

**Operable Unit 8**

**Final Explanation of Significant Differences**

**to the**

**Record of Decision for the Libby Asbestos Superfund Site,  
Libby and Troy Residential and Commercial Properties,  
Parks and Schools, Transportation Corridors, and  
Industrial Park, Operable Units 4 through 8**

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## List of Acronyms

|           |   |
|-----------|---|
| BMP       | best management practice  |
| BOH-ARP   | City/County Board of Health-Asbestos Resource Program                 |
| CDM Smith | CDM Federal Programs Corporation                                      |
| CERCLA    | Comprehensive Environmental Response, Compensation, and Liability Act |
| CFR       | Code of Federal Regulations   |
| DEQ       | Montana Department of Environmental Quality                           |
| EPA       | U.S. Environmental Protection Agency                                  |
| ESD       | explanation of significant differences                                |
| FS        | feasibility study   |
| IC        | institutional control   |
| ICIAP     | institutional control implementation and assurance plan               |
| LA        | Libby amphibole asbestos  |
| MDT       | Montana Department of Transportation                                  |
| NCP       | National Oil and Hazardous Substances Pollution Contingency Plan      |
| O&M       | operation and maintenance   |
| OU        | operable unit   |
| RAL       | remedial action level   |
| RAO       | remedial action objective   |
| RG        | remedial goal   |
| ROD       | record of decision  |
| ROW       | right-of-way  |
| Site      | Libby Asbestos Superfund Site   |
| UDIG      | Montana one-call utility locate service                               |

# Section 1 Introduction

## 1.1 Site Name and Location

This document presents an explanation of significant differences (ESD) from the *Record of Decision for the Libby Asbestos Superfund Site, Libby and Troy Residential and Commercial Properties, Parks and Schools, Transportation Corridors, and Industrial Park, Operable Units 4 through 8* (ROD) (U.S. Environmental Protection Agency [EPA] 2016) for the Libby Asbestos Superfund Site (Site) (Superfund Enterprise Management System #MT0009083840). The EPA and the Montana Department of Environmental Quality (DEQ) signed the ROD in February 2016. The EPA and DEQ support the need for this ESD. This ESD is specific to Operable Unit (OU) 8 (Highways and Roadways).

The Site is located in and around the Cities of Libby and Troy in Lincoln County, 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 (Figure 1-1). The Site has been divided into eight OUs (Figure 1-2), five of which (OU4, OU5, OU6, OU7 and OU8) were included in the ROD. OU4 encompasses the residential, commercial and public properties in and around Libby; OU5 is the 400-acre industrial park (former Stimson Lumber Mill); OU6 contains all Burlington Northern Santa Fe railroad property in and between OUs 4 and 7, including rights-of-way (ROWs) and rail yards; OU7 includes residential, commercial and public property in and around Troy (about 20 miles west of Libby); and OU8 consists of the federal, state, and county roadways and ROWs within and between OUs 4 and 7. The EPA previously selected remedies for OU1 (former export plant) and OU2 (former screening plant). OU3, the former Libby Vermiculite Mine and surrounding areas, is being addressed separately.

## 1.2 Statement of Purpose

The ROD clarified that while the objectives for the institutional controls (ICs) identified were unlikely to change, the specific ICs had yet to be formally identified. The IC objectives documented in the ROD are discussed in Section 2.3 of this ESD. The EPA and DEQ worked with the community to develop an institutional control implementation and assurance plan (ICIAP) that clarified the tools used to implement the ICs selected in the ROD. The OU8 ICIAP was finalized in 2017. The ROD explained that the EPA would prepare an ESD to reference the ICIAP, which would detail how encounters with Libby amphibole asbestos (LA) following cleanup would be managed and identifies specific IC requirements and tools. The EPA anticipates that the ICs or IC tools may require modification over time to meet the community's needs and based on determinations of protectiveness made during five-year reviews. As stated, this ESD is specific to OU8 and separate ICIAPs have been developed for OU5, OU6 and OU4/OU7 of which separate ESDs will be prepared.

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended, provides for the public disclosure of the reasons for significant differences through this document. The pertinent section of CERCLA, at Section 117(c), requires the lead agency to address post-ROD significant changes in the following instances:

*After adoption of a final remedial action plan (1) if any remedial action is taken [under section 104 or 120]; (2) if any enforcement action under section 106 is taken; or (3) if any settlement or consent decree under section 106 or section 122 is entered into, and*

*if such action, settlement or decree differs in any significant respects from the final plan [the ROD] the [lead agency] shall publish an explanation of significant differences and the reasons such changes were made.*

The pertinent section of the National Contingency Plan (NCP), at 40 Code of Federal Regulations (CFR) § 300.435(c)(2)(i), states the same criteria and direction. The EPA's remedy selection documentation guidance, *A Guide to Preparing Superfund Proposed Plans, Records of Decision, and Other Remedy Selection Decision Documents* (EPA 1999), further explains the nature of significant differences and states that considering the extent of change in the remedy's scope, cost, and performance for the type of change is a site-specific determination. According to the guidance, significant differences generally involve a change to a component of a remedy that does not fundamentally alter the overall cleanup approach.

In this case, the changes identified below are significant differences that do not change the fundamental overall cleanup approach. Some of the changes may be considered minor modifications to the ROD (do not significantly alter the overall scope, performance, or cost), but the EPA has included them in this document to provide full public disclosure and consistency with the NCP. Details of the significant changes, including the basis for these decisions, are provided in Section 3.

### **1.3 Document Availability**

The ESD and all documents that support the changes are part of the administrative record for the Site as required by NCP Section 300.825(a)(2), and are also available at information repositories in Libby and Troy.

The full administrative record is available on the EPA website and housed at the EPA Superfund Records Center in Denver, Colorado. Contact information is as follows:

EPA Libby Asbestos Website Administrative Record (click on link below)

[Final Libby Administrative Record OU4-OU8](#)

EPA Superfund Records Center  
1595 Wynkoop Street  
Denver, CO 80202-1129

To request copies of administrative record documents, call:  
(303) 312-7273 or (800) 227-8917 ext. 312-7273 (toll free Region 8 only)

Additional relevant OU8 documents are available online at:

<https://semspub.epa.gov/src/collection/08/SC36143>

Local information repositories include the Lincoln County Public Library branches. Contact information is as follows:

Lincoln County Public Library – Main Branch, Libby  
220 W 6<sup>th</sup> Street  
Libby, MT 59923  
(406) 293-2778

Lincoln County Public Library - Troy  
207 3<sup>rd</sup> Street  
Troy, MT 59935  
(406) 295-4040

## Section 2 Site History, Contamination, and Selected Remedy

A complete description of the Site, its history, the contamination and its threat to human health and the environment, and the selected remedy can be found in the ROD (EPA 2016). Figure 2-1 presents a timeline of regulatory activities at the Site.

Since 1999, the EPA has conducted sampling and response action activities to address contaminated areas in the Libby Valley. The EPA's involvement was initiated in response to media articles that detailed extensive asbestos-related health problems in the Libby population. While at first the situation was thought to be limited to those with direct or indirect occupational exposures, it soon became clear there were multiple exposure pathways and many persons with no link to mining-related activities were affected. Typically, the amphibole asbestos contamination found in the Libby Valley comes from one or some combination of source material (e.g., vermiculite insulation, processed vermiculite ore, mine wastes). Asbestos from these source materials has been found in interior building dust samples and local soils, which, in turn, act as secondary sources.

While OUs were used at the Site to organize investigations and subsequent response actions, the EPA determined that categories related to current and future land use were more consistent with the risk management approach for non-OU3 areas of the Site evaluated within the feasibility study (FS) and considered during remedy selection in the ROD. Thus, non-OU3 areas of the Site were organized into four separate land use categories:

- Residential/commercial
- Industrial
- Transportation corridors
- Parks/schools

While these land use categories were primarily identified to categorize existing land uses for properties within the Site, they also form the framework for evaluating future changes in land use. OU8 is within the land use category of transportation corridors; additional ROW remediation work was conducted under OUs 1 (parks/schools land use category), 2 (residential/commercial land use category), 4 and 7 (residential/commercial land use category).

### 2.1 Operable Unit 8

During the time the vermiculite mine operated, U.S. 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]) within OUs 4 and 7 were used to transport vermiculite and vermiculite products from the mine to the screening plant, export plant, and 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. These federal, state, and county ROWs within and between OUs 4 and 7 were designated by the EPA as OU8 in 2009.

Multiple investigations and response actions have occurred within OU8. Systematic soil sampling was performed in support of the remedial investigation along the ROWs. The EPA has addressed

parts of OU8 along with response actions for other OUs. Portions of MT Highway 37 adjacent to OU1 (Figures 2-2 and 2-3) and OU2 (Figure 2-4) have been addressed as part of their respective response actions. The EPA has not performed removal or remedial actions specific to OU8; however, in some cases, removal or remedial actions performed based on land use in other OUs (i.e., OU1, OU2, OU4 and OU7) extended into the highway or ROW, and as such, into OU8. No response actions relating to building materials was conducted within OU8 because no buildings with LA exist as part of OU8. A property status map book for residential and/or commercial properties abutting OU8 is provided as an appendix to the *Highways and Roadways, Operable Unit 8, Operation and Maintenance Plan* (CDM Federal Programs Corporation [CDM Smith] 2018).

## 2.2 Selected Remedy

Prior to the ROD signing in February 2016, the majority of the properties within OUs 4 through 8 that posed unacceptable risks to human health and the environment had already been cleaned up through response actions. While past removal actions for OUs 4 through 8 addressed unacceptable exposures, the selected remedy, particularly for OU8, relies on ICs to manage any remaining exposures to LA contamination. ICs with monitoring and statutory reviews will provide assurance that the integrity of the remedy will be protected. The EPA will conduct five-year reviews to evaluate effectiveness of the remedy.

Remedial action objectives (RAOs) are medium-specific (e.g., soil, outdoor air, indoor air) and source-specific (e.g., soil, building materials) goals to be achieved through completion of a remedy that is protective of human health and the environment. The RAOs in the ROD were developed to restrict or mitigate through management the continued release and migration of LA from contaminated soil and building materials. The RAO applicable to OU8 is as follows<sup>1</sup>:

- Minimize the inhalation of LA during disturbances of soil contaminated with LA such that the resulting exposures result in cumulative cancer risks within or below the EPA's acceptable risk range of  $10^{-6}$  to  $10^{-4}$  and cumulative noncancer hazard indexes at or below 1.

In general, the remedy for contaminated soil at the Site consisted of excavation of the soil and placement of clean backfill materials. Removal or remedial actions performed for other OUs that extended into the OU8 ROW addressed soil conditions exceeding remedial action levels (RALs) for residential/commercial land use categories or parks/schools land use categories (which are more stringent RALs than for OU8 land use categories). Because these actions were performed under different OUs, the ROD considered OU8 to not require any additional, OU8-specific physical remedy. The RALs applicable to each land use category are detailed in Section 8.3.1 of the ROD (EPA 2016).

As stated in the *Final Remedial Action Report, Operable Unit 8 – Highways* (CDM Smith 2017a), unacceptable exposures to contamination have largely been mitigated by removal of surface soils in areas of the OU8 ROW; remaining surface soils do not present an unacceptable risk to identified human receptors (outdoor workers) under the current and potential future land uses as transportation corridors.

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<sup>1</sup> The RAO for building materials is not applicable to OU8 as no buildings exist as part of OU8.



### **2.2.1 Risk Management Strategy Discussion from the ROD**

The risk management strategy that forms the basis of the selected remedy for transportation corridors (i.e. OU8) is provided in the ROD. Based on the conclusions of the risk management strategy, if established ICs are followed for the Site to mitigate these contributions to risk, and comprehensive cleanups are performed, then adequate protection of human health from exposure to LA contamination can be achieved when combined with physical measures. For OU8, although no physical cleanups were required, ICs would still have a role in protectiveness by tracking and confirming contaminated soils in ROWs are properly managed so they are not relocated in a manner that would pose unacceptable human health risks and/or contaminant migration issues within other OUs. The ICs established for OU8 are currently believed to be adequate to support the risk management strategy, and ICs will be continually evaluated and modified as appropriate to determine effectiveness through both annual inspections and five-year reviews. The rationale for developing the risk management strategy is discussed and illustrated graphically in Section 8.2 and Exhibit 4-2 in the ROD.

### **2.2.2 Remedial Goals and Cleanup Criteria**

The remedial criteria typically identified during the FS and finalized in the ROD are remedial goals (RGs). The development of RGs is a requirement of the NCP (40 CFR § 300.430(e)(2)(i)). Identification and selection of the RGs are typically based on RAOs, current and anticipated future land uses, and applicable rules and regulations. However, development of RGs for LA could not be performed using conventional techniques so factors related to technical limitations and uncertainty were considered during RG development as provided for in 40 CFR § 300.430(e)(2)(i)(A)(3) and (4).

The remedial clearance criteria are site-specific criteria used to determine when the physical remedy component or approach used in a cleanup action at a particular location would be considered complete in the context of the risk management strategy. As previously discussed, after comparison of RALs, no cleanups were required within OU8. However, cleanups were performed as part of other OUs within the OU8 ROW. In contrast to RALs, which define conditions when remedial action should begin, remedial clearance criteria define conditions when the physical remedy component or approach can end. Comparison of analytical results to remedial clearance criteria would only occur once the specified physical remedy was implemented to the initial design limits (e.g., only once proper thicknesses of soil covers or backfill are placed, specified initial excavation depths of soil are reached, or encapsulation of accessible building materials is completed).

Cleanup of properties with contaminated source media based on remedial clearance criteria, through a combination of physical remedial approaches and other overarching protective measures such as ICs, would achieve the established RAOs and thus successfully implement the risk management strategy.

The ROD (EPA 2016) provides a detailed description of the RALs and remedial clearance criteria that were established for use during remediation of LA contamination for land use categories within OUs 4 through 8 at the Site.

## **2.3 IC Requirements from the ROD**

In 2012, the EPA began developing an interim ICs program for the Site. Interim ICs were developed as part of the then ongoing removal program to enhance education of community residents and provide information on activities property owners may take that could disturb LA and create an

unacceptable exposure. Based on the interim ICs and initial community outreach, the EPA worked with DEQ and local agencies to develop a list of preferred ICs, which were published in the Site's proposed plan. During preparation of the proposed plan, interim IC objectives were developed to address soil, building materials, and change of land use. ICs were developed to meet these objectives, and when implemented with the physical remedy components, provide a protective remedy with resulting cumulative risks below the EPA's level of concern. Outreach was conducted to obtain feedback from the community on the preferred ICs during the comment period for the 2015 proposed plan. Comments on the 2015 proposed plan were addressed through clarification and explanation as a responsiveness summary within the ROD.

The OU8 ICIAP has been finalized and meets the objectives for ICs in the ROD. The IC objectives documented in the ROD are provided below.

### **Soil**

Objective: Prevent LA fibers that may remain in soil at properties after meeting remedial criteria for the land use category, or at undeveloped properties, from becoming a future source of unacceptable exposure.

#### Tools:

- Moving excavated material off-site
  - Permit for disturbance of soil
  - Montana One-call utility locate service (UDIG) program
  - Landfill permit
  - Ban on illegal dumping
  - Contractor certification
  - Education
- Moving backfill and other materials on-site
  - Best management practices (BMPs) for use of imported material sources
  - Education
- Bringing subsurface soils to the surface
  - BMPs for managing excavated soils on-site
  - UDIG program
  - Permit for disturbance of soil
  - Education

### **Building Materials**

Evaluation or reporting of contaminated building materials was not required for OU8 as part of the transportation corridor land use category, and as such, ICs relating to building materials are not included in this ESD.

## **Land Use**

Objective: Track changes in land use and develop a notification system to ensure that property owners, prospective property owners, and workers are aware of IC requirements and remaining or potential LA that could become a future source of unacceptable exposure.

Tools to be used to track changes in land use are identified in the ROD. While the ROD included ICs intended to monitor land use, land use is not expected to change in OU8.

The list of tools that will be utilized to implement the IC program, the entity(ies) responsible for implementing the tools, and entity(ies) responsible for the cost of the tools have been finalized and documented in the OU8 ICIAP (CDM Smith 2017b) discussed in Section 3.1.

## Section 3 Basis for ESD

The proposed plan for OUs 4 through 8 of the Site was released for public comment in May 2015. Alternative S06 was identified as the preferred alternative for contaminated soil and Alternative BM5 was the preferred alternative for contaminated building materials occurring on residential/commercial properties. For the other three land use categories (industrial, transportation corridors, and parks/schools), no additional physical cleanup will occur, since these areas were sufficiently addressed during prior response actions.

As requested, the public comment period was extended from 30 to 60 days, and the EPA reviewed all written and verbal comments submitted during that comment period. It was determined that no significant changes to the remedy, as originally identified in the proposed plan, were necessary. Implementation of ICs would be required and this ESD was prepared to discuss the specific ICs to be implemented for OU8. As previously mentioned, the ROD was subsequently signed in February 2016.

### 3.1 Explanation of Change

In September 2017, the *Highways & Roadways, Operable Unit 8, Institutional Control Implementation and Assurance Plan* (OU8 ICIAP) (CDM Smith 2017b) was finalized and placed into publication on the EPA website. The OU8 ICIAP identifies and documents activities that are designed to implement, maintain and enforce ICs at OU8 and the organizations responsible for conducting the IC activities. The ICIAP also helps ensure that OU8 ICs are properly implemented to protect the remedies in place and continue to operate as intended. However, the ROD anticipated a sitewide ICIAP and, as such, explained a public comment period would be made available for a sitewide ICIAP. Because an ICIAP specific to OU8 was developed prior to a sitewide document, and done so without a public comment period, the EPA will have a public comment period on this OU8-specific ESD and the OU8-specific ICIAP.

The ROD states that while the objectives for the ICs are unlikely to change, the specific sitewide ICs have yet to be formally identified. As discussed in the ROD, the EPA and DEQ were expected to work to develop an ICIAP that would help clarify the tools anticipated to be used in implementing the ICs selected. The purpose of an ICIAP, coupled with an O&M plan, is to explain in more detail how encounters with asbestos following cleanup will be managed. The EPA anticipated using a “layering” approach for ICs, meaning that multiple tools would be used to implement each selected IC to ensure each objective was met. The EPA has developed this OU8 ESD as required by the ROD. The ROD further explains that an ESD would reference the ICIAP and identify the specific IC requirements and tools that the EPA used to implement the ICs selected. The EPA anticipates the actual ICs or tools selected may require modification over time to meet the community’s needs and based on determinations of protectiveness made during five-year reviews.

The following paragraphs detail IC tools and types of IC instruments (categories) in place, as discussed in the OU8 ICIAP. The informational devices related to OU8 include the City/County Board of Health-Asbestos Resource Program (BOH-ARP), UDIG, MDT encroachment permit and addendum, the EPA Libby Asbestos Superfund Site website, O&M plan, and BMP manual.

BOH-ARP is a program staffed in Lincoln County, Montana, and funded by the EPA through the O&F period. BOH-ARP was developed as an interim program, that may be supported by DEQ into

Operations and Maintenance as a long-term 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 risks associated with LA exposure. Assistance in managing contamination may include providing resource materials and BMPs, providing contractor referrals, and/or removing contamination. BOH-ARP is available for people interested in information regarding LA and/or to provide resources that minimize risks associated with LA. BOH-ARP may be contacted at (406) 291-5335, and information is available on their website at [www.LCARP.com](http://www.LCARP.com).

BOH-ARP is notified by UDIG for all activities planned within OU8 boundaries where excavation, drilling, or other subsurface activities are to be performed. If disturbance is planned in an area of contamination, advice on how to address the contamination may be obtained from BOH-ARP. In addition to providing advice and instruction, BOH-ARP will assist in managing contamination encountered, as necessary. Assistance in managing contamination may include providing resource materials and BMPs, providing contractor referrals, and/or removing contamination.

All individuals and organizations intending to perform work within the ROW areas in OU8 must apply for an encroachment permit with 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 that accompanies any such permit in OU8 (i.e., transportation corridors) 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 as Appendix A in the OU8 ICIAP (CDM Smith 2017b).

The EPA Libby Asbestos Superfund Site website (<https://www.epa.gov/superfund/libby-asbestos>), managed by the EPA, is another public source for information about the Site. If necessary, additional informational sources may be established and maintained, which may include advertisements, handouts and training classes.

The OU8 O&M Plan was completed and presents administrative, financial and technical details and requirements for inspecting, operating and maintaining the OU8 remedial action. In addition the O&M plan includes a BMP manual and checklists for inspecting the remedy. The OU8 O&M plan is available online at (<https://semspub.epa.gov/src/collection/08/SC36143>).

A BMP manual has been developed to outline BMPs for working within the boundaries of OU8. The BMP manual provides guidance to assist in preventing or reducing the release of LA (to prevent or reduce exposure to LA) within OU8 and is provided as Appendix B in the OU8 ICIAP (CDM Smith 2017b).

For informational handouts and LA awareness, people may contact the BOH-ARP at the following:

BOH-ARP  
418 Mineral Ave  
Libby, MT 59923  
(406) 291-5335

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, the OU8 ICIAP will be reviewed and revised accordingly to ensure the ICs at OU8 continue to provide adequate protection.

## Section 4 Description of Significant Differences

### 4.1 Changes in Scope

The example IC tools identified in the ROD to achieve the IC objectives presented for both soil and land use differ from those identified in the OU8 ICIAP. The following table presents the differences between the example ICs discussed in the ROD and the OU8 ICIAP. In general, the IC tools incorporated into the OU8 ICIAP consist of only informational devices and do not contain proprietary controls, governmental controls, or enforcement and permit tools and, as such, are not “layered” to the extent anticipated and discussed in the ROD.

| <b>IC Tools Identified in the OU8 ICIAP</b>   | <b>Instrument Category</b> |
|---|----------------------------|
| UDIG Program  | Informational Device       |
| Education   | Informational Device       |
| BMPs for use of imported material sources (e.g., site management plan)                | Informational Device       |
| BMPs for managing excavated soils on-site (e.g., site management plan)                | Informational Device       |
| Property status mapping (i.e., Libby Response Manager/geographic information system)  | Informational Device       |
| <b>IC Tools Identified in the OU8 ICIAP, Modified from the ROD</b>                    | <b>Instrument Category</b> |
| ROW permits (e.g., MDT encroachment permit application and addendum)                  | Informational Device       |
| <b>Example IC Tools Identified in the ROD and Not Incorporated into the OU8 ICIAP</b> | <b>Instrument Category</b> |
| Permit for disturbance of soil  | Governmental Control       |
| Landfill Permit   | Governmental Control       |
| Ban on illegal dumping  | Governmental Control       |
| Contractor certification  | Governmental Control       |
| Transaction disclosure through board of realtors                                      | Informational Device       |
| Land use classification in the city   | Governmental Control       |
| Subdivision requirements  | Governmental Control       |
| Building permits in the city  | Governmental Control       |
| New utility notification  | Governmental Control       |
| Overlay district  | Governmental Control       |

Although not specifically discussed in the ROD, in some cases, removal or remedial actions performed for other OUs (i.e., OU1, OU2, OU4, and OU7) extended into the highway or ROW, and as such, into OU8. Response actions performed for other OUs that extended into the OU8 ROW addressed soil conditions exceeding RALs for residential/commercial land use categories or parks/schools land use categories (which are more stringent RALs than OU8 land use categories). ICs established for OU4, OU6 and OU7, which are not fully developed at the time of this OU8 ESD, are likely to differ in scope from those for OU8. However, it is unclear whether the ICs selected for these other OUs would affect OU8 due to governmental ownership and management of the ROWs.

### 4.2 Changes in Performance

Changes in performance of the remedy are not anticipated as a result of the implemented ICs at OU8. The experience and knowledge gained over the course of implementing many of these same or similar IC tools during prior response actions at OU4, OU5 and OU7 have allowed for the evaluation of IC performance to occur. This, in turn, has allowed for administrative ease in implementing the

selected ICs at OU8 and provides confidence that IC performance will not differ significantly from the performance already demonstrated, thus meeting the IC objectives for OU8 in the ROD.

### **4.3 Changes in Cost**

Assumptions related to estimated costs identified in the ROD are detailed in Appendix L of the FS (CDM Smith 2015). Because the ROD took a holistic approach and included a selected remedy cost estimate of combined OUs (OU4, OU5, OU6, OU7 and OU8), an O&M cost estimate related to the implementation and maintenance of ICs specific to OU8 was prepared in the *Highways and Roadways, Operable Unit 8, Operation and Maintenance Plan* (OU8 O&M Plan) (CDM Smith 2018).

A comparison of the costs between those anticipated in the ROD and those implemented for OU8, shows that there was a decrease in cost for implementation and maintenance of ICs selected for OU8 because fewer IC tools are being used.

### **4.4 Changes in Expected Outcomes**

The changes in expected outcomes as a result of this OU8 ESD are that the ICs for OU8 should be more manageable (administratively) to meet the OU8 IC objectives at a presumably lower overall cost.



## Section 5 Response to ESD Review Summary

DEQ reviewed this ESD prior to issuance and comments were considered prior to issuance. Comments from DEQ have been addressed in the document by inclusion, with additional clarification as noted below.

Section 2.2.1 – DEQ questioned how the risk management strategy discussed in the ROD applies to OU8.

**EPA Response** – Text was added to the paragraph to better clarify how the risk management strategy applies to OU8. Added text for clarification is as follows: “For OU8, although no physical cleanups were required, ICs would still have a role in protectiveness by tracking and confirming contaminated soils in rights of way are properly managed so they are not relocated in a manner that would pose unacceptable human health risks and/or contaminant migration issues within other OUs. The ICs established for OU8 are currently believed to be adequate to support the risk management strategy and ICs will continually be evaluated and modified as appropriate to determine effectiveness through both annual inspections and the five-year review.”

Section 4.1 – DEQ commented that the ESD explains why there are fewer ICs than considered in the ROD but the ICIAP recommends that a site management plan be considered for OU8 and questioned why mention of a site management plan wasn’t incorporated into the ESD. Additionally, DEQ questioned whether proprietary controls were created and whether property status mapping was considered a proprietary control.

**EPA Response** – The ICIAP for OU8 does not specifically recommend that a site management plan be considered; however, the BMP manual (Appendix B of OU8 ICIAP) does state there should be a mechanism in place to ensure importation or exportation of material does not have the potential to increase risk of LA exposure to land users and that mechanism may be satisfied through the use of a site management plan. A site management plan has been added as an example of BMPs for use of imported material sources and BMPs for managing excavated soils on-site in the table in Section 4.1.

No proprietary controls were established specific to OU8 because OU8 consists of government-managed properties (e.g., highways, roadways). Property status mapping is therefore considered an informational device. The Libby Response Manager/geographic information system was added as an example of property status mapping in the table in Section 4.1.

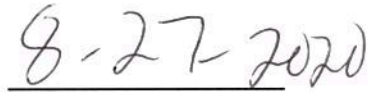
## Section 6 Statutory Determinations

Considering the new information presented in this OU8 ESD and the changes made to the selected remedy, the EPA believes that the selected remedy, as modified by this ESD, remains protective of human health and the environment, complies with federal and state requirements that are applicable or relevant and appropriate to this OU or involves appropriate waivers of these requirements, and is cost effective. Thus, the modified remedy satisfies the statutory requirements of CERCLA Section 121.

### APPROVAL



Andrew Wheeler  
Administrator



Date

## Section 7 Public Participation Compliance

In accordance with NCP Section 300.435(c)(2)(i), to issue an ESD, the lead agency shall:

*(A) Make the explanation of significant differences and supporting information available to the public in the administrative record established under NCP § 300.815 and the information repository; and*

*(B) Publish a notice that briefly summarizes the explanation of significant differences . . . in a major local newspaper of general circulation.*

A copy of this ESD and supporting information will be placed in the Site administrative record and in two local information repositories in accordance with NCP Section 300.435(c)(2)(i)(A), as described in Section 1 of this ESD.

Additionally, the lead agency, the EPA, will publish a public notice in the *Western News*, *The Montanian*, and *Kootenai Valley Record* that briefly summarizes the changes presented in the ESD. These are local newspapers of general circulation, in accordance with NCP Section 300.435(c)(2)(i)(B).

These activities will meet the public participation requirements of the NCP, as indicated in Section 300.435(c)(2)(i).

## Section 8 References

CDM Smith. 2018. *Highways and Roadways, Operable Unit 8, Operation and Maintenance Plan*. Libby, Montana. Prepared for the U.S. Environmental Protection Agency.

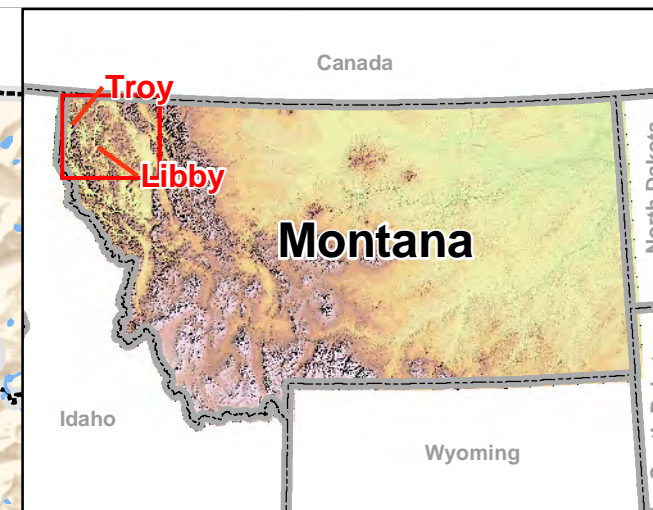
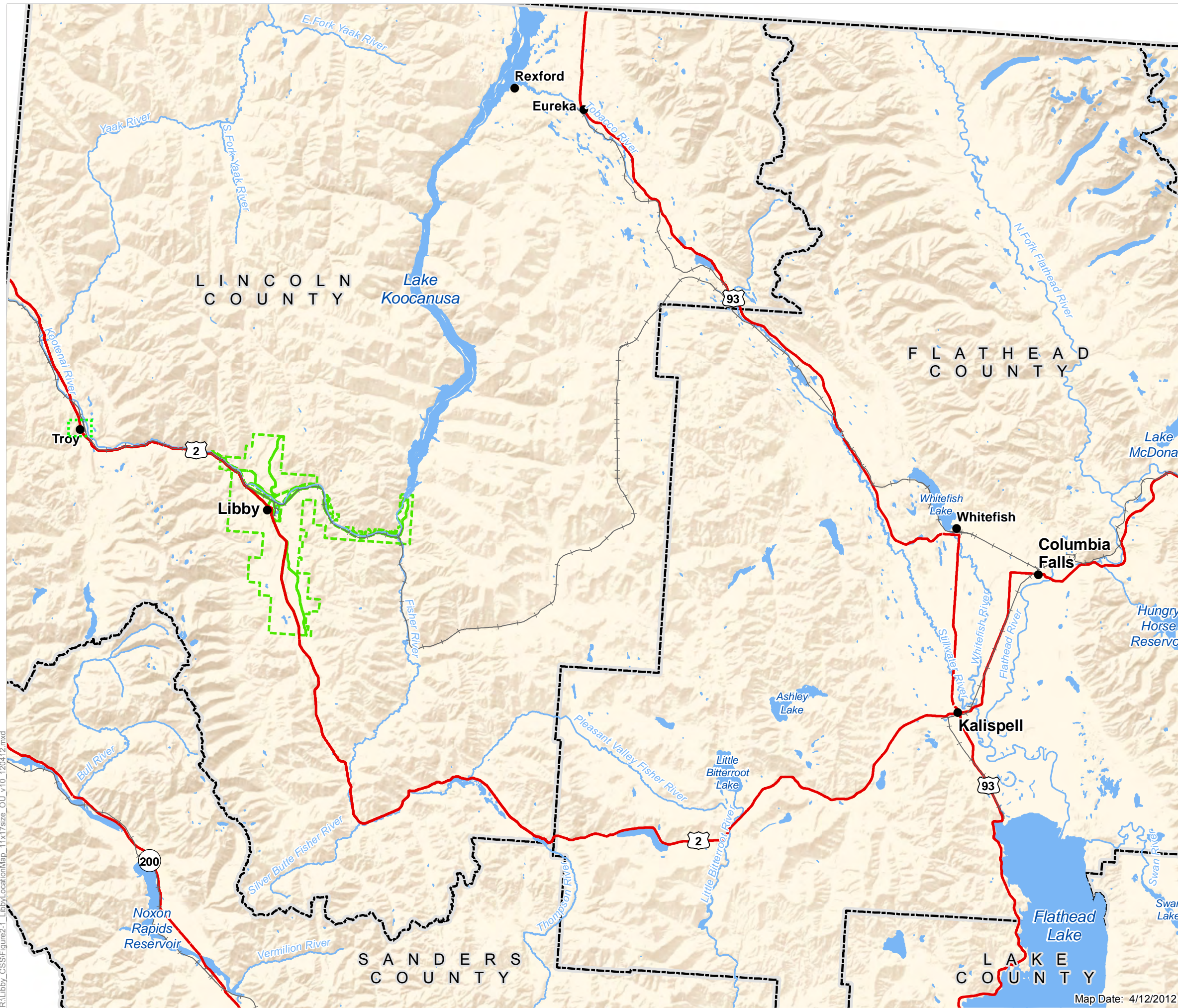
\_\_\_\_\_. 2017a. *Final Remedial Action Report, Operable Unit 8 – Highways, Libby Asbestos Superfund Site, Lincoln County, Montana*. Prepared for the U.S. Environmental Protection Agency.

\_\_\_\_\_. 2017b. *Highways & Roadways, Operable Unit 8, Institutional Control Implementation and Assurance Plan, Libby Asbestos Superfund Site, Lincoln County, Montana*. Prepared for the U.S. Environmental Protection Agency.

\_\_\_\_\_. 2015. *Site-Wide Feasibility Study, Libby Asbestos Superfund Site*. Prepared for the U.S. Environmental Protection Agency.

EPA. 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*.

# Figures



**Legend**

- City
- Highway
- +— Railroad
- River
- Waterbody
- Approximate Site Boundary
- County Boundary

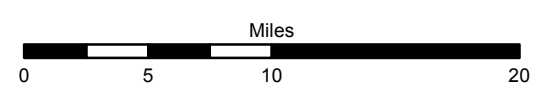


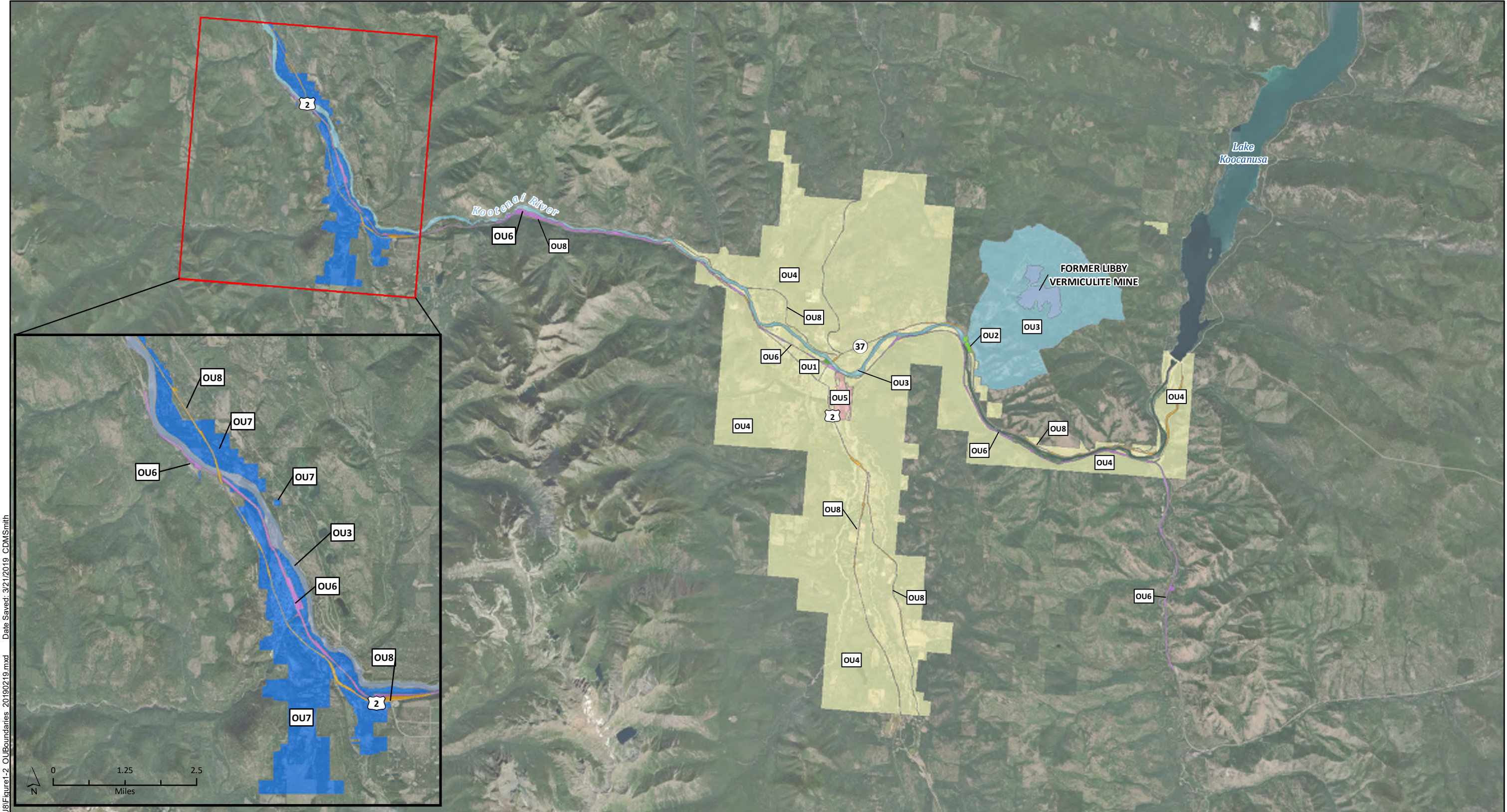
Figure 1-1

Site Location Map  
 Libby Asbestos Superfund Site  
 Lincoln County, Montana



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Map Date: 4/12/2012



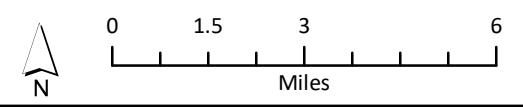
Document Path: R:\GIS\_Support\MD\OU8\Figure1-2\_OUBoundaries\_20190219.mxd Date Saved: 3/21/2019 CDM\Smith



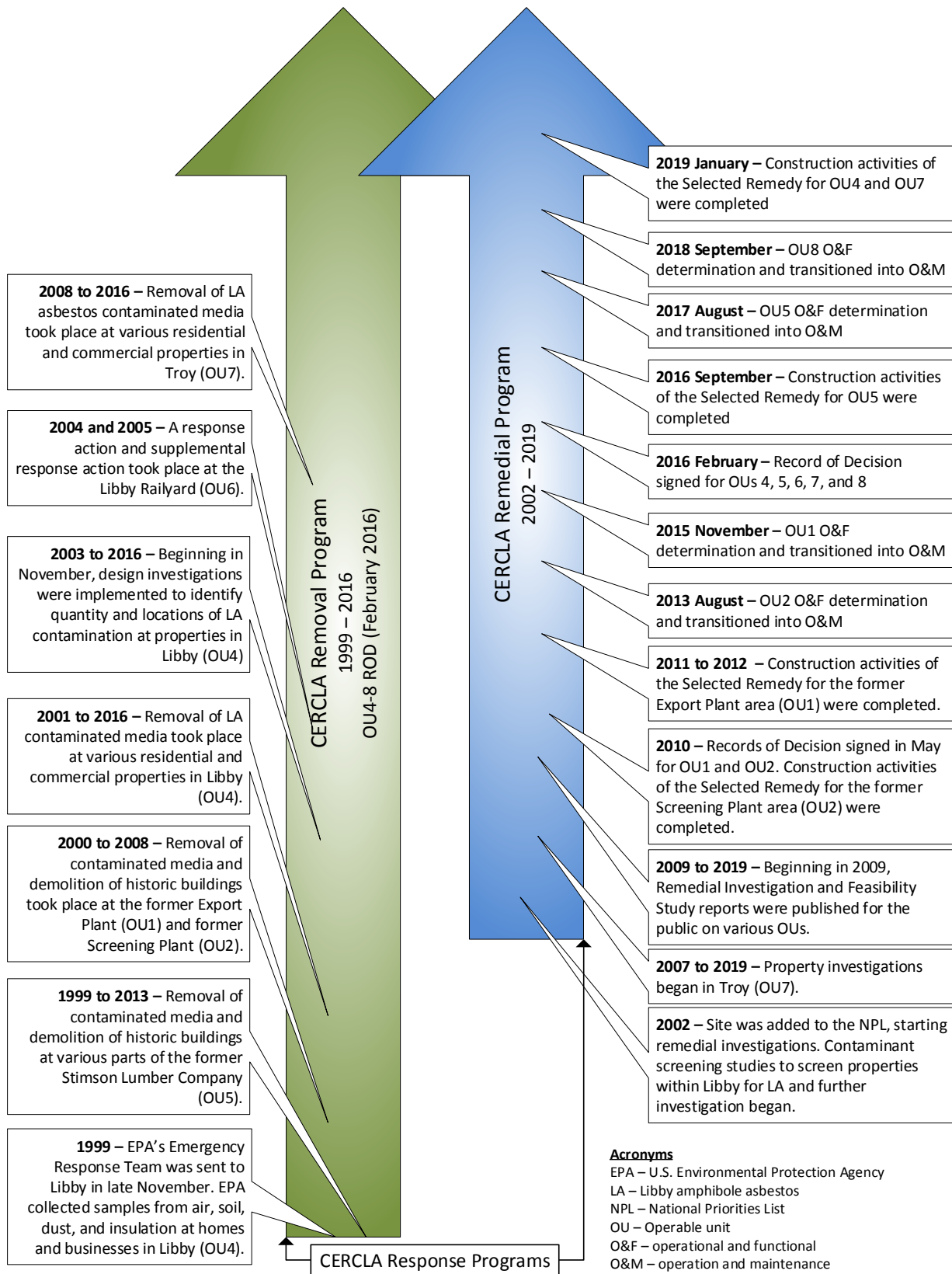
- OU1 - Former Export Plant
- OU2 - Former Screening Plant
- OU3 - Forest/Former Mine Site/Kootenai River Study Area Boundary
- OU4 - Residential/Commercial Areas within Libby
- OU5 - Former Stimson Lumber Mill
- OU6 - Burlington Northern and Santa Fe Railroad
- OU7 - Residential/Commercial Areas within Troy
- OU8 - Highways
- OU3 - Former Mine Site

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

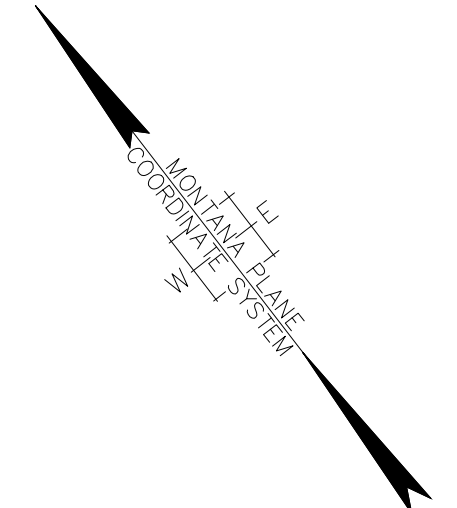
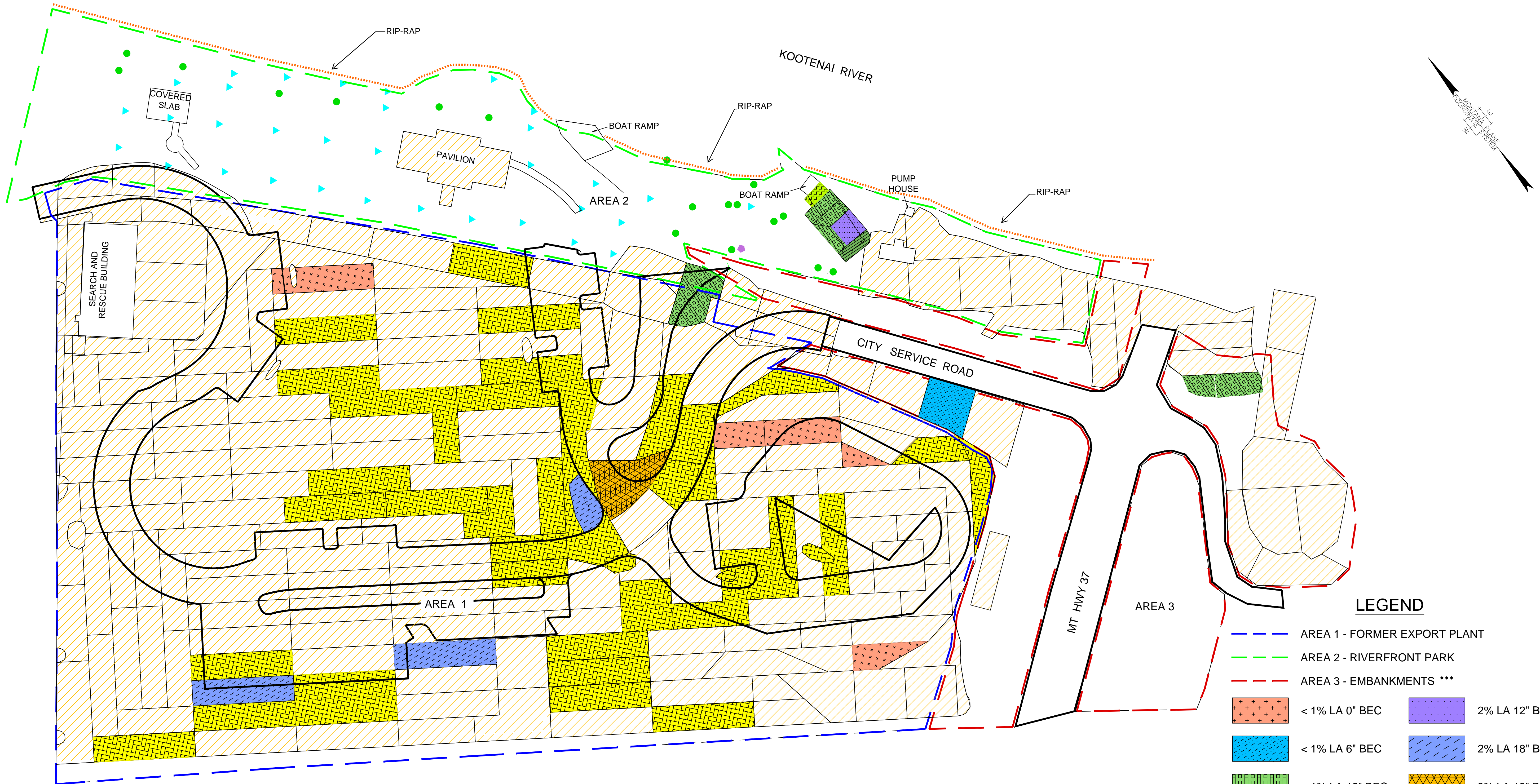
**Figure 1-2**  
 Operable Unit Boundaries  
 Libby Asbestos Superfund Site | Lincoln County, MT



**Figure 2-1. Timeline of Regulatory Activities at the Site**







**LEGEND**

- AREA 1 - FORMER EXPORT PLANT
- AREA 2 - RIVERFRONT PARK
- AREA 3 - EMBANKMENTS \*\*\*
- < 1% LA 0" BEC
- < 1% LA 6" BEC
- < 1% LA 12" BEC
- < 1% LA 16" BEC
- < 1% LA 18" BEC
- < 1% LA 24" BEC
- NON DETECT
- 2% LA 12" BEC
- 2% LA 18" BEC
- 3% LA 18" BEC
- EDGE OF PAVEMENT
- ▲ ND LA 12" BGS
- < 1% LA 12" BGS
- 2% LA 12" BGS
- ⋯ RIP-RAP

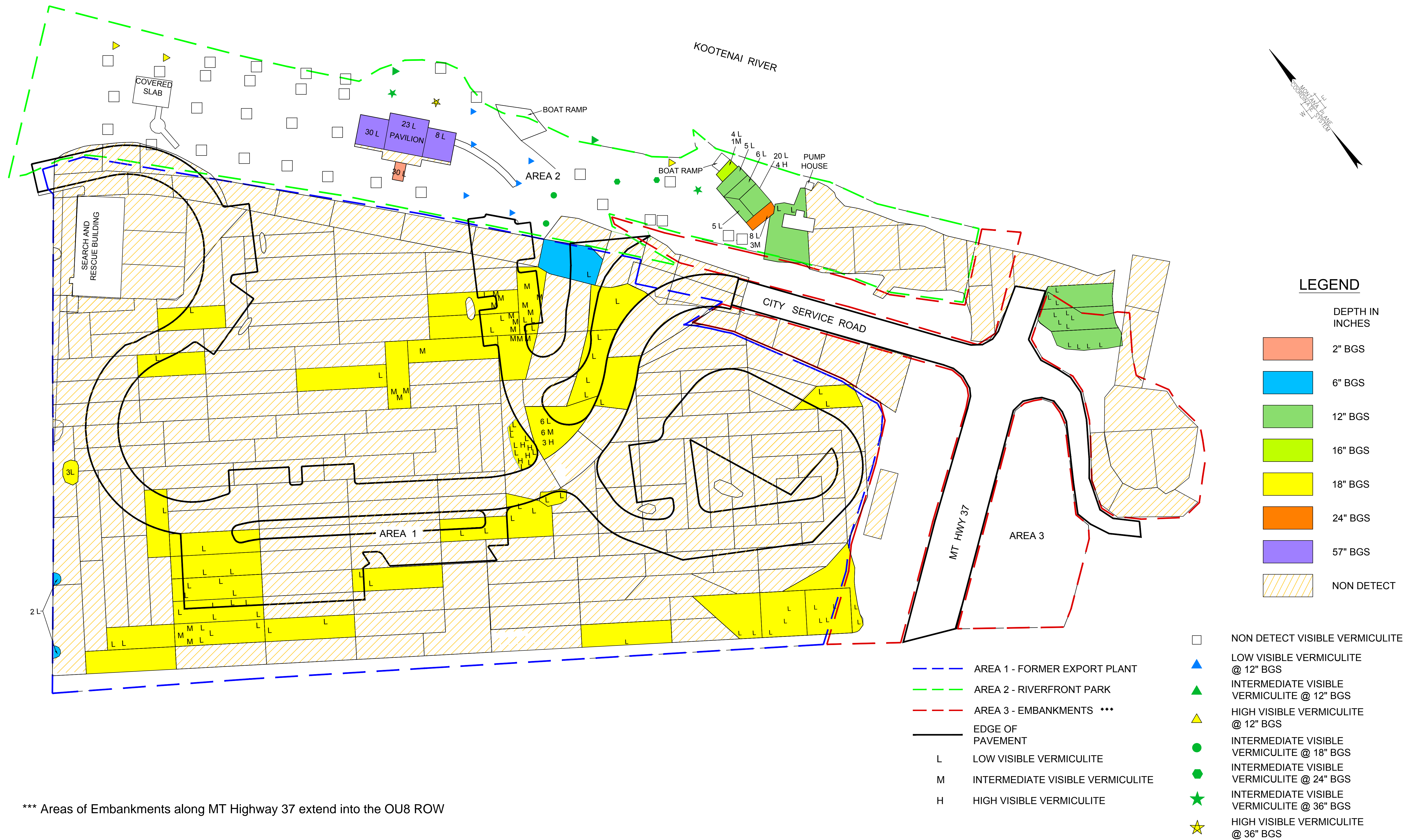
\*\*\* Areas of Embankments along MT HWY 37 extend into the OU8 ROW

**Note: Hatching indicates LA results below engineered cover (BEC) - engineered cover has a minimum thickness of 18 inches**



Figure 2-2  
Location and Depth of Libby Amphibole Asbestos at OU1, Including Areas Extending into the OU8 Right-of-Way (MT Highway 37)





\*\*\* Areas of Embankments along MT Highway 37 extend into the OU8 ROW

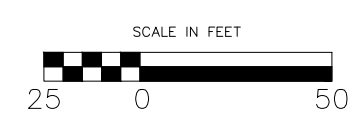
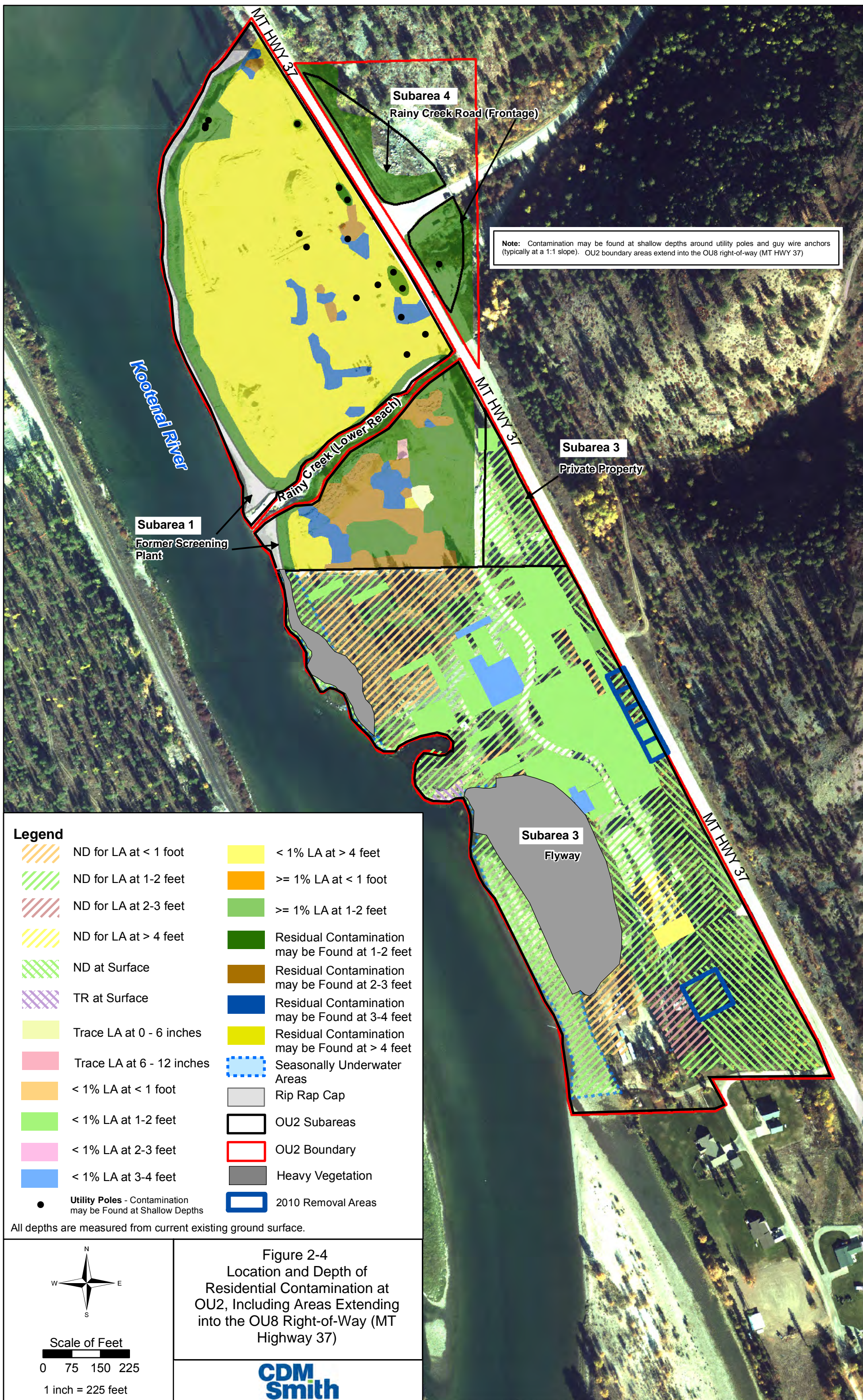


Figure 2-3  
Location of Depth of Visible Vermiculite at OU1, Including Areas Extending into the OU8 Right-of-Way (MT Highway 37)



**Note:** Contamination may be found at shallow depths around utility poles and guy wire anchors (typically at a 1:1 slope). OU2 boundary areas extend into the OU8 right-of-way (MT HWY 37)

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

All depths are measured from current existing ground surface.

North Arrow

Scale of Feet

0 75 150 225

1 inch = 225 feet

**Figure 2-4**  
 Location and Depth of Residential Contamination at OU2, Including Areas Extending into the OU8 Right-of-Way (MT Highway 37)

**CDM Smith**