

Operable Units 4 and 7
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 and Abbreviations

ARP	Lincoln County Asbestos Resource Program
BMP	best management practice
BOH	City-County Board of Health
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
GIS	geographical information system
IC	institutional control
ICIAP	institutional control implementation and assurance plan
LA	Libby amphibole asbestos
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NOEC	notice of environmental condition
NOPEC	notice of potential environmental condition
O&M	operation and maintenance
OU	operable unit
PEN	property evaluation notification
PLM-VE	polarized light microscopy using visual area estimation
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
VCI	vermiculite-containing insulation

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). The Site is listed as Superfund Enterprise Management System #MT0009083840. The EPA, the lead agency, 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 Units (OUs) 4 and 7, which include residential and commercial properties, and parks and schools.

The Site is 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). Troy is about 20 miles west of Libby. 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 Company) in Libby; OU6 contains all BNSF Railway Company 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; 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), which were documented in respective RODs. OU3, the former Libby vermiculite mine and surrounding areas, will be addressed under an additional decision document.

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. ICs are defined as nonengineered instruments, such as administrative, programmatic, and legal controls, that help minimize the potential for exposure to contamination and/or protect the integrity of a response action. ICs are required if contamination remains after the active cleanup is complete that does not allow for unlimited use and unrestricted exposure, or if the active cleanup alone cannot feasibly mitigate the risks from exposure to contamination. 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 *Final Institutional Control Implementation and Assurance Plan, Operable Units 4 and 7, Libby Asbestos Superfund Site, Libby, Montana* (CDM Smith 2020b) was finalized in March 2020. The ICIAP discusses ICs necessary to maintain the remedy or minimize encounters of Libby amphibole asbestos (LA) for OUs 4 and 7 of the Site. The ROD explained that the EPA would prepare an ESD to reference the ICIAP, which would detail how encounters with LA following cleanup would be managed and would identify 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 site reviews. As stated, this ESD is specific to OUs 4 and 7; separate ICIAPs and ESDs have been prepared for OU5, OU6, and OU8.

The ROD also presented a summary of the major remedial components for the selected remedies along with their associated quantities. This ESD discusses the changes from the projected remedial component quantities to the actual quantities used for the selected remedy, which are summarized in Table 1.

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 Oil and Hazardous Substances Pollution 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 § 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 provided below.

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

[Libby Asbestos Site Administrative Record](#)

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 OUs 4 and 7 documents are available online at:
<https://semspub.epa.gov/src/collection/08/SC37815>

Local information repositories include the Lincoln County Public Library branches. Contact information is provided below.

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

Hours of operation:

Tuesday: 1 p.m. to 6 p.m.
Wednesday to Friday: 10 a.m. to 4 p.m.
Saturday: 11 a.m. to 2 p.m.

Lincoln County Public Library – Troy
207 3rd Street
Troy, MT 59935
(406) 295-4040

Hours of operation:

Tuesday: 1 p.m. to 6 p.m.
Wednesday to Friday: 10 a.m. to 4 p.m.
Saturday: 11 a.m. to 2 p.m.

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 people 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-containing insulation [VCI], 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. Current land use within OUs 4 and 7 are categorized as residential/commercial and parks/schools.

2.1 Operable Units 4 and 7

OUs 4 and 7 are the subject of this ESD and include residential, commercial, roadways, municipal (service-related), and public areas (e.g., parks, schools) impacted by contamination such as VCI, processed vermiculite ore, and mine wastes associated with the historical local mining, processing, and shipping of vermiculite by W.R. Grace and Company. Exposure to vermiculite and LA within these OUs was largely mitigated by removing contaminated surface soil and replacing it with clean soil backfill and/or removing contaminated VCI and/or contaminated building materials during response actions.

The EPA and DEQ have performed many investigations in OUs 4 and 7 to determine the extent of LA occurrence. Investigation results led to physical response actions at individual properties within OUs 4 and 7. Details of investigation and response actions within OUs 4 and 7 are discussed in the

Remedial Investigation Report, Residential and Commercial Properties, Operable Unit 4, Libby Asbestos Superfund Site (CDM Smith 2014); *Final Remedial Investigation Report, Operable Unit 7, Libby Asbestos Superfund Site* (Tetra Tech 2014); and *Final Remedial Action Report, Operable Units 4 and 7 – Libby Asbestos Superfund Site* (CDM Smith 2020a).

2.2 Selected Remedy

Prior to the ROD signing in February 2016, most properties within OUs 4 through 8 that posed unacceptable risks to human health and the environment had already been cleaned up through prior time-critical response actions. While past removal actions for OUs 4 through 8 addressed unacceptable exposures, the selected remedy also relies on ICs to manage any remaining exposures to LA contamination, particularly if land use were to change. 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 that guide the remedy to ensure it will be protective of human health and the environment when it is complete. 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 RAOs applicable to OUs 4 and 7 are:

- 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.
- Minimize the inhalation of LA during disturbances of building materials contaminated with LA such that the resulting exposures result in cumulative cancer risks that are within or below 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 excavating soil and placing clean backfill materials when remedial action levels (RALs) were reached or exceeded. The remedy for contaminated building materials at the Site generally consisted of removing the materials, encapsulating the area, and performing interior cleanings when RALs were reached or exceeded.

Polarized light microscopy using visual estimation (PLM-VE) is a Libby-specific analytical method that uses LA-specific reference materials to determine reporting "bins" for fine-ground soil samples. These reporting bins are used to determine if remedial actions are required. The reporting bins are:

- Bin A (non-detect): no LA is observed
- Bin B1 (trace): LA is present, but at levels less than 0.2 percent
- Bin B2 (less than 1 percent): LA is present at levels less than 1 percent but greater than or equal to 0.2 percent
- Bin C (greater than or equal to 1 percent): LA is present at levels greater than or equal to 1 percent

The RALs applicable to OUs 4 and 7 are as follows:

Contaminated Surface Soil for Residential/Commercial Land Use Categories in Areas Identified as Frequently Used

- LA soil concentration of Bin B2 or Bin C by PLM-VE (regardless of spatial extent)
- or
- LA soil concentrations of Bin B1 by PLM-VE if the spatial extent of the Bin B1 area is more than 25 percent of the total soil exposure area at a property

Contaminated Surface Soil for Residential/Commercial Land Use Categories in Areas Identified as Infrequently Used

- LA soil concentrations of Bin B2 or Bin C by PLM-VE

Contaminated Surface Soil for Park/Schools Land Use Categories

- LA soil concentrations of Bin B2 or Bin C by PLM-VE

Contaminated Building Materials (regardless of land use category)

- Presence of accessible LA-containing vermiculite insulation in any quantity in living spaces, non-living spaces, and/or secondary structures
- or
- Presence of accessible friable and/or deteriorated building materials (e.g., chinking; plaster; mortar; other materials on boilers, pipes, or other appurtenances) containing greater than or equal to 0.25 percent LA by the EPA's polarized light microscopy point count (400) method

As discussed in the *Final Remedial Action Report, Operable Units 4 and 7 – Libby Asbestos Superfund Site* (CDM Smith 2020a), unacceptable exposures to contamination have largely been mitigated by removing surface soils, partially removing contaminated building materials, and sealing in place inaccessible contaminated building materials; remaining surface soils and inaccessible contaminated building materials do not present an unacceptable risk to identified human receptors (e.g., residents, teachers/students) under the current and potential future land uses. Although some receptors (e.g., tradespersons) have been identified in the *Site-Wide Human Health Risk Assessment, Libby Asbestos Superfund Site* (EPA 2015) as having the potential to present an unacceptable risk, appropriate protections, such as ICs, are expected to bring risks to an acceptable level.

2.2.1 Risk Management Strategy Discussion from the ROD

The risk management strategy that forms the basis of the selected remedy for residential/commercial properties and parks/schools within OUs 4 and 7 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 OUs 4 and 7, ICs combined with the physical cleanups conducted have a role in protectiveness by maintaining the integrity of response actions, as well as

tracking and confirming contaminated soils 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 areas or OUs. The ICs established for OUs 4 and 7 are currently believed to be adequate to support the sitewide risk management strategy, and ICs will continually be evaluated and modified, as appropriate, to determine effectiveness through annual inspections and five-year reviews. The rationale for developing the risk management strategy is discussed in Section 8.2 and illustrated in Exhibit 4-2 of 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. 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 only occurs once the physical remedy is implemented according to the design limits (e.g., after excavation depths of soil are reached and proper thicknesses of soil covers or backfill are placed, or after accessible building materials are encapsulated).

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 Institutional Control Requirements from the Record of Decision

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. When preparing the proposed plan, interim IC objectives were developed to address contaminated soil, contaminated building materials, and change of land use. ICs were then developed to meet those interim 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 OUs 4 and 7 ICIAP has been finalized and meets the objectives for ICs stated in the ROD. These objectives and tools to implement them are as follows:

Soil

Objective: Prevent LA fibers that may remain in soil at properties after meeting remedial criteria for the land use category, or that may remain 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

Objective: Prevent LA fibers that may remain in inaccessible building materials from becoming a future source of unacceptable exposure.

- Demolition
 - Disconnecting utilities notifications
 - Landfill permits for contractors
 - Building permits in the city
 - Permits for disturbance of building materials
 - Contractor certification
 - Education
- Renovation
 - New utility notifications
 - Landfill permits for contractors
 - Building permits in the city

- Permits for disturbance of building materials
- Dumpster program
- Contractor certification
- Education

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.

- Transaction information
 - Transaction disclosure through the local board of realtors
 - Property status maps
 - Education
- Changes in land use
 - Land use classification in the city
 - Subdivision requirements
 - Building permits in the city
 - UDIG program
 - New utility notifications
 - Overlay district
 - Rights-of-way permits (e.g., MDT encroachment permit)
 - Education

The list of tools that will be used 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 OUs 4 and 7 ICIAP (CDM Smith 2020b), as discussed in Section 3.1.

Section 3 Basis for Explanation of Significant Differences

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 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 met the cleanup criteria for their respective land use categories 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. As previously mentioned, the ROD was subsequently signed in February 2016. Implementation of ICs would be required for OUs 4 through 8 and this ESD was prepared to discuss the specific ICs to be implemented for OUs 4 and 7 to ensure the remedy remains protective into the future.

3.1 Explanation of Change

3.1.1 Institutional Controls

In March 2020, the OUs 4 and 7 ICIAP was finalized and placed into publication on the EPA website. The OUs 4 and 7 ICIAP identifies and documents activities that are designed to implement, maintain, and enforce ICs at OUs 4 and 7, and specifies the organizations responsible for conducting the IC activities. The ICIAP also helps ensure that OUs 4 and 7 ICs are properly implemented to protect the remedies in place and continue to operate as intended, particularly if land use were to change. However, the ROD anticipated a sitewide ICIAP and, as such, explained a public comment period would be made available for a sitewide ICIAP. Since the ICIAP for OU4 and OU7 was developed in lieu of a sitewide ICIAP, the EPA provided a public comment period on the OUs 4 and 7 ICIAP. The public comment period extended 60 days—November through December 2019. Additionally, a responsiveness summary was appended to the OUs 4 and 7 ICIAP to address public comments.

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 develop an ICIAP that would clarify which tools are anticipated to be used when implementing the selected ICs. The purpose of an ICIAP, coupled with an operation and maintenance (O&M) plan, is to explain in 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 OUs 4 and 7 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 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. Five-year reviews are expected to continue into the future, even after OUs 4 and 7 are partially deleted, because of the waste left in place, and ICs may be modified, as needed, at any time.

The following paragraphs detail the IC tools and types of IC instruments (categories) in place, as discussed in the OUs 4 and 7 ICIAP. The governmental controls include a property evaluation notification (PEN) regulation by the City-County Board of Health (BOH). The informational devices related to OUs 4 and 7 include notices of environmental conditions (NOECs) and notices of potential environmental conditions (NOPECs), Montana utility locate service (Montana 811), Lincoln County Asbestos Resource Program (ARP) educational and resource pillars (i.e., educational programs, BMP awareness, contractor awareness, educational outreach, property transaction awareness, health fairs and public outreach, and Lincoln County departmental procedure coordination [subdivision planning/septic review and coordination, business license information requests, asbestos disposal program coordination]), data and administrative record sources, and the OUs 4 and 7 BMP Manual.

Modification of ICs may be required if new ICs are developed, existing ICs change, or land use or ownership changes, or as needed based on determinations of protectiveness made during five-year reviews. If an IC modification is needed, the OUs 4 and 7 ICIAP will be reviewed and revised to ensure the ICs at OUs 4 and 7 continue to provide adequate protection.

Governmental Controls

PEN Regulation: The purpose of a PEN is to inform the public of the possibility of exposure to LA as a result of applicable activities related to real property, to include: (1) excavation, grading, and landscaping; (2) interior or exterior demolition, repair, modification, disturbance of material, or remodeling to permanent or temporary structures; (3) transfer of real property regardless of whether any comfort letter has been issued by the EPA or any other agency; (4) change in land use category or property use area; and (5) any dividing of land, including through subdivision, family transfer, court-ordered division, or other division. In addition to the applicable activities, other activities that require a PEN are included in the regulation. The PEN regulation focuses on providing property information regarding LA, data, education, and evaluations to protect the public in relation to the PEN-required activities. Prior to performing any PEN-required activities at a property within BOH's defined jurisdiction, a person is required to notify ARP of the proposed applicable activities through the PEN process. Based on adaptive management practices, the information provided through the PEN process may be used to provide additional assistance, information, or ICs. Assistance in monitoring and managing contamination may include monitoring contamination and evaluating it using RALs and RAOs in the ROD (EPA 2016), providing resource materials and BMPs, providing contractor referrals, facilitating removal of contamination, and providing funding information and guidance.

Informational Devices

NOEC/NOPEC: NOECs and NOPECs were filed by the EPA with the Lincoln County Clerk and Recorder office for any property whose owner has refused to complete investigation and/or cleanup efforts. The notices are intended to provide notice concerning the presence (NOEC) or potential presence (NOPEC) of contamination at a specific property and to precaution interested parties against using the property in any manner that may increase the risk of exposure to the contamination and result in an imminent and substantial endangerment to public health and the environment. A subsequent withdrawal notice is filed for properties where investigation data and/or proof of remediation, as applicable, are completed and submitted to the EPA and DEQ. The request and associated investigation and/or remediation documentation to obtain a withdrawal

notice are the responsibility of the property owner. ARP, in coordination with DEQ, will assist NOEC and NOPEC property owners in understanding the process and evaluating the data/report/response quality and applicability of the request for a withdrawal notice as necessary.

Montana 811: When the Montana 811 call center has been notified of ground-disturbing activities (e.g., excavation, fence installation) planned within the boundaries of OUs 4 and 7, Montana 811 will notify ARP. ARP will review past LA assessment data and sampling analytical results and provide guidance on how to address any contamination left in place recorded on a specific property or potential LA encounters. If ground disturbance is required, guidance and resources may be obtained from ARP. In addition to providing advice and instruction, ARP may assist in managing or providing scope services for encountered contamination as necessary. Assistance in managing contamination may include providing resource materials and BMPs, providing contractor referrals, and facilitating removing contamination.

ARP: ARP is a program under the BOH that is currently staffed in Libby, Montana. ARP was developed as a program to educate the public regarding the risks of LA exposure and provide resources to manage risks associated with LA exposure, including implementing initiatives or regulations to reduce or prevent LA exposure. ARP manages contamination risk through a variety of practices, which may include providing resource materials and BMPs, identifying contractors educated in LA-specific abatement practices, administering the PEN regulation, monitoring LA exposure during O&M, facilitating removing and disposing of LA contamination, and reducing the potential for exposure to LA. ARP is funded by a cooperative agreement with DEQ during O&M. The public is encouraged to contact ARP at (406) 291-5335 or visit the ARP website at www.lcarp.org for more information.

Educational and Resource Pillars: Educational and resource programs are central pillars of ARP. ARP strives to make sure the public is aware of what to look for and how to deal with LA and LA source materials before or when they encounter it on their property. A large part of ARP's educational program focuses on BMP awareness. ARP teaches the public what to look for and what to do if someone encounters vermiculite in their yard or VCI within their house. ARP makes site visits to schools, health fairs, construction sites, and homes to help the public manage LA contamination. Additionally, ARP works with other community organizations and commercial businesses to provide LA awareness. ARP has developed brochures that provide BMPs and information about reducing exposure, working in exterior and interior conditions, performing demolition activities, do-it-yourself projects, and yard work and gardening, and will update those brochures as required.

ARP provides status updates and information of work done on properties throughout the Site, including OUs 4 and 7, to Lincoln County departments and multiple municipalities. The Lincoln County departments and the Cities of Libby and Troy can make a request to ARP for information. ARP will review property files, and provide LA property information, data, and education to any department representative.

For informational handouts and LA awareness, individuals may also contact ARP at:

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

Data and Administrative Record Sources: Data and administrative record sources are available to assist with providing critical information during O&M. DEQ has adapted EPA response and remedy data into a database of property information on LA assessments, remedies, sample analytical data, and land use applicable to LA remedies. DEQ continues to integrate that database with geographical information system (GIS) mapping capabilities to provide geodata for locations with LA-asbestos-related information in OUs 4 and 7. Response Manager is a multiuser database administered by DEQ for tracking and reporting purposes. DEQ and ARP have access to Response Manager and the GIS database system to provide information and assessments of properties with respect to LA-related investigation and cleanup activities. Individual property information and data are available through ARP upon request by the property owner or their designated representative.

All hard copy property information recorded and collected by the EPA was scanned and delivered to DEQ and ARP at the completion of remedial action at OUs 4 and 7. The information captured on the property information hard drives provides additional mechanisms for obtaining property-specific information related to past LA-related investigation and response activities. Individual property information and data are available through ARP upon request by the property owner or their designated representative.

The Site administrative record is a set of nondeliberative documents the EPA considered, directly or indirectly, in determining the final ROD for the Site. The record includes all factual, technical, and scientific material or data considered in making the final ROD, regardless of whether the materials or data supported the decision. The EPA Site administrative record for OUs 4 and 7 are available at the Lincoln County Libby and Troy Libraries. The administrative record and the EPA website (www.epa.gov/superfund/libby-asbestos) may be accessed by the public for information on the EPA's responses, remedies, and decisions for the Site.

BMP Manual: The Libby Asbestos Superfund Site OUs 4 and 7 BMP manual, an appendix to the ICIAP, was developed as a means of providing the best practices to observe when working with/near LA or in potential LA exposure areas. The BMP manual, when used in combination with the other layers of developed ICs and BMPs provided by ARP, provides guidance to owners, land users, tenants, and visitors to prevent or reduce potential release or exposure to LA within OUs 4 and 7. BMPs will be updated and adapted, as necessary, throughout O&M.

3.1.2 Remedial Component Quantities

Table 1 provides a comparison of the quantities of remedial components for soil and building materials projected in the ROD and what actually occurred in OUs 4 and 7.

Table 1. Remedial Component Quantity Comparison of ROD Projections versus Actuals

Alternative SO6 (Soil)				
Quantity Description	Units	Projected (FS/ROD)	Actual	Change
Number of properties requiring ICs (based on total response actions conducted)	each	2,082	2,258	+176
General Property Investigations (2015-2019)	each	655	1,485	+830
Properties for Soil Excavation (2015-2019)	each	317	469	+152
Transportation and Disposal of Soils (2015-2019)	yd ³	459,000	72,782	-386,218
Contaminated Soil Excavation (per Property)	yd ³ /each	1,447.9	155.2	-1,293
Alternative BM5 (Building Materials)				
Quantity Description	Units	Projected (FS/ROD)	Actual	Change
Number of properties requiring ICs (based on total response actions conducted)	each	1,083	353	-730
General Property Investigations (2015-2019)	each	655	1,485	+830
Properties for Building Materials Removal/Encapsulation (2015-2019)	each	57	112	+55
Contaminated Building Materials Removal/Disposal (2015-2019)	yd ³	3,200	6,485	+3,285

yd³ – cubic yards

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 contaminated soil and building materials for the land use categories associated with OUs 4 and 7 (i.e., residential/commercial and parks/schools) differ from those identified in the ICIAP. Table 2 presents the comparison. The IC tools in the ICIAP consist of governmental controls and informational devices; however, they do not contain proprietary controls or enforcement and permit tools.

Table 2. Example ICs in the ROD versus ICs in the ICIAP

Example IC Tools in the ROD	IC Tools Included in the ICIAP	Instrument Category
UDIG program	Montana 811	Informational Device
Education	ARP educational and resource pillars	Informational Device
BMPs for use of imported material sources	ARP, OUs 4 and 7 BMP manual	Informational Device
BMPs for managing excavated soils on-site	ARP, OUs 4 and 7 BMP manual	Informational Device
Property status mapping	DEQ Response Manager/integrated GIS database	Informational Device
Example IC Tools in the ROD	IC Tools Included in the ICIAP Modified from the ROD Examples	Instrument Category
Permit for disturbance of soil	PEN regulation	Governmental Control
Permit for disturbance of building materials	PEN regulation	Governmental Control
Building permits in the city	PEN regulation	Governmental Control
Land use classification in the city	PEN regulation	Governmental Control
Transaction disclosure through board of realtors	Property transaction awareness through ARP, NOEC, NOPEC	Informational Device
New utility notification	Informational Device	Informational Device
Disconnecting utilities notification	PEN regulation, ARP	Informational Device
Subdivision requirements (e.g., ARP)	Informational Device	Informational Device
Dumpster program (e.g., ARP)	Informational Device	Informational Device
IC Tools Not Discussed in the ROD and Included in the ICIAP		Instrument Category
Property information repositories		Informational Device
Libby Asbestos Superfund Site administrative record		Informational Device
EPA Libby Asbestos Superfund Site website		Informational Device
Example IC Tools Identified in the ROD and Not Incorporated into the ICIAP		Instrument Category
Ban on illegal dumping		Governmental Control
Contractor certification ¹		Governmental Control
Overlay district		Governmental Control
Landfill permits ²		Governmental Control
Rights-of-way permits ³		Governmental Control

¹ No contractor certification specific to LA has been instituted; ARP offers LA awareness-level training/guidance to contractors by request.

² No landfill permits have been instituted; ARP offers guidance to residents/contractors for disposal of LA-contaminated materials at the Class IV Asbestos Cell at the Libby Class II Landfill.

³ Rights-of-way permits pertaining to the transportation corridor land use category have been included in the ICIAP for OU8 of the Site.

The scope of the response actions conducted at OUs 4 and 7 was consistent with the selected remedy presented in the ROD for contaminated soil and building materials for the land use categories associated with OUs 4 and 7 (i.e., residential/commercial and parks/schools). However, the number of properties requiring response actions and the volume of contaminated soils and building materials for removal and disposal (and associated volumes of uncontaminated soil and rock needed to backfill soil excavations) differed from the projected quantities presented in the ROD. As shown in Table 1, there was an increase in the number of properties for both contaminated soil and building response actions from the projections estimated in the ROD. In addition, the volume of contaminated building materials for disposal increased from ROD projections. However, there was a significant decrease from ROD projections in amount of contaminated soil generated for disposal and the amount of uncontaminated soil and rock backfill needed for those excavations.

The reasons for increase in the number of properties undergoing response action for contaminated soil and building materials could be because of resolved property access issues (i.e., properties that had denied or deferred access when the ROD projections were made in 2015 may have granted access later as a result of the EPA's "last call" for cleanup announcements). The decrease in contaminated soil volumes (and related borrow soil and rock volumes) could be because of the smaller volumes generated on average for response actions after 2015 as compared to the volumes used for the ROD projections.

4.2 Changes in Performance

While the scope of the response actions conducted at OUs 4 and 7 was consistent with the selected remedy presented in the ROD as discussed in Section 4.1, the physical remediation of more properties containing contaminated soils and building materials than anticipated in the ROD is expected to result in enhanced performance of the selected remedy, especially with respect to long-term effectiveness and permanence.

The risk management strategy, described in Section 8.2 of the ROD, was considered in the development of remedial alternatives and the selected remedy to ensure OUs 4 through 8 were protective. The strategy anticipated that a combination of physical remedy components and ICs would be employed together to address contaminated soil and building materials. The premise was that the remedy, even with LA contamination remaining in soil and building materials meeting cleanup criteria (described in Section 8.3 of the ROD), would result in adequate protection of human health and the environment when used in conjunction with ICs. ICs would address potential exposures to remaining contamination that could pose unacceptable exposure risks.

Since the physical remediation conducted after the ROD addressed more properties with contaminated soil and building materials than originally anticipated in the ROD, there can be a lesser reliance on ICs for protectiveness from overall exposure to LA within remaining contaminated soils and building materials in OUs 4 and 7. During the removal and remedial phases of OUs 4 and 7 for remaining LA contamination, the EPA, contractors, and stakeholders gained valuable experience and knowledge, which is expected to improve the effectiveness of ICs. This experience and knowledge have allowed for the performance of ICs to be evaluated for their effectiveness, allowing for administrative ease in implementing most of the selected ICs at OUs 4 and 7 and providing confidence that IC performance will not differ significantly from the performance already demonstrated, and thus meeting the IC objectives for OUs 4 and 7 in the ROD. However, the EPA recognizes that OUs 4 and 7 contain additional ICs, which have yet to be fully

tested within OUs 4 through 8 (e.g., PEN regulation). While there is an expectation that based on the type of additional ICs implemented, they will be equal to or more effective than the ICs presented in the ROD. Additional assessment (e.g., annual inspections, five-year review) will be used to evaluate and confirm effectiveness.

4.3 Changes in Cost

A comparison between the estimated costs for the selected remedy components for OUs 4 and 7, as summarized in Section 12.4 of the ROD (EPA 2016), and the estimated costs incurred as a result of modifications to the selected remedy for OUs 4 and 7 was conducted to estimate the changes in cost associated with the scope changes detailed in this ESD. The estimated costs for the selected remedy for contaminated soil and building materials for the two pertinent land use categories identified for OUs 4 and 7 in the ROD (i.e., residential/commercial and parks/schools) were used as the baseline for this cost comparison. Assumptions related to the costs developed and summarized in the ROD for the selected remedy are detailed in Appendix L of the FS (CDM Smith 2015). These assumptions note that the quantities were based on the projected number of remaining properties requiring remediation for contaminated soil and building materials as of February 5, 2015.

A revised selected remedy cost estimate for OUs 4 and 7 was created by using the ROD cost estimate's overall structure and unit costs as a basis. The quantities for major cost items related to the remedy components for OUs 4 and 7 were revised using actual quantity data for response actions tracked starting in 2015. The O&M costs for this revised selected remedy cost estimate were revised using the O&M cost estimate presented in the *Final Operations and Maintenance Plan, Libby Asbestos Superfund Site, Operable Units 4 and 7* (CDM Smith 2020c).

This cost comparison indicates that even with the scope changes related to property quantity increases detailed in this ESD, the overall changes resulted in an estimated 40 percent decrease in overall present value cost (\$37,870,000) as compared to the selected remedy cost estimate for OUs 4 and 7 in the ROD (\$62,740,000). Despite overall costs decreasing, costs to implement the selected remedy for OUs 4 and 7 increased because of the modifications mentioned in this ESD, which include:

- greater number of properties requiring ICs
- greater number of investigations
- greater numbers of response actions associated with building materials
- larger disposal volumes for building materials

However, the overall cost decreased primarily because of the decrease in soil disposal volumes. The decrease in soil disposal volumes is believed to be a result of ROD projections based on statistical analysis from historical volumes from larger size properties and more elevated LA concentrations than properties remediated post-2015. The actual volume of soil disposed of between 2015 and 2019 was approximately 85 percent less than projected in the ROD, resulting in a significant decrease in costs related to excavating, transporting, and disposing of contaminated soils, and a corresponding decrease in the costs of obtaining, transporting, and placing uncontaminated borrow materials to backfill the excavated areas of contaminated soil.

4.4 Changes in Expected Outcomes

No overall changes in expected outcomes are expected as a result of this ESD because (1) the physical remedy components identified for contaminated soil and building materials for the associated land use categories in OUs 4 and 7 have not changed (only the number of properties and the quantities of contaminated materials addressed at the remaining properties changed), (2) most of the example ICs discussed in the ROD have been applied to OUs 4 and 7 in some manner, and (3) those ICs meet the objectives in the ROD. As discussed in Section 4.2, the physical remediation of more properties than originally anticipated in the ROD results in a lesser reliance on ICs for protectiveness from exposure to LA within remaining contaminated soils and building materials in OUs 4 and 7.

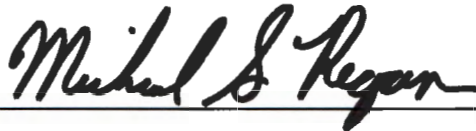
Section 5 Response to Explanation of Significant Differences Review Summary

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 provided in a response to comments table delivered to DEQ.

Section 6 Statutory Determinations

Considering the new information presented in this OUs 4 and 7 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 these OUs or involves appropriate waivers of these requirements, and is cost effective. Thus, the modified remedy satisfies the statutory requirements of CERCLA Section 121.

APPROVAL

A handwritten signature in black ink, reading "Michael S. Regan", is written over a horizontal line.

Michael S. Regan
Administrator

MAY - 3 2022

Date

Section 7 Public Participation Compliance

In accordance with NCP § 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 § 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 the *Kootenai Valley Record* that briefly summarizes the changes presented in the ESD. These are local newspapers of general circulation, in accordance with NCP § 300.435(c)(2)(i)(B).

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

Section 8 References

CDM Smith. 2020a. *Final Remedial Action Report, Libby Asbestos Superfund Site, Operable Units 4 and 7*, Lincoln County, Montana. Prepared for the U.S. Environmental Protection Agency, Region 8.

_____. 2020b. *Final Institutional Control Implementation and Assurance Plan, Operable Units 4 and 7, Libby Asbestos Superfund Site, Libby, Montana*. Prepared for the U.S. Environmental Protection Agency, Region 8.

_____. 2020c. *Final Operations and Maintenance Plan. Libby Asbestos Superfund Site, Operable Units 4 and 7*, Lincoln County, Montana. Prepared for the U.S. Environmental Protection Agency, Region 8.

_____. 2015. *Site-Wide Feasibility Study, Libby Asbestos Superfund Site*. Prepared for the U.S. Environmental Protection Agency, Region 8.

_____. 2014. *Remedial Investigation Report, Residential and Commercial Properties. Operable Unit 4*, Libby, Montana. Prepared for the U.S. Environmental Protection Agency, Region 8.

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. The U.S. Environmental Protection Agency, Region 8.

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

Tetra Tech. 2014. *Final Remedial Investigation Report. Operable Unit 7 of the Libby Asbestos Superfund Site*. Prepared for the Montana Department of Environmental Quality.

Figures

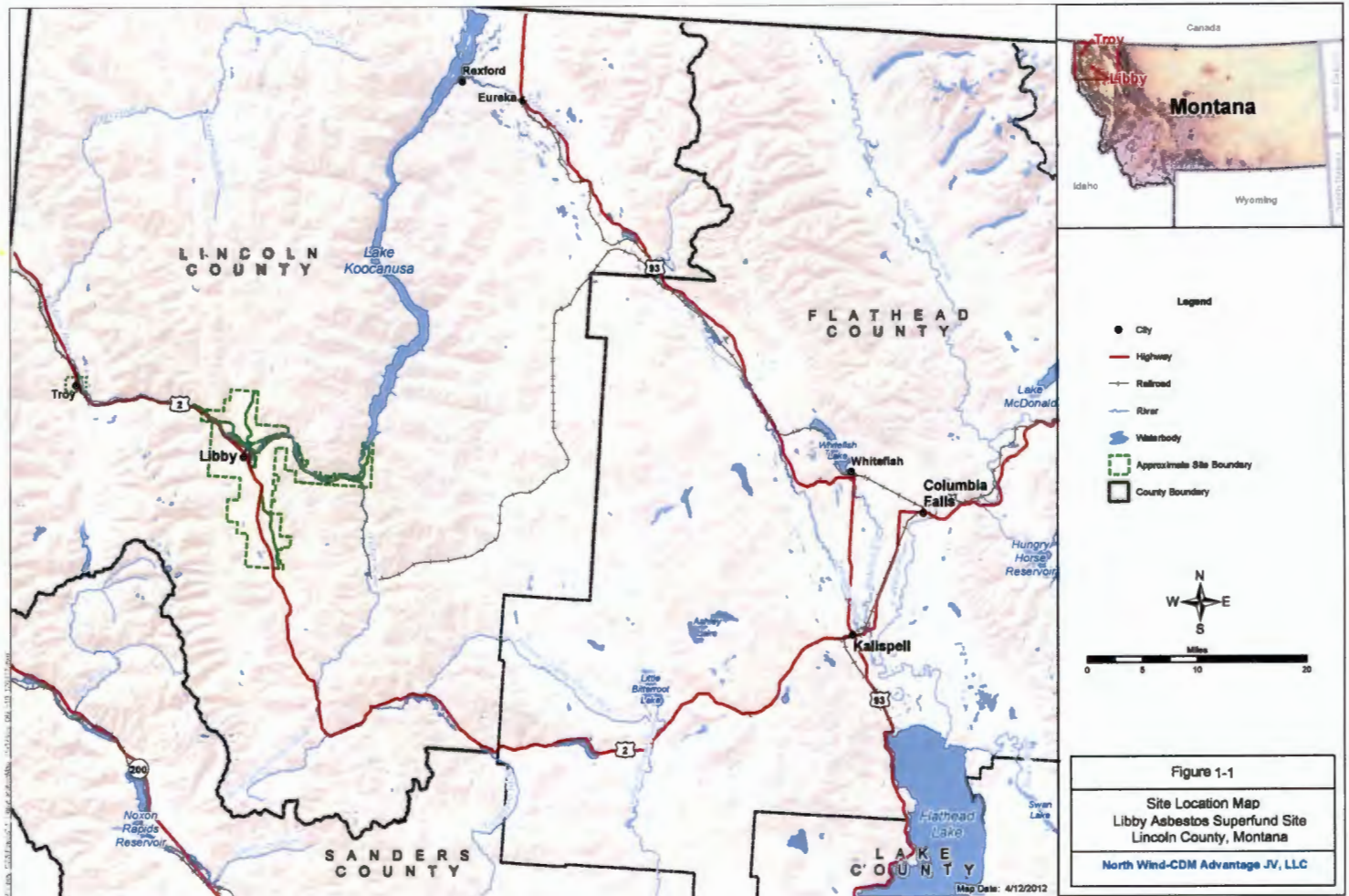


Figure 2-1. Timeline of Regulatory Activities at the Site

