"/>	<input type="checkbox"/>	N/A <input type="checkbox"/>	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)?	<input type="checkbox"/>	<input type="checkbox"/>		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.	<input type="checkbox"/>	<input type="checkbox"/>	
Impact Questions		Yes	No	Comment, Explanation, and/or Informat Source (Attach supporting information, necessary.)																																																																																																				
Actions that qualify for Categorical Exclusion under MEPA and/or NEPA (See ARM 18.2.261 and 23 CFR 771.117)																																																																																																								
1.	Will the proposed action impact any known historical or archaeological site(s)?	<input type="checkbox"/>	<input type="checkbox"/>																																																																																																					
2.	Will the proposed action impact any publicly owned parkland(s), recreation area(s), wildlife or waterfowl refuge(s)?	<input type="checkbox"/>	<input type="checkbox"/>																																																																																																					
3.	Will the proposed action impact prime farmlands? (If yes, attach a completed Farmland Conversion Impact Rating Ad-1006.)	<input type="checkbox"/>	<input type="checkbox"/>																																																																																																					
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?	<input type="checkbox"/>	<input type="checkbox"/>																																																																																																					
	b. Has the proposed action received any preliminary or final approval from the local land use authority?	<input type="checkbox"/>	<input type="checkbox"/>																																																																																																					
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?)	<input type="checkbox"/>	<input type="checkbox"/>																																																																																																					
6.	Will the proposed action require work in, across or adjacent to a listed or proposed Wild or Scenic River?	<input type="checkbox"/>	<input type="checkbox"/>																																																																																																					
7.	Will the proposed action require work in a Class I Air Shed or nonattainment area?	<input type="checkbox"/>	<input type="checkbox"/>																																																																																																					
8.	Will the proposed action impact air quality or increase noise, even temporarily?	<input type="checkbox"/>	<input type="checkbox"/>																																																																																																					
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.	<input type="checkbox"/>	<input type="checkbox"/>																																																																																																					
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.)	<input type="checkbox"/>	<input type="checkbox"/>																																																																																																					
11.	a. Are there any listed or candidate threatened or endangered species, or critical habitat in the vicinity of the proposed action?	<input type="checkbox"/>	<input type="checkbox"/>																																																																																																					
	b. Will the proposed action adversely affect listed or candidate threatened or endangered species, or adversely modify critical habitat?	<input type="checkbox"/>	<input type="checkbox"/>																																																																																																					
12.	Will the proposed action require an environmental-related permit or authorization? If the answer is "yes," please list the specific permits or authorizations.	<input type="checkbox"/>	<input type="checkbox"/>																																																																																																					
13.	a. Is the proposed action on or within approximately 1 mile of an Indian Reservation?	<input type="checkbox"/>	<input type="checkbox"/>																																																																																																					
	b. If "Yes", will a Tribal Water Permit be required	<input type="checkbox"/>	<input type="checkbox"/>	N/A <input type="checkbox"/>																																																																																																				
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)?	<input type="checkbox"/>	<input type="checkbox"/>																																																																																																					
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.	<input type="checkbox"/>	<input type="checkbox"/>																																																																																																					
16. <input type="checkbox"/> Attach a brief description of the work to be performed, including any subsurface work.																																																																																																								
17. <input type="checkbox"/> 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. <input type="checkbox"/> 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	Title	Date
(When any of the items 1 through 15 are checked "Yes")		
Transportation Planning	Title	Date
(When items 14 or 15 are checked "Yes")		

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 100 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

Best Management Practices Manual

Libby Asbestos Superfund Site – Operable Unit 8

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 8 (OU8). Discussion of the contaminant of concern (COC), BMPs, and where to find additional information pertaining to OU8, 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

During the time the former Vermiculite Mine operated, MT Highway 37, US Highway 2, and county roads (Kootenai River Road, County Highway 482 [Farm to Market Road], and County Highway 567 [Pipe Creek Road]) included in this OU were used to transport vermiculite and vermiculite products from the mine to the former Screening Plant and Export Plant as well as other mining-related areas. They were also used by workers and industries servicing the mine. Libby amphibole asbestos (LA) contaminated materials may also have been used as fill in some instances to build or repair the road embankments or in asphalt aggregate.

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 W.R. Grace (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 2015b).

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 (primarily the Montana Department of Transportation), contractors, and land users for the prevention or reduction in the release and exposure to LA within OU8. The information within this section is grouped by the type of activities anticipated to take place in OU8 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 OU8 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 *Highways & Roadways Operable Unit 8 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 OU8. 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 *Highways & Roadways Operable Unit 8 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 OU8. 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. Entity 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 OU8 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 OU8. 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 OU8.
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 OU8.

Record of Decision for Libby Asbestos Superfund Site (EPA 2015b)

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 2015a)

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 8 (HDR 2013)

This document describes the nature and extent of LA at OU8, focused primarily on investigative measures taken on the site to characterize the level of contamination.

Remedial Action Report – Operable Unit 8 (CDM Smith 2017a)

This document details the remedial actions and activities that have taken place at OU8.

Institutional Control Implementation and Assurance Plan – Operable Unit 8 (CDM Smith 2017b)

This document identifies activities that are designed to implement, maintain, and enforce ICs at OU8, and the organizations responsible for conducting these activities.

Operation and Maintenance Plan – Operable Unit 8 (CDM Smith 2017c)

This document presents the administrative, financial, and technical details and requirements for inspecting, operating, and maintaining at OU8.

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. 2017a. *Final Remedial Action Report, Operable Unit 8 – Highways*, Libby Asbestos Superfund Site, Lincoln County, Montana. September.

_____. 2017b. *Highways, Operable Unit 8, Institutional Control Implementation and Assurance Plan*, Libby Asbestos Superfund Site. Libby Montana. Revision 0, September.

_____. 2017c. *Draft Operations and Maintenance Plan, Highways*, Operable Unit 8, Libby Asbestos Superfund Site, Lincoln County, Montana, October.

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

_____. 2015b. *Record of Decision for Libby Asbestos Superfund Site, Libby and Troy Residential and Commercial Properties, Parks and Schools, Transportation Corridors, Industrial Park. Operable Units 4-8*, Lincoln County, Montana. December.

HDR. 2013. *Final Remedial Investigation Report, Operable Unit 8*, Libby Asbestos National Priorities List Site, Libby Montana. June.

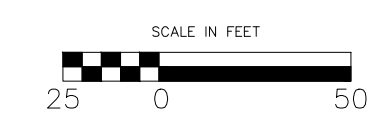
Appendix C

Supporting Figures from Reference Documents



- LEGEND**
- AREA 1 - FORMER EXPORT PLANT
 - AREA 2 - RIVERFRONT PARK
 - AREA 3 - EMBANKMENTS
 - NON DETECT
 - < 1% LA
 - > 1% LA
 - L LOW VISIBLE VERMICULITE
 - M MODERATE VISIBLE VERMICULITE
 - H HIGH VISIBLE VERMICULITE

LOCATION OF RESIDUAL CONTAMINATION AT OU1 OVERVIEW
 FIGURE 3-1
 LIBBY ASBESTOS SUPER FUND SITE
 LINCOLN COUNTY, MONTANA





LOCATION OF RESIDUAL CONTAMINATION AT OU1 AREA 1
 FIGURE 3-2
 LIBBY ASBESTOS SUPER FUND SITE
 LINCOLN COUNTY, MONTANA



LOCATION OF RESIDUAL CONTAMINATION AT OU1 AREA 2
 FIGURE 3-3
 LIBBY ASBESTOS SUPER FUND SITE
 LINCOLN COUNTY, MONTANA

SCALE IN FEET
 20 0 40

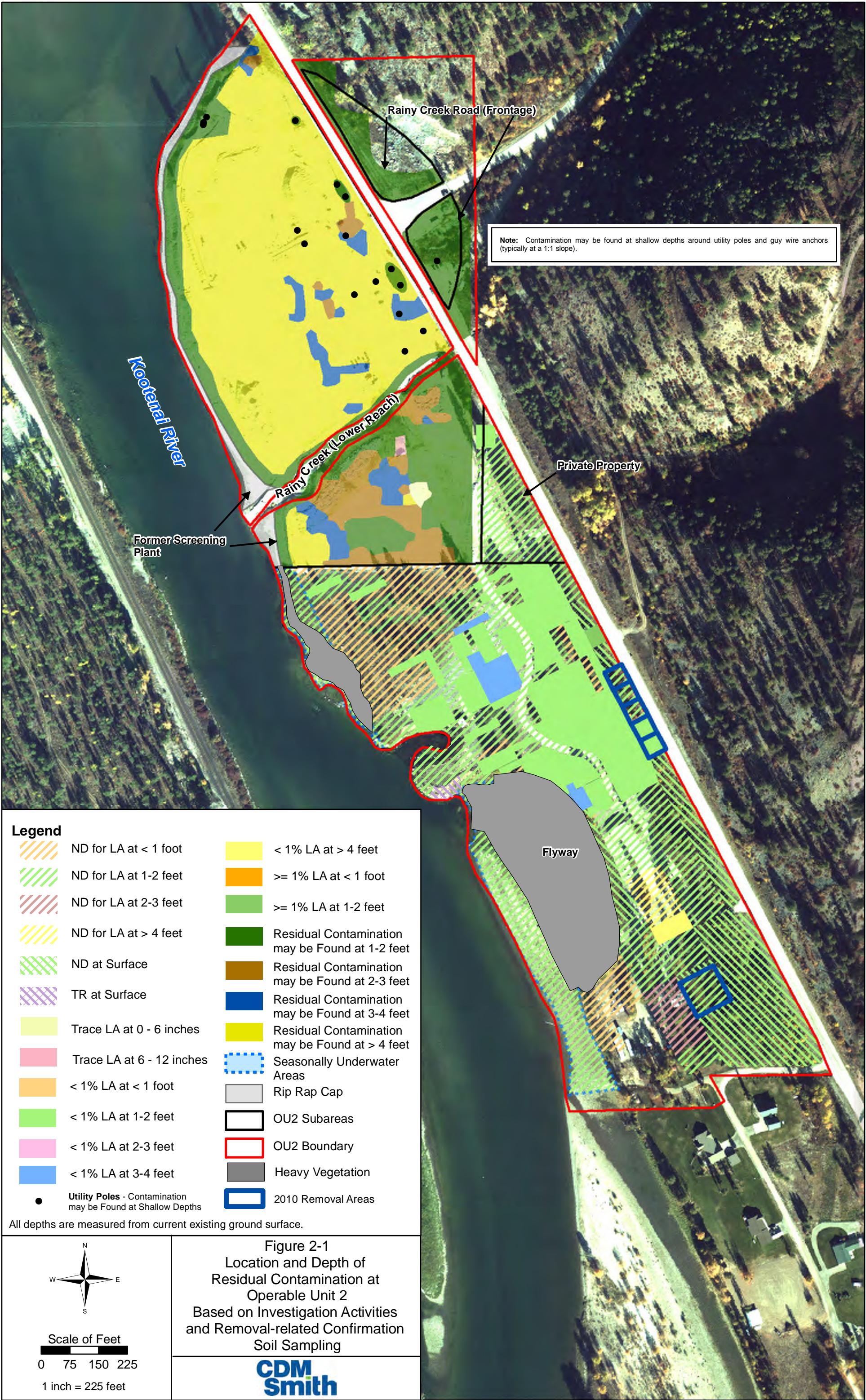


LEGEND

- AREA 3 - EMBANKMENTS
- NON DETECT
- < 1% LA
- > 1% LA
- L LOW VISIBLE VERMICULITE
- M MODERATE VISIBLE VERMICULITE
- H HIGH VISIBLE VERMICULITE

LOCATION OF RESIDUAL CONTAMINATION AT OU1 AREA 3
FIGURE 3-4
LIBBY ASBESTOS SUPER FUND SITE
LINCOLN COUNTY, MONTANA

SCALE IN FEET
15 0 30



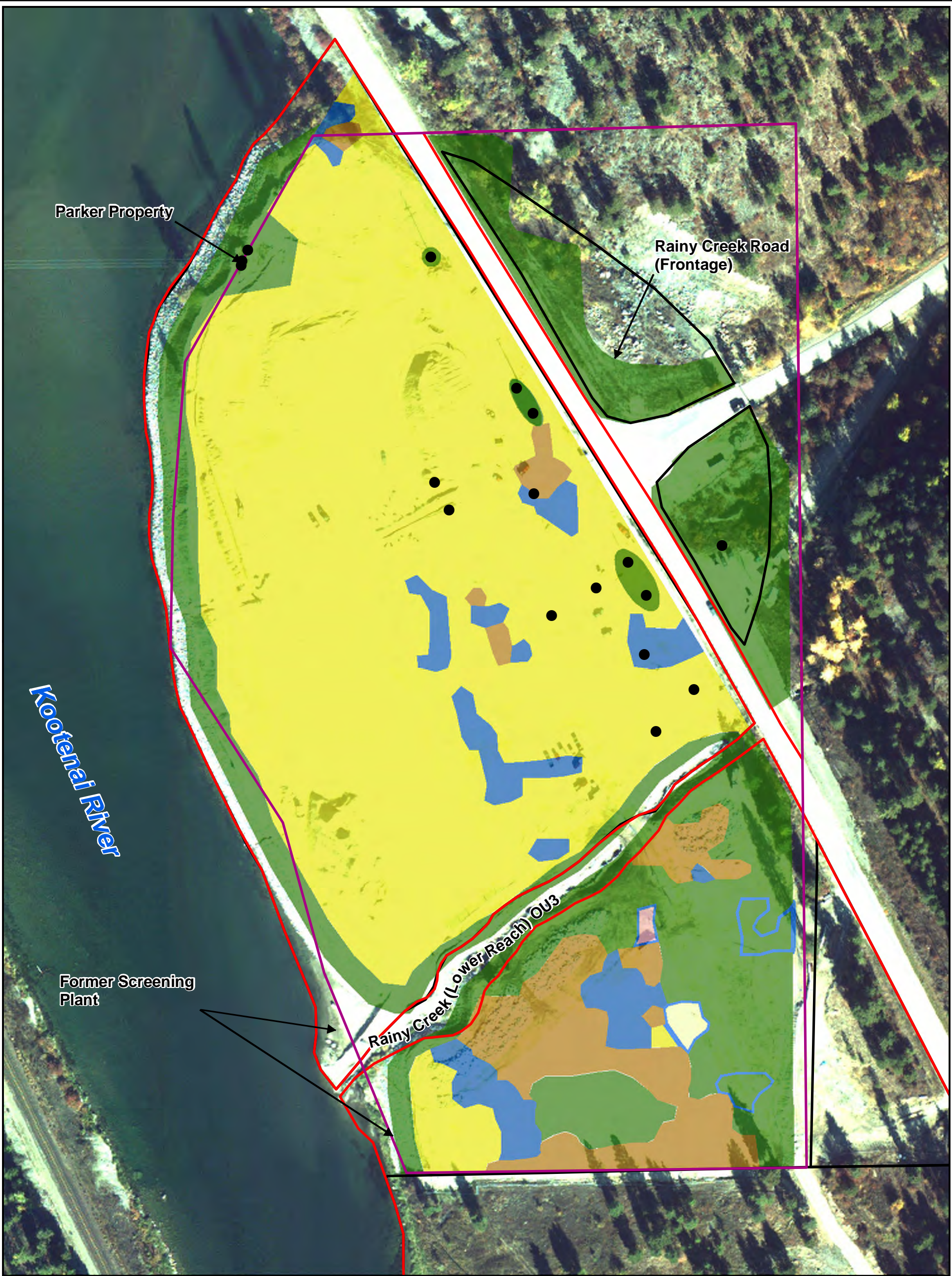
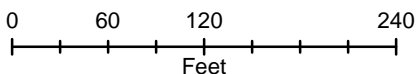


Figure 2-2
Location and Depth of Residual Contamination
at OU2 - Parker Property Based on
Investigation Activities and Removal-related
Confirmation Soil Sampling
Libby Asbestos Superfund Site
Lincoln County, Montana



1 inch = 120 feet

- | | |
|---|----------------------------------|
| Residual Contamination may be Found at 1-2 feet | Utility Pole |
| Residual Contamination may be Found at 2-3 feet | Rip Rap Cap |
| Residual Contamination may be Found at 3-4 feet | OU2 Subareas |
| Residual Contamination may be Found at > 4 feet | OU2 Boundary |
| TR LA at 0-6 inches | Parker Property |
| TR LA at 6-12 inches | November 2010 Investigation Area |

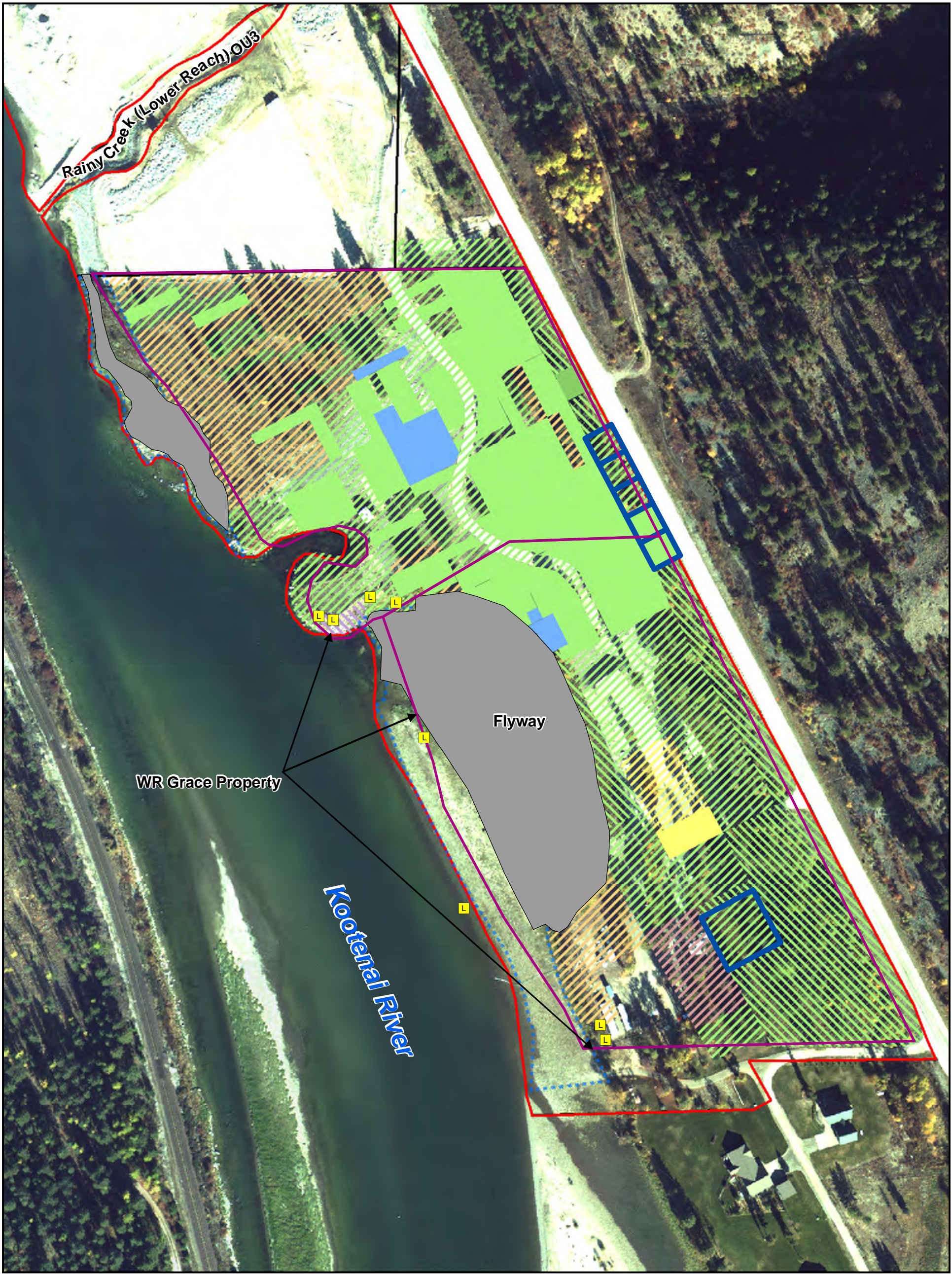
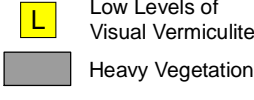
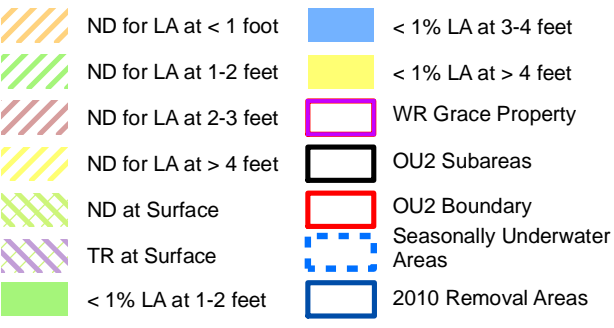
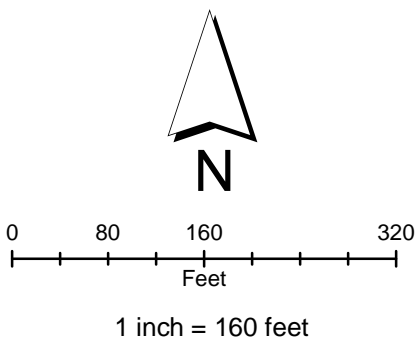


Figure 2-3
 Location and Depth of Residual Contamination
 at OU2 - WR Grace Property Based on
 Investigation Activities and Removal-related
 Confirmation Soil Sampling
 Libby Asbestos Superfund Site
 Lincoln County, Montana



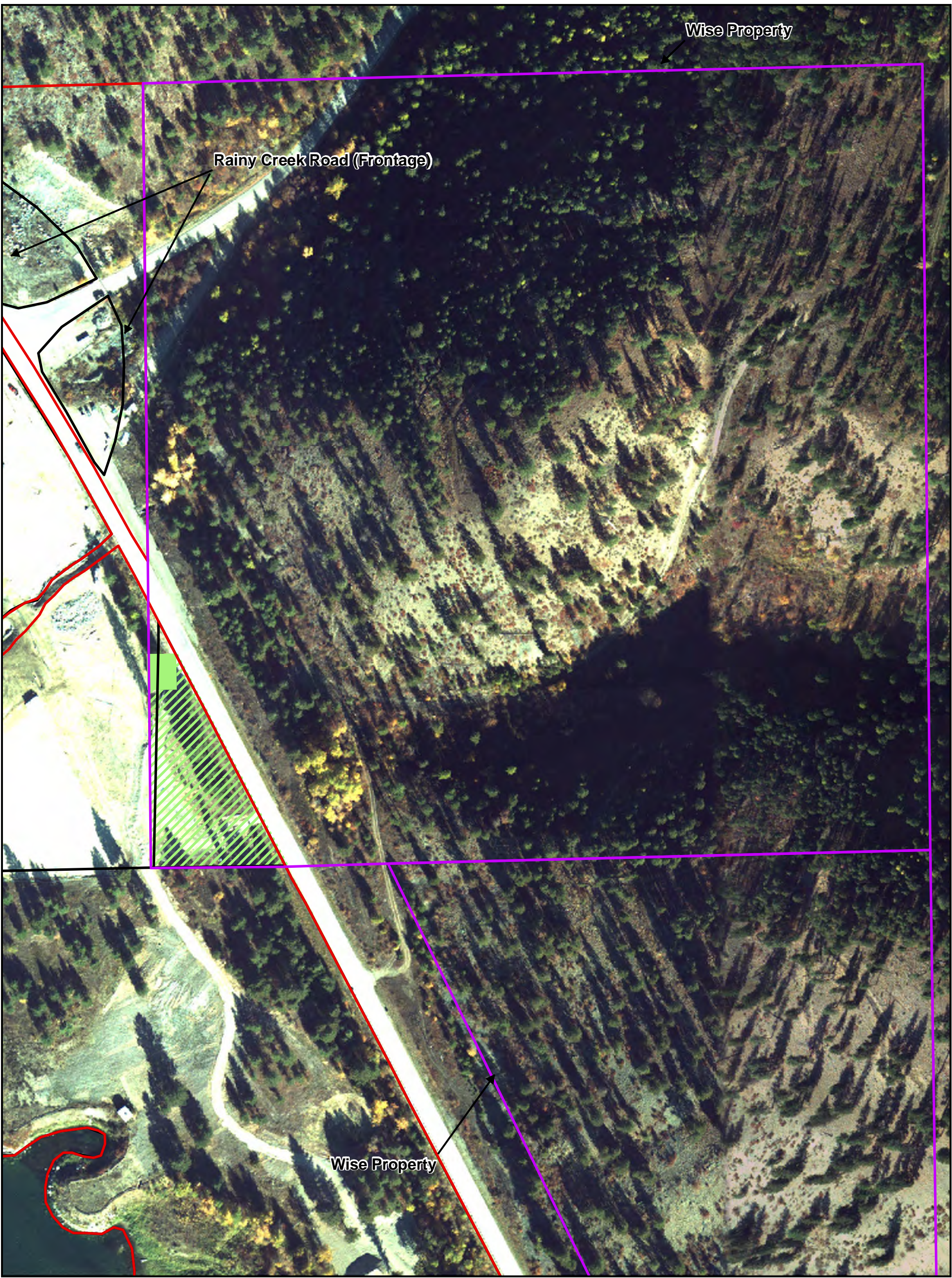
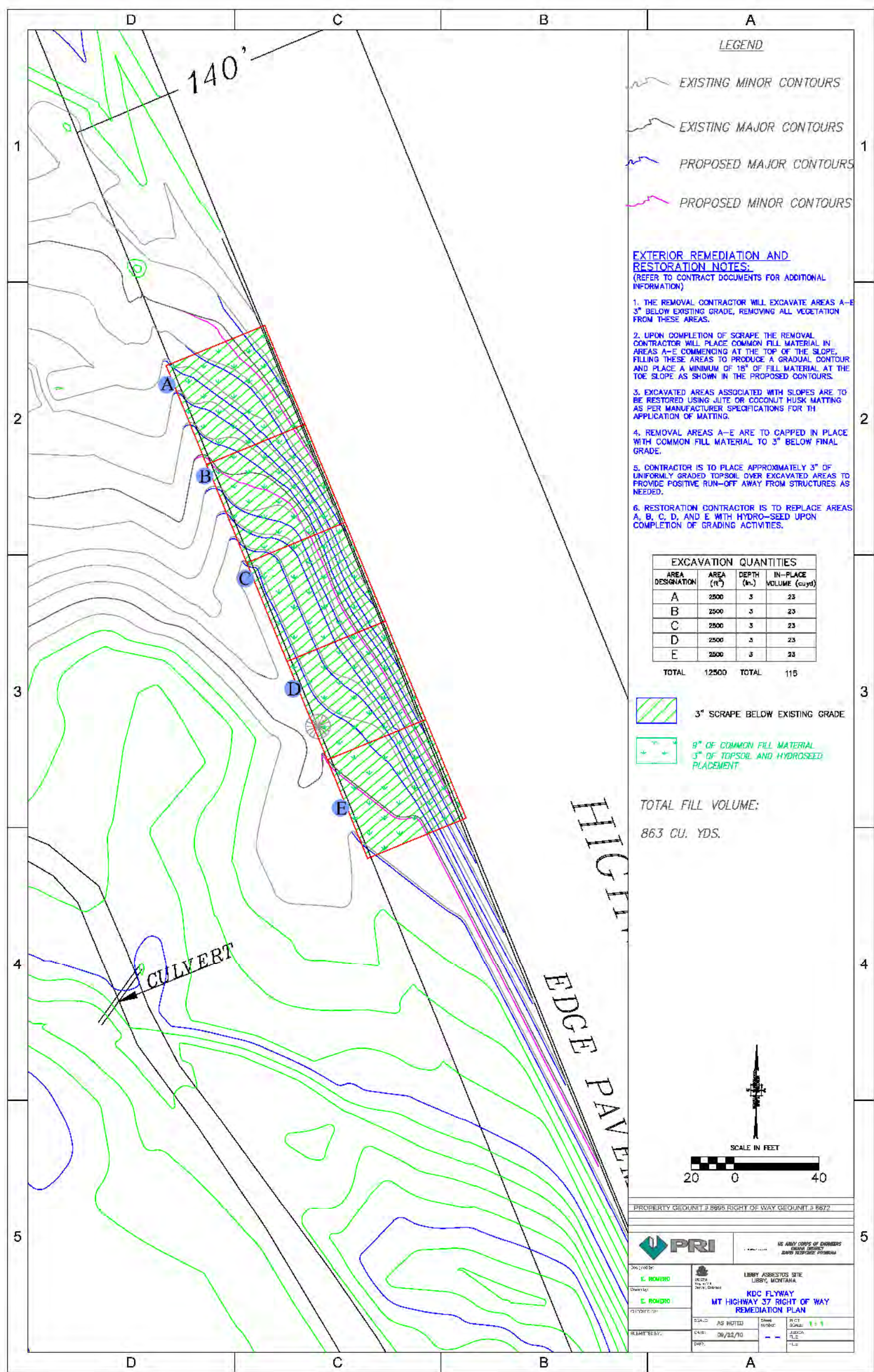


Figure 2-4
Location and Depth of Residual Contamination
at OU2 - Wise Property Based on
Investigation Activities and Removal-related
Confirmation Soil Sampling
Libby Asbestos Superfund Site
Lincoln County, Montana



NOT TO SCALE
Figure provided by Project Resources, Inc.

Figure 3-1
Remediation Design
KDC Flyway: MT Highway 37 Right of Way
Libby Asbestos Superfund Site
Lincoln County, Montana

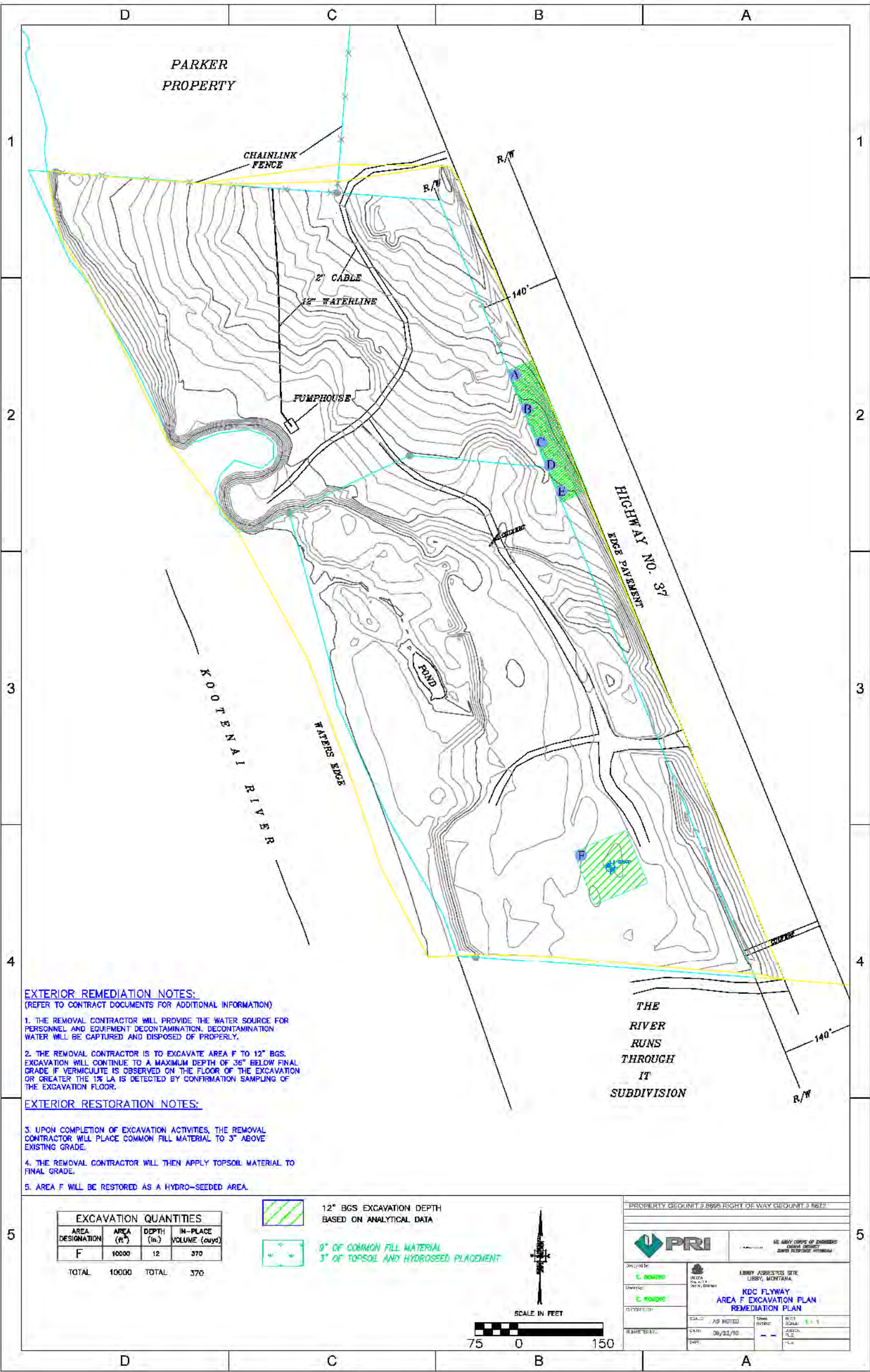


Figure 3-2
Remediation Design
KDC Flyway: Area F
Libby Asbestos Superfund Site
Lincoln County, Montana

NOT TO SCALE
Figured provided by Project Resources, Inc.

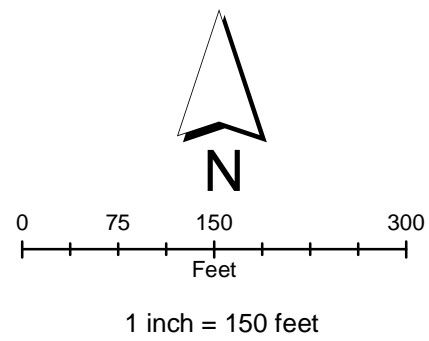
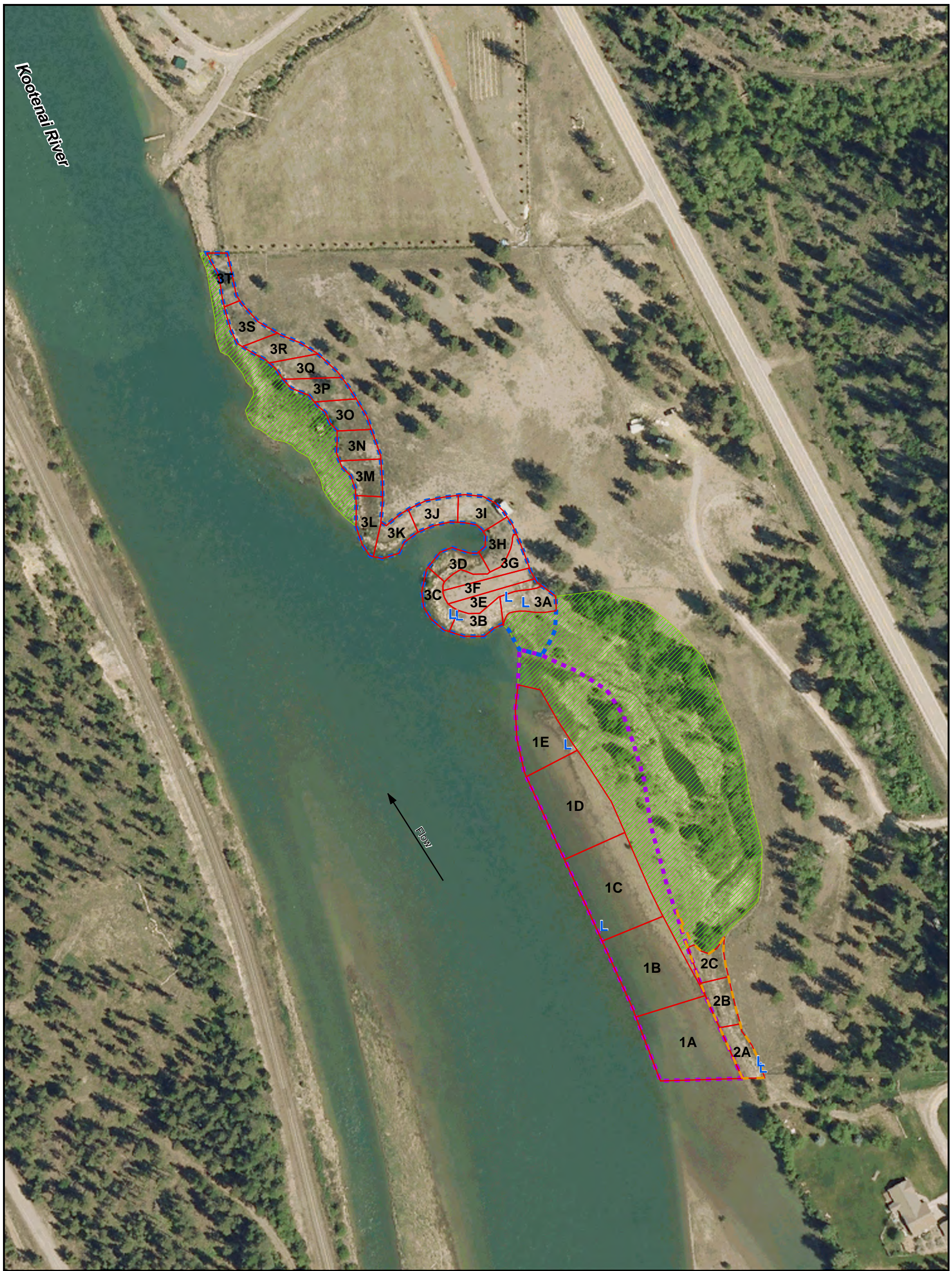


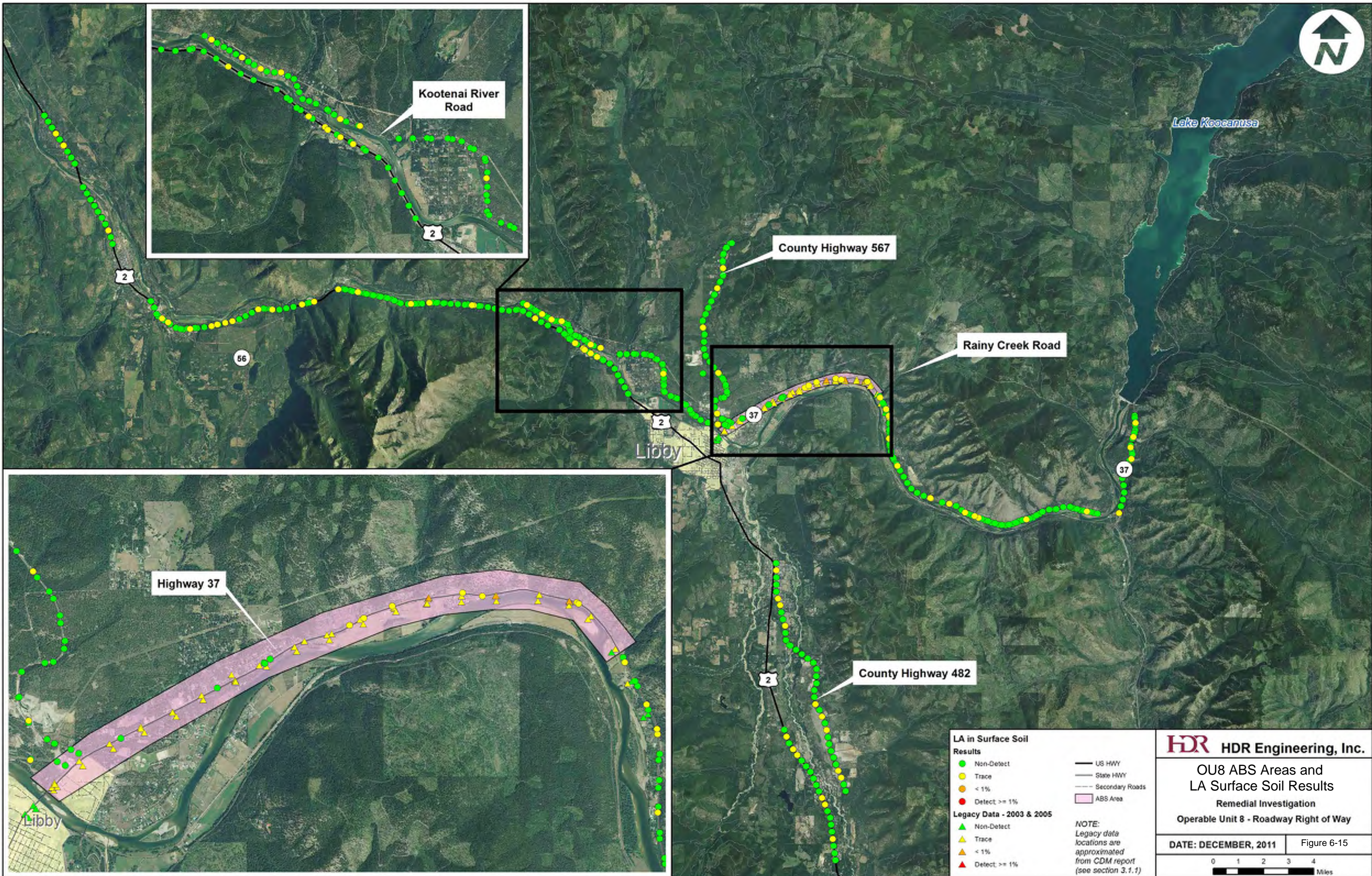
Image Source:
The imagery was acquired in May 2009 with a Microsoft/Vexcel UltraCamX digital aerial camera equipped with airborne GPS and inertial measurement unit.

The orthoimagery has been generated to meet a horizontal accuracy of 60 cm RMSE according to ASPRS class I accuracy standards for 1:2,400 scale maps or 1.04 m at the 95 percent confidence level according to NSSDA standards. These specs have been verified by measuring the ground control points in the orthophotos with 52 cm RMSE. No independent check points were available.

Legend

- Zone
- Area 3
- Area 2
- Area 1
- Heavy Vegetation

Figure 3-3
July 2010 Investigation
KDC Flyway
Libby Asbestos Superfund Site
Lincoln County, Montana



Kootenai River Road

County Highway 567

Rainy Creek Road

Highway 37

County Highway 482

Lake Kootenai

Libby

Libby

HDR HDR Engineering, Inc.

OU8 ABS Areas and
LA Surface Soil Results
Remedial Investigation
Operable Unit 8 - Roadway Right of Way