Summer 8-2023

Revised Final Multi-Pathway Residential Metals Abatement Program Plan

Atlantic Richfield Company

Butte Silver Bow

Atlantic Richfield Company

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August 2, 2023

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RE: Revised Final Multi-Pathway Residential Metals Abatement Program Plan

Agency Representatives:

I am writing to you on behalf of Atlantic Richfield Company and Butte-Silver Bow to submit the Revised Final Multi-Pathway Residential Metals Abatement Program (RMAP) Plan. The Plan is prepared to effectively identify and mitigate potentially harmful exposure to sources of lead, arsenic, and mercury in specific accessible areas described in the Plan.

This submittal addresses redline comments and recommendations informally provided by the EPA and collaborative response efforts developed by Atlantic Richfield and Butte-Silver Bow Department of Reclamation and Environmental Services. The report and attachments may be downloaded at the following link:

https://pioneertechnicalservices.sharepoint.com/:f:/s/submitted/EhJgg7x1oM9Oqkfij1vLCtQB7J_6nOwnnarRWSHMVzNDgg.

If you have any questions or comments, please call me at (907) 355-3914 or Eric Hassler at (406) 497-5042.

Sincerely,

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REVISED FINAL

MULTI-PATHWAY RESIDENTIAL METALS ABATEMENT PROGRAM PLAN

SILVER BOW CREEK/BUTTE AREA
NATIONAL PRIORITIES LIST SITE
BUTTE, MONTANA

August 2023

Prepared by:

The City and County of Butte-Silver Bow

and

Atlantic Richfield Company

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Acronyms

Acronym	Definition		Acronym	Definition
µg/m³	micrograms per cubic meter		**HVAC**	Heating, Ventilation, & Air Conditioning
µg/dL	micrograms per deciliter		**HUD**	U.S. Department of Housing and Urban Development
µg/L	micrograms per Liter		**IC**	Institutional Controls
Atlantic Richfield	Atlantic Richfield Company		**ICIAP**	Institutional Control Implementation and Assurance Plan
BHRS	Butte Hill Revegetation Specifications		**ISWP**	Individual Site Work Plan
BPSOU	Butte Priority Soils Operable Unit		**LBP**	Lead-Based Paint
BSB	City and County of Butte-Silver Bow		**mg/kg**	milligrams per kilogram
CCR	Construction Completion Report		**MMP**	Medical Monitoring Plan
CEP	Community Engagement Plan		**QA**	Quality Assurance
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act		**QAPP**	Quality Assurance Project Plan
CFRSSI	Clark Fork River Superfund Site Investigations		**QC**	Quality Control
COC	Contaminant of Concern		**QMP**	Quality Management Plan
CPMP	Community Protective Measures Program		**RAWP**	Remedial Action Work Plan
DEQ	Montana Department of Environmental Quality		**RMAP or Program**	Residential Metals Abatement Program
DSR	Data Summary Report		**ROD**	Record of Decision
EBL	Elevated Blood Lead		**RODA**	Record of Decision Amendment
EJ	Environmental Justice		**SD**	Settling Defendants
EPA	U.S. Environmental Protection Agency		**UAO**	Unilateral Administrative Order
ESD	Explanation of Significant Differences		**WIC**	Women, Infants, and Children
HASP	Health and Safety Plan		**WSSOU**	West Side Soils Operable Unit
HIPAA	Health Insurance Portability and Accountability Act		**XRF**	X-Ray Florescence
HEPA	High Efficiency Particulate Air Heating, Ventilation, & Air Conditioning			

PURPOSE STATEMENT

The purpose of the Multi-Pathway Residential Metals Abatement Program (RMAP) Plan (hereafter referred to as RMAP or the Program) is to ensure public and environmental health of the residents of the Butte Priority Soils Operable Unit (BPSOU) and certain adjacent areas by effectively identifying and mitigating potentially harmful exposures to sources of lead, arsenic, and mercury in residential yards, living spaces, attics that have a pathway to the living space, schools, daycare facilities, parks, and playgrounds.

As described in the 2020 RMAP Unilateral Administrative Order (UAO), the revised RMAP Plan includes the components of the program described in the 2006 Record of Decision (ROD), the 2011 Explanation of Significant Differences (ESD), and the 2020 ROD Amendment (RODA) (the ROD, ESD, and RODA are included as Appendix A to the BPSOU Consent Decree [EPA, 2020a]). The RMAP Plan requires that all residential properties within the BPSOU be sampled, assessed, and abated as described in the 2006 ROD, 2011 ESD, and 2020 RODA. An indoor and outdoor assessment (i.e., residential yard soil, indoor and outdoor dust, attic dust, and in appropriate cases, lead-based paint and drinking water infrastructure) of all residential properties that are known to be occupied or expected to be occupied must be completed as described in the revised RMAP Plan.

1 INTRODUCTION

The multi-pathway Program is designed to protect residents within the Silver Bow Creek/Butte Area Superfund Site from potentially harmful sources of lead, arsenic, and mercury contamination. Figure 1 shows the 2020 RMAP boundary, which encompasses the BPSOU, areas within the West Side Soils Operable Unit (WSSOU)[1], and the urban corridor of the City and County of Butte-Silver Bow (BSB). The contaminants of concern (COCs) addressed by the Program include lead, arsenic, and mercury. These COCs may originate from both mining-related sources (e.g., waste rock, tailings, and aerial emissions) and non-mining-related sources (e.g., lead-based paint [LBP], lead solder, other construction materials). The contaminants can be found in soil, interior living space dust, attic dust, interior and exterior paint, and potentially

[1] At the time of this report, the WSSOU boundary is undefined. Remedial investigation of areas outside of the BPSOU have been initiated by the U.S. Environmental Protection Agency (EPA) and by Atlantic Richfield Company according to the Unilateral Administrative Order for Remedial Investigation Data Collection for the West Side Soils Operable Unit (OU 13) of the Silver Bow Creek/Butte Area Superfund Site (EPA, 2019). These remedial investigation activities are expected to inform future definition of the WSSOU boundary.

in drinking water due to lead pipes or solder. In addition, mercury contamination can also be present in indoor air due to volatilization from solid media.

The Program addresses both contaminant sources (mining- and non-mining-related) and exposure pathways. Residential homes and yards and other living spaces that are found to have contaminant sources that present a potential human health risk (i.e., are above action levels) will be remediated. The residential component of the Program is implemented by BSB through funding provided by Atlantic Richfield Company (Atlantic Richfield). Beginning in 2021, Atlantic Richfield began assessment, sampling, and related remediation at schools, parks, play areas, and commercial daycares in parallel with the BSB residential assessment process.

Medical monitoring is conducted as a sister program to evaluate the effectiveness of the RMAP. Individuals participating in the RMAP are offered environmental assessments and participation in the medical monitoring program to identify resident exposure to lead, arsenic, or mercury if any soil/dust remedial action level is exceeded. Any unacceptable COC exposures identified through the environmental assessment are remediated. All medical monitoring data (blood lead, arsenic, and mercury urine results) are stored in the medical monitoring database maintained by the BSB Health Department as described in the *Butte-Silver Bow Medical Monitoring Plan* (MMP) (BSB, 2021). The outcome of the environmental assessment is documented in the RMAP database.

This plan is an overarching document that provides an overview detailing how the RMAP is implemented. Specifics on Program components are detailed in other topic-specific plans, including:

- Quality Assurance Project Plan (QAPP) for Residential Parcels (BSB and Atlantic Richfield Company, 2022) – this plan describes how environmental assessments for residential properties will be performed and provides specifics on sampling procedures, analysis methods, results reporting, data review, and sampling/analysis oversight.
- QAPP for Non-Residential Parcels (BSB and Atlantic Richfield Company, 2023) – this plan describes how environmental assessments for non-residential properties, such as the schools, parks and playgrounds, and commercial daycares, will be performed.
- BSB MMP (BSB, 2021) – this plan describes how the medical monitoring program is conducted and explains how blood lead and urine testing is performed and how these results are interpreted.
- BSB Data Management Plan (Atlantic Richfield Company, 2022a) – this plan describes how property information, sample characteristics, analytical methods, and results will be managed and maintained in the RMAP database.
- Health and Safety Plan (HASP) –The BSB HASP to describe the safety procedures and best management practices that will be followed by RMAP field personnel when conducting environmental assessments and remediation.

- Institutional Controls Implementation and Assurance Plan (referred to herein as BPSOU ICIAP; BSB and Atlantic Richfield Company, 2019) – this plan establishes and describes how institutional controls (ICs) are implemented and includes requirements for establishing property access agreements and monitoring controls.

- Community Protective Measures Program (CPMP) Plan – sets forth BSB's and Atlantic Richfield's specific responsibilities with respect to the coordination, implementation, and management of the CPMP and is intended to operate in conjunction with the RMAP Plan and the BPSOU ICIAP. The CPMP Plan is included as Appendix F of the BPSOU ICIAP.

- BPSOU Community Engagement Plan (CEP) (Atlantic Richfield Company, 2021) – the CEP is organized to define strategies for engaging, informing, educating, and exchanging information with the community throughout the remedial design and remedial action process associated with work related to the BPSOU Consent Decree. The CEP supplements EPA's *Community Involvement Plan* (EPA, 2021) and its Butte area *Environmental Justice* (EJ) *Action Plan* (EPA, 2020b), and to work with ongoing public engagement efforts within the Butte community.

This plan will be reviewed annually in coordination with program quality plans and updated as appropriate to reflect changes to the program scope or structure.

1.1 Program Development

The Program, as identified in the EPA ROD for the BPSOU (included as Appendix A of the BPSOU Consent Decree, EPA, 2020a), initially focused on the BPSOU. Subsequently, an additional one-time sampling event occurred north of the BPSOU in an area identified as the Adjacent Area[2]. In 2011, the ESD to the 2006 BPSOU ROD (included in Appendix A of the BPSOU Consent Decree) expanded the program boundary (for attic sampling and remediation only) to include additional areas outside of the BPSOU and Adjacent Area boundaries. The Program was again expanded according to the 2020 RODA (included in Appendix A of the BPSOU Consent Decree). The boundary of the Program described in the 2020 RODA is shown on Figure 1. The 2020 RODA made the following specific changes to the Program:

1. *2020 RMAP Area*: The geographic extent of the Program was expanded as indicated on Figure 1. The Expanded Area encompasses the urban corridor of BSB and includes the 2006 ROD Adjacent Area and the 2011 ESD attic expansion area.

[2] The Adjacent Area is a reference to the expanded attic area. The Northwest Thumb is an area identified in the 2011 Unilateral Administrative Order to evaluate residences in the Moulton and Bull Run Gulch Road areas to determine if potential exposure was occurring in this area, which is located outside the BPSOU and within the vicinity of contaminated dumps.

2. *Expanded Area Sampling by Request*: Sampling outside the BPSOU within the Expanded Area will be completed at the request of property owners ("by request").

3. *Schedule*: As described in Section 2.1.3 of the 2020 RMAP UAO (EPA, 2020a), the 2011 ESD modified the time allotted for assessment and abatement of all residential properties within the BPSOU. The 2011 ESD required three attempts to perform assessments of all residential properties within the BPSOU to occur in 10 years and all contaminated residential properties within the BPSOU to be remediated in 20 years, except for those properties for which access cannot be obtained. On November 16, 2020, the 10- and 20-year timeframes began as goals for completion of these activities in the BPSOU. The assessment and remediation of interior attics, properties outside of the BPSOU, and within the 2020 RMAP boundary are not subject to these 10- and 20-year timeframes. Using the GIS system in conjunction with the functionality of the RMAP database, RMAP staff can periodically estimate the completeness of achieving the target goals.

4. *Properties*: In addition to residential yards and living spaces, the Program now addresses contaminants and pathways at schools, playgrounds and play areas, daycares, and commercial/industrial properties with residential living quarters. Administering and sampling areas of new developments are addressed through protocols described in the BPSOU ICIAP and BSB Excavation and Dirt Moving Ordinance.

1.2 Program Eligibility

Participation in the Program is voluntary and requires the cooperation of property owners and occupants. Assessment and sampling of attics will only occur in residential structures constructed wholly or partly before 1980. Every property located in the BPSOU and all properties for which an assessment was requested outside the BPSOU are eligible to have both soil and indoor living space dust sampling performed. In addition to being within the Program boundary, as shown on Figure 1, properties must meet one or more of the following criteria to be eligible for participation in the Program:

1. The property consists of a residential structure (with or without a residential yard) that is used for primary occupancy and can be categorized as one of the following:

    a. A single-family residence
    b. A multi-family residence
    c. A residential living quarter within a commercial or industrial property

2. The property is used for outdoor residential or recreational purposes and can be categorized as a yard, playground, or play area located adjacent to or within one of the following:

    a. A residential property

    b. A municipal park
    c. A school or daycare center (residential or commercial)

3. The property is used as a school or dormitory and can be categorized as one of the following:

    a. Eligible schools can be public or private institutions that provide educational services to pre-school (pre-K), elementary (grades K-6), middle-school (grades 7-8), or high-school (grades 9-12) students.
    b. Eligible dormitories include pre-college or college dorms and residence halls for students living on campus of an eligible school or recognized college or university.

4. The property is a current or former primary residence of an affected individual, as identified by protocol established in the MMP (BSB, 2021) (refer to Section 3).

Properties that meet one or more of the eligibility criteria can receive Program benefits that include environmental assessment (exposure pathway assessment and environmental sampling) and remediation of sources of contaminants that exceed action levels applicable to the defined property use.

2 COMMUNITY AWARENESS AND EDUCATION

The community awareness and education components of the Program are included as part of an overall CPMP plan that is presented in detail in Appendix F of the BPSOU ICIAP.

The Program provides a range of education components to enhance and maintain the community's awareness of potential contaminant sources and risks of exposure to lead, arsenic, and mercury.

The Program relies on educational materials to ensure that residential property owners, tenants, contractors, developers, home inspectors, and potential buyers are aware that:

1. Lead, arsenic, and/or mercury contamination may be present in both structures and soil that may pose a risk to residents.
2. It is important to restrict access to potentially impacted portions of affected properties to prevent resident exposure to contaminants.
3. The Program offers free services to all eligible properties to complete environmental assessment and remediation if applicable action levels are exceeded and, specific to attics, a pathway for exposure is present.

Educational materials describe measures that can be taken to mitigate exposure to contaminant sources. Educational materials are available through the Program and its website (https://co.silverbow.mt.us/467/Residential-Metals-Abatement-Program). Educational materials are provided directly to Program participants and are made available to local contractors (e.g., electricians, roofers, carpenters), hardware/lumber suppliers, childcare facilities and afterschool programs (e.g., Head Start, YMCA, and PAWS), housing authorities (e.g., Human Resource Council – Section 8 and Low-Income Energy Assistance Program), realtors, and the BSB Building Department. Informative presentations are available on request. Periodic mailings to BPSOU residential property owners and public service announcements broadcast by radio and television are also designed to improve public awareness. In addition, public communication efforts regarding RMAP sampling efforts are included in the BPSOU CEP for Remedial Design & Remedial Action (Atlantic Richfield Company, 2021). Specific mailing efforts will be limited to within the BPSOU. Program reminders will be provided as an informational insert within utility water billing information on a quarterly basis.

3 SENSITIVE AND AFFECTED POPULATIONS

The Program prioritizes environmental assessment and remediation (if needed) of properties occupied by sensitive and affected populations. Sensitive populations for lead exposures include children (0-6 years of age) and pregnant or nursing mothers. Affected populations, as determined through medical monitoring[3], have elevated levels of lead in blood samples or elevated arsenic or mercury in urine samples. Medical monitoring data results are stored in the MMP database. The MMP database is not linked to the RMAP database to alleviate complications with Health Insurance Portability and Accountability Act (HIPAA) regulations. Medical monitoring data results are verbally communicated to RMAP by the BSB Environmental Health Nurse when an elevated blood lead (EBL) result is reported, as described in MMP. Eligible properties where medical monitoring data show an exceedance has occurred will be prioritized for environmental assessment and remediation based on the following criteria, arranged from highest priority to lowest priority:

- Residential properties occupied by one or more children with a blood lead level equal to or greater than 5 micrograms per deciliter (µg/dL).
- Residential properties occupied by an individual with elevated urinary arsenic as listed in the MMP[4] (BSB, 2021) (thresholds provided in Table 2 of the MMP).
- Residential properties occupied by an individual with elevated urine mercury as listed in the MMP (thresholds provided in Table 2 of the MMP).
- Secondary residences[5] occupied by children with EBL equal to or greater than 5 µg/dL.
- Residential properties previously occupied by children with EBL equal to or greater than 5 µg/dL, even if no child is currently living at the address.
- Residential properties with sensitive populations[6] even if no individual with EBL, urinary arsenic, or urinary mercury has been identified.

[3] Medical monitoring data are collected and disseminated according to the BSB Medical Monitoring Program.
[4] At the time of this report, the BSB Medical Monitoring Program Plan is being updated.
[5] A primary residence is anywhere a person lives most of the time. Secondary residence is any additional residence where the child routinely stays for all or part of the day, typically where the child lives part time or where a secondary caregiver resides. Information on secondary residences is collected by the environmental assessor and is tracked in the RMAP database. Determinations of secondary residences is based upon verbal conference with the client. There is a note left in the database that a sampling rationale is documented (e.g., secondary residence or elevated blood level investigation).
[6] Responses to completed exposure questionnaire interviews which includes children's age(s) are entered into the Medical Monitoring database and communicated to RMAP staff to determine prioritization.

- Homes built prior to 1940[7].
- Residential properties located in census block groups identified as potential EJ areas within the BPSOU.
- Residential properties with no children or other sensitive populations, but with one or more sources suspected to contribute to EBL of residents.
    - Remedial action of areas evaluated under a separate scope of work identified in the 2020 BPSOU CD (i.e., Unreclaimed or Insufficiently Reclaimed Sites) will be prioritized when impacted sites could affect residential properties.
- Playgrounds and play areas at schools and designated parks.
- School interiors based on age of construction (oldest to newest).
- All other areas that meet the criteria for RMAP sampling or remediation.

[7] The 1940s timeframe is the period when the use of lead in paint was prevalent, although LBP continued to be available until 1978. Also note that evaluation of paint in the residential program is not required under Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) law but performed as a component of the multi-pathway approach to identify sources of lead when investigating EBL.

4 ENVIRONMENTAL JUSTICE

The RMAP does not discriminate based on race, color, religion, sex, disability, familial status, national origin, or economic status. Potential EJ concerns are addressed by providing environmental assessments as a priority (Section 3) for potential EJ areas. The respective property of any property owner within the BPSOU that participates in the Program and provides access for environmental assessment and remediation activities will be scheduled for assessment. Potential EJ areas will be addressed by prioritizing properties within these areas when conducting community outreach and planning for and completing environmental assessments (Section 3). Assessments will be scheduled and completed for participating properties in order of highest priority to lowest priority following BSB evaluation of prioritization criteria for each participating property (Section 3). Each year, the Program will concentrate community outreach efforts on potential EJ areas in the BPSOU. Community outreach to potential EJ areas may be conducted consistent with the recommendations provided within the *BPSOU CEP for Remedial Design & Remedial Action* (Atlantic Richfield Company, 2021).

For properties where sensitive or affected populations are present but the property owner (landlord) does not choose to participate, sampling cannot be performed without permission from the property owner. The BPSOU ICIAP, Appendix H, includes templates for Agency enforcement letters which may be implemented as means of acquiring permission to access properties when the property owner chooses not to participate. Implementation of the letters provided in Appendix H of the BPSOU ICIAP will require enforcement from EPA and Montana Department of Environmental Quality (DEQ), collectively referred to as the Agencies.

To increase participation in the RMAP, the Program performs outreach through the Women, Infants and Children (WIC) program at the BSB Health Department. The BSB Health Department directly offers Program and medical monitoring services to WIC participants. In addition to the WIC program, which specifically targets the potential EJ community within BSB, RMAP educational materials are provided to the Southwest Montana Community Health Center for distribution to patients. Both WIC and the Southwest Montana Community Health Center provide services to low-income residents.

The Program will work to expand collaboration with local organizations that work regularly with other residents who may have potential EJ concerns, including the State of Montana Department of Public Health and Human Services, Action, Inc., and other interested organizations, including the community resource organizations defined in the BPSOU CEP (Atlantic Richfield Company, 2021). RMAP information and education will be provided to

expand the reach of the Program, with the goal of improving the health and well-being of everyone in the impacted community. In EPA's *EJ Action Plan for Butte* (EPA, 2020b), EPA focused on the potential EJ needs within the BPSOU or the area covered by the RMAP. The Program will coordinate with the U.S. Housing and Urban Development (HUD) program and adopt the use of the EJSCREEN tool and other future EJ tools, as appropriate, to identify potential EJ areas within the BPSOU. EJSCREEN is an environmental justice mapping and screening tool that provides EPA with a nationally consistent dataset and approach for combining environmental and demographic indicators. EJSCREEN users choose a geographic area; the tool then provides demographic and environmental information for that area. All the EJSCREEN indicators are publicly available data. EJSCREEN simply provides a way to display this information and includes a method for combining environmental and demographic indicators into EJ indexes. Properties identified to be within a potential EJ area of the BPSOU will be prioritized to receive annual community outreach materials according to direct communication methods identified within the *BPSOU CEP* (Atlantic Richfield Company, 2021). Properties within potential EJ areas of the BPSOU that elect to participate in the Program will be prioritized for assessment and remediation, as necessary, according to Section 3.

5 PROGRAM ASSESSMENT AND REMEDIATION TIMEFRAME

The 2011 ESD modified the time allotted for assessment and remediation of all residential soil within the BPSOU. The 2011 ESD (EPA, 2020a) required three attempts to perform assessments of all residential properties (including residential quarters within commercial/industrial properties) within the BPSOU to occur in 10 years and all contaminated properties within the BPSOU be remediated in 20 years, except for those properties for which access cannot be obtained. On November 16, 2020, the 10- and 20-year timeframes began as goals for the assessment and remediation activities of residential properties in the BPSOU. The 2011 ESD stated that three attempts (described in Section 1.1) to obtain access from the current owner of record for sampling or remediation without success meets the directive for outreach and assessment of the BPSOU residential yards, understanding that assessment and any required remediation will be conducted later, when and if access is obtained to that property for RMAP purposes in the future. Three attempts to obtain access to conduct assessment activities of residential properties will continue to meet the outreach objective of the Program. EPA will provide support to gain access as described in the BPSOU ICIAP, to properties whose owners refuse to provide Program access for completion of assessment and/or remediation activities.

For non-residential properties, such as designated parks and playgrounds and schools and dormitories outside of the BPSOU but within the 2020 RMAP Area, the Program does not have a fixed schedule or duration of time to complete assessment and any potentially required remediation activities. However, a goal of 20 years is established for completing assessment of these properties. This 20-year target has been set to coincide with the anticipated completion of residential remediation within the BPSOU.

A systematic schedule to complete environmental assessments of structures and properties presently used as schools, playgrounds, and play areas is proposed annually upon submittal of required RMAP QAPPs and associated revisions (submitted annually) until environmental assessments are completed at all required properties. Then, annually proposed implementation schedules that account for the results of previously completed environmental assessments, provision of access, and the availability of Program resources will be submitted to implement and oversee subsequent environmental assessments and remediation, if required. Environmental assessment and remediation (if required) of playgrounds and play areas within designated parks will be coordinated with the entity responsible for their management (e.g., BSB Parks and Recreation).

5.1 Overview of Program Process and Protocol

The following steps provide a general overview of the Program process executed by the BSB RMAP.

For residential properties within BPSOU, RMAP will reach out to property owners to conduct sampling of the residential property while property owners outside of BPSOU can contact RMAP and request sampling to be conducted. Additional details regarding how property access is secured by RMAP and/or a sample request is initiated by the property owner to RMAP is described in Section 6. Property sampling is scheduled by RMAP with the property owner as described in Section 7. An environmental assessment and associated questionnaire will be completed in conjunction with property sampling activities.

Sample results will be communicated to the Agencies and property owners (as applicable) as described in Section 8. In general, when sample results exceed action level(s), property owners will be provided with preliminary sample results as soon as practical to schedule remediation efforts. Remediation will be completed as described in Section 9 at properties where sample results exceed action level(s). Additional Program reporting will be completed annually as described in Section 9.1 Additional details related to property access and sample results tracking and storage are provided in Section 12.

Non-residential properties, including eligible schools, playgrounds, and play areas located in the 2020 RMAP Area and dormitories associated with Montana Technological University campus, will be proactively sought for sampling by Program representatives executed by Atlantic Richfield.

6 ACCESS

It is essential to obtain access to properties as early as possible in the Program process. Experience has shown that various means of communication (mail, email, phone calls, and knocking on doors) must be employed to successfully obtain access to some properties. Additional detail on procedures for obtaining property access is provided in the BPSOU ICIAP.

Prior to conducting any environment assessment, sampling, or cleanup activities (inside or outside of BPSOU) at a third-party owned property, access must be obtained from the property owner by completing a Sample Request form (provided in Attachment 1). A Sample Request form, which is a temporary agreement to conduct an environmental assessment and sampling of the property must be obtained and signed by the property owner. If the property owner completes the Sample Request, then environmental assessment of the property will be completed according to Section 7 (Sampling). The executed, signed, and notarized Access Agreement (included in Appendix H of the BPSOU ICIAP) must be obtained prior to commencing any remediation, if required.

If the results of the environmental assessment determine that property remediation is necessary, then the Sample Request Form becomes an attachment to the property Access Agreement (Attachment 1) and remediation will be completed according to Section 9 (Remediation).

The two forms listed below are provided in Attachment 1 and are required to perform sampling and remediation activities of residential components of the Program:

- Sample Request Form, which addresses residential sampling.
- The *Residential Access Agreement,* which addresses all remediation projects.

Two forms (provided in Attachment 1) are required to perform sampling and remediation activities of non-residential components of the Program. While different in format, they accomplish the same goal.

- The *Soil Sampling Access Agreement* addresses non-residential soil sampling work.
- The *Soil Remediation Access Agreement* addresses non-residential soil remediation work.

All four access agreement templates are provided in Attachment 1. Completed agreements will be photocopied, scanned, and the electronic version will be stored in the RMAP database. The status of property access will be tracked in the Program database tracking system. A copy of the access agreements (Attachment 1) will also be included in the project record files.

Monitoring involves a comprehensive approach to track participation from individual inquiry to remediation completion. The RMAP database uses various elements to track program participation and property status. For example, any time a resident in the community contacts the RMAP program or RMAP performs proactive outreach to a resident, an entry is made in the database. A proactive approach uses various communication methods, including those named above, but primarily uses post cards/letters to approximately 50 residences at a time.

This creates an identification number for the address, which allows BSB to assign qualifiers to the property (e.g., sensitive population or refusal to participate in the program). This enables BSB to routinely seek participation, three times at a minimum, and identify reluctant participants while also initiating a new outreach effort if the property has changed owners. Each formal outreach attempt RMAP deploys (such as routine mailing, phone call outreach, or personal conversation) to seek property owner/occupant participation in the Program is recorded in the RMAP database. Database records include pertinent details such as who initiated the attempt and date of attempt, outreach method used, property geocode, attempt number (first, second, or third), and response (if pertinent).

The Reclamation Department will review property ownership changes annually. The RMAP database will be queried to identify all properties refusing to participate in the program. This list will be compared to recorded property transactions to identify whether the property has a new owner. If the property has changed hands, then a new outreach attempt will begin and tracked in the database. Three attempts to seek participation of the new owners will be made. In the event the property does not change ownership and the owner continues to refuse participation, BSB will work with EPA to obtain access as described in the BPSOU ICIAP, which is included as Attachment E to the BPSOU Consent Decree.

6.1 BPSOU Residential Property Access

Access to residential properties within the BPSOU will be proactively sought by Program representatives, as described in this Plan and the BPSOU ICIAP. Proactive attempts to gain access to residential properties within the BPSOU will continue until all eligible residential properties are assessed and remediated, if needed. If access is denied, the property will be flagged in the Program database and reported to the Agencies. Attempts to access the property will be made twice more through contacts with the property owner to confirm consent and obtain owner signature to the required agreements. Following completion and refusal of three recorded access attempts to a property, proactive solicitation of access to the subject property will be suspended. Repeated access refusals will be reported to the Agencies, and the Agencies may elect to file a notice in the real property records that access for assessment and/or remediation was denied. After three access attempts, and preceding any property transfer or

sale, the current owner of the property may obtain access to Program benefits by signing the required legal agreements and requesting Program services. RMAP staff will conduct annual review of property records via the BSB Clerk and Recorder's Office to track property transactions. Discovery of recent property transfer within BPSOU will reinitiate proactive solicitation for access to the property. The status of property access will be tracked in the RMAP Program's tracking and database system, which will be made available by BSB to the public (e.g., prospective buyers) upon request.

Reinstating the outreach process will begin upon identification of new ownership, but three attempts within the new outreach timeline will not be completed within any particular timeframe. Proactive monitoring of all reluctant participants will continue until the residence is evaluated and, if necessary, remediated.

6.2 Expanded Area Residential Property Access

Residential property outside of the BPSOU, but within the 2020 RMAP Area boundary shown on Figure 1 will be sampled on a by-request basis submitted by the property owner. The Program will not proactively seek access to complete environmental assessments at these properties.

Residents or contractors performing interior renovation or remodeling on residential structures constructed prior to 1980 must provide Program access to conduct pathway assessment and perform associated sampling activities as needed. Butte-Silver Bow County will not seek access to sample these properties but will respond to owners' requests for sampling. Properties will be scheduled according to priority and request date.

Property owners may contact the RMAP to request sampling. Various contact methods are available at the convenience of the individual to request sampling.

> Phone contact – 406-497-5040
> BSB website: https://www.co.silverbow.mt.us/467/Residential-Metals-Abatement-Program
> https://arcg.is/1WrL0W0 or BPSOU.com
> Email: RMAPTeam@bsb.mt.gov

The RMAP will provide sample request documentation to the property owner, schedule sampling and coordinate access with the property owner. Any environmental assessments or remediation completed for eligible properties in the Expanded Area will be recorded in the Program's tracking and database system (Section 11).

Any dispute concerning access should be brought to the attention of the Agencies. It is essential to begin access procurement as early as possible in the remedial process to avoid potentially

lengthy delays. If access for response work cannot be reasonably obtained from a third-party owner, EPA may choose to use its authorities under Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) to secure access as provided in the current UAO (EPA, 2011) and any updated UAOs.

When access is denied (or the owner is deemed to be unresponsive through three unsuccessful contact attempts), Program representatives will track the attempt to gain access to the property for environmental assessment within the Program database. After three attempts are recorded, the property will be flagged in the database (as either having declined access or becoming non-responsive), and the Agencies will be notified of the property status. At this time, the Agencies may elect to issue the property owner an enforcement letter. A copy of the Agency notice form letter is provided in Attachment 2. Future changes in ownership will be monitored annually. If ownership changes, the access procurement process will be reinitiated.

6.3 Schools, Dormitories, Playgrounds and Play Areas Access

Access to eligible schools, playgrounds, and play areas located in the 2020 RMAP Area will be proactively sought by Program representatives. Parks and play areas are defined as a site "frequented by children and as 'a generally accessible public area', the public can use the site and its facilities for recreational purposes within normal operating hours." Dormitories associated with Montana Technological University campus are also included in this Plan.

Proactive attempts to gain access to eligible schools, dormitories, playgrounds and play areas will continue until the eligible properties are environmentally assessed and remediated, if necessary. If access is denied, the property will be flagged in the database and reported to the Agencies. Access attempts to assess the property will be made twice more for a total of three attempts. After three access attempts, the property may obtain access to the Program benefits by request, and the Agencies may elect to file a notice in the real property records that access for assessment and/or remediation was denied. The status of property access will be tracked in the Program's tracking and database system, which will be made available by BSB to the public upon request. There will be no difference in how schools inside versus outside the BPSOU will be assessed.

6.4 BPSOU Rental Property Access

Rental properties may require special attention, particularly if children are involved and the landlord is refusing access to the property. The process for obtaining and tracking access to rental properties is the same as that described in Section 6.1 for residential properties within the BPSOU and Section 6.2 for residential properties outside of BPSOU. Property owner and resident status information is initially collected prior to an environmental

assessment as a portion of the program questionnaire (Attachment 1) and recorded in the RMAP database. If the request is made by a tenant, BSB will advise the tenant to participate in the medical monitoring program to determine if a tenant is impacted. A property cannot be accessed by BSB if an owner refuses to participate nor can BSB notify the property owner of the health status of any one tenant. If an EBL is identified, the tenant/guardian can notify the property owner of their child's health status, and BSB can use the tenant's health status as leverage to gain access to the property to perform an assessment and remediation, if necessary.

If access to a rental property cannot be obtained through the standard process, the Agencies will be notified to initiate extra steps to obtain access, particularly if children may be impacted. These steps include additional phone contacts, certified mailings, setting up a private meeting with the landlord, and, if necessary, legal action to obtain access.

Tenants (whether single or multi-family residences) do not have the ability to enter into access agreements on behalf of the property owner. If a tenant requests sampling but the property owner is unwilling to execute an access agreement to facilitate the tenant's request, no sampling will be conducted unless the Agencies choose to issue the property owner an enforcement letter. A copy of the Agency notice form letter is provided in Attachment 2. All communication regarding access, sampling, and remediation will be with the property owner (unless the property owner delegates those responsibilities to the tenant/property manager).

7 SAMPLING

7.1 Sampling Procedures

Detailed discussion of sampling procedures and quality assurance (QA) protocol is provided in the RMAP QAPPs. General discussion of sampling procedures for soil, dust, paint, drinking water, and mercury vapor of eligible properties is described in this Section.

Residential sampling implemented by BSB will be performed as described in the Agency-approved Residential RMAP QAPP, (BSB and Atlantic Richfield Company, 2022 or latest approved version) with individual yard sampling maps and locations. Non-residential sampling implemented by Atlantic Richfield will be performed as described in the Agency-approved Non-Residential RMAP QAPP (BSB and Atlantic Richfield Company, 2023 or latest approved version), and individual Field Sampling Plans for non-residential sampling will be provided to the Agencies for review and approval prior to implementation.

7.1.1 Soil

7.1.1.1 Residential Properties

Soil sampling at residential properties is completed on a predetermined sampling pattern developed from a scaled map of the property. Sampling areas are distinct and consider area use (i.e., yards are sampled separately from gardens, driveways, and play areas). Composite samples are collected at specified locations from the required sampling depth intervals. For most locations, soil samples are collected from three depth intervals: 0 to 2 inches, 2 to 6 inches, and 6 to 12 inches. In all garden areas (vegetable and flower gardens), additional soil samples are collected from 12 to 24 inches. Samples are analyzed for lead, arsenic, and mercury. If the results exceed the residential action level (see Table 8-1) for any COC, the corresponding location will be remediated. Soil samples are collected, analyzed, and managed according to the procedures set forth in the Residential RMAP QAPP.

Prior to 2012, residential soil assessments were performed to a depth interval of only 0 to 2 inches. Thus, the current Program also includes resampling assessments for residential yards sampled prior to 2012. Residential yards sampled prior to 2012 to a depth interval of 0 to 2 inches, but which did not receive remediation, will be resampled in the 2- to 6-inch and 6- to 12-inch depth intervals. Attempts to regain access to these residential properties are incorporated into the normal process for acquiring access and will be implemented to address data gaps. For example, in the instance a portion of a yard was remediated, then resampling will focus on evaluating only the non-remediated portion of the property (i.e., omit the

remediated portion of the property). If newly collected depth interval samples exceed the residential action level for any COC, then the corresponding location will be remediated.

Yards of multi-family residences and residential living quarters within a commercial or industrial property will be assessed using the same protocols applied to residential properties.

7.1.1.2 Earthen Basements

Sampling of soil (characterized as "dirt" in the RMAP database) in earthen basements is completed regardless of the results of a pathway assessment, provided the area is accessible for occupancy or storage, and the results are compared to residential action levels. Basements are remediated if results for arsenic, lead, or mercury exceed the residential action levels listed in Table 9-1. Properties that exceed the action levels listed in Table 9-1, but are not remediated (due to lack of access provided from the property owner) will be monitored in the Program tracking and database system over the long-term to provide future opportunity to remediate the property.

7.1.1.3 Large Lot Sampling

Residential properties within the Program area can have yards that are atypical of the moderately dense residential development pattern of uptown Butte. These atypical properties can have substantially larger yards. In these cases, sampling will occur to a maximum horizontal distance of 125 feet from the outer edge of the residential structure (the yard). This distance may be less if the parcel boundary or a natural or constructed boundary (e.g., fence, retaining wall, hedge, curb, road, landscape feature, pasture, open space) occurs on the property prior to reaching the maximum distance of 125 feet.

7.1.1.4 Residential Development Areas

Changes to a property will be monitored as part of the Excavation and Dirt Moving permit process. If/when a large lot property undergoes further residential development, the property will be assessed during excavation activities, and the new property will be eligible for a RMAP environmental assessment after the development is complete. The annual parcel review process, performed by RMAP in coordination with BSB Land Records department, will also identify properties that may require environmental assessments. Any residential development will be identified during the annual parcel review process and become eligible for RMAP environmental assessment. Properties described in Section 7.1.1.3 are only relevant to areas in the expanded area outside of the BPSOU.

7.1.1.5 Playgrounds and Play Areas

Playgrounds and play areas will be assessed to determine appropriate sampling requirements based on the use of the property as described in the Non-Residential QAPP (BSB and Atlantic Richfield Company, 2023 or latest approved version). The following definitions are provided to

define use and estimate the level of activity occurring within playgrounds and play areas of eligible properties. Based on the estimated level of activity, an appropriate environmental assessment protocol will be assigned.

- Land Use Category #1 – This category consists of playground areas. This will typically be defined as the area around playground equipment such as swings, slides, jungle gyms, and other types of equipment.
- Land Use Category #2 – This category consists of highly accessible areas near school buildings such as school courtyards. Also contained within the category will be barren sports areas such as a baseball/softball infield.
- Land Use Category #3 – This category consists of maintained grassy areas such as sodded school grounds and turf-covered sports fields.
- Land Use Category #4 – This category consists of low use/low maintenance areas that are rarely accessed by children. Examples include school grounds that are fenced off to restrict access by students.
- Land Use Category #5 – This category consists of vegetable and/or flower gardens.

The sampling density requirements will be scaled depending upon the land use category. Collected soil samples from playgrounds and play areas will be analyzed for lead, arsenic, and mercury. If the results exceed the residential action level (see Table 9-1) for any COC, the corresponding location will be remediated.

7.1.2 Dust

During the environmental assessment of attics or interior living space, attics and/or crawl spaces areas will be sampled and a pathway assessment[8] will be conducted concurrently with dust sampling activities.

7.1.2.1 Residential Property Living Space

Dust samples are collected, analyzed, and managed according to the procedures set forth in the Residential RMAP QAPP (BSB and Atlantic Richfield Company, 2022 or latest approved version). Dust in carpeted residential living space is sampled using a vacuum sampler. Dust samples are analyzed for lead, arsenic, and mercury. Sampling results from residential living spaces are compared to residential action levels (Table 9-1). Sampled properties will be remediated if an

[8] A pathway is the ability to regularly access an area where contamination is present, which can include visible cracks, water damage, location of the HVAC systems, and any construction plans that could cause migration of contamination into the residential space. Evaluation consists of visual examination of the ceiling condition, location of the entry points, type of use, frequency of use, and planned work that might impact the space.

action level for arsenic, lead, or mercury is exceeded. Properties that exceed action levels but are not remediated (due to the owner declining to sign an access agreement) will be monitored in the Program tracking and database system over the long-term to provide future opportunity to remediate the property.

Interior sampling of multi-family residences and residential living quarters within a commercial or industrial property is limited to the residential living space of such structures. Sampling of these areas is completed in a manner consistent with residential properties to determine if remediation is required. Sampling results from multi-family residences and residential living quarters within a commercial or industrial property are compared to residential action levels. Sampled properties will be remediated if an action level for arsenic, lead, or mercury is exceeded. Multi-family residences and residential living quarters within a commercial or industrial property that exceed action levels but are not remediated (because property owner access and consent is not obtained through multiple attempts) will be monitored in the Program tracking and database system over the long-term to provide future opportunity to remediate the property. These properties will be tracked for at least 99 years or until remediation is complete.

7.1.2.2 Residential Property Attics and Crawl Spaces

For homes built prior to 1980, dust in residential attics and crawl spaces is sampled using brushes and scoops. Dust samples are analyzed for lead, arsenic, and mercury. Sampling results from attics and crawl spaces are compared to residential action levels. Residential property attics and crawl spaces will be remediated (i) if an action level for arsenic, lead, or mercury is exceeded; and (ii) if an environmental assessment determines that an exposure pathway is present. An exposure pathway exists if there is a reasonably identifiable means of contaminants coming into contact (physical, inhalation, oral, etc.) with occupants of the residence. Exposure pathways may include physical openings or access points where contaminated materials accumulate. An exposure pathway evaluation performed by RMAP personnel includes physical examination of the areas to determine if a method of exposure is present.

Properties that exceed action levels but are not remediated (due to lack of access/property owner consent or lack of presence of an exposure pathway) will be tracked by RMAP staff in the Program tracking and database system over the long-term to provide future opportunity to remediate the property. RMAP staff will periodically (at least semi-annually) review BSB land records and building permit applications for a change in property ownership of properties of concern for an opportunity to gain access to perform remediation.

7.1.2.3 School and Dormitory Interior Sampling

An environmental assessment will be completed at non-residential schools, preschools, and daycares to determine appropriate interior sampling requirements. This assessment includes

both public and privately owned facilities. All schools and daycares will undergo an indoor dust sampling regimen (i.e., entrance floor mats, floor, and other surface sampling in accessible areas) without regard to age of building construction, remodeling status/timing, or outdoor soil results. Accessible areas are defined as classrooms, hallways, bathrooms, and other areas (e.g., cafeterias) that would be frequently used by students/daycare children. In addition, sampling of surfaces in inaccessible areas and attics/crawlspaces will also be performed for all schools and daycares unless the building was constructed or remodeled after historical mining and smelting operations were terminated in 1980 or if the building has had an interior renovation. Inaccessible areas are defined as locations that would not be frequented by students/daycare children but may be used by teachers or administrative/janitorial staff (e.g., staff lounges, supply closets, boiler rooms, crawl spaces, attics, rafters, and other areas only periodically accessed for maintenance).

Sampling will be performed per protocol described in the current RMAP Non-Residential Parcels QAPP (ERM, 2021) submitted annually. Sample results will be compared to residential action levels for arsenic, lead, and mercury. Areas where an action level is exceeded and an exposure pathway is identified will be remediated. Properties/areas that exceed action levels but are not remediated (due to lack of access/property owner consent or lack of presence of an exposure pathway) will be monitored in the Program tracking and database system over the long-term to provide future opportunity to remediate the property as described in Section 7.1.2.2 above. Site assessments, sampling, and potential remediation will be coordinated around school terms and schedules to minimize impacts to the users to the extent possible.

7.1.3 Paint

Paint inspections will be performed as a component of an EBL investigation. LBP is defined as paint or other surface coatings that contain lead equal to or exceeding 1.0 milligram per square centimeter or 0.5 percent by weight or 5,000 parts per million by weight. Although LBP is not a mining-related issue, the presence of LBP would contribute to total lead exposures, therefore the assessment of paint would be performed as a courtesy for any residence when an individual with an EBL level is present. Painted surfaces of residential properties are sampled using an X-ray fluorescence (XRF) unit according to the procedures detailed in the RMAP QAPPs. According to EPA's *Protect Your Family from Sources of Lead* (EPA, 2022; https://www.epa.gov/lead/protect-your-family-sources-lead), peeling, chipping, chalking, or cracking LBP is a hazard and needs immediate attention. LBP may also be a hazard when found on surfaces that children can chew or that get a lot of wear and tear. The condition of the LBP is the determining factor for remediation.

Paint assessment begins with visual inspection of the residential property according to HUD guidelines to determine if there are potential LBP hazards.

Interior and exterior components of the residential property, including outbuildings and fences, are also sampled with the portable XRF unit to determine the presence of LBP. If LBP is detected (i.e., greater than 1.0 milligram per square centimeter per HUD guidelines), safe and effective lead hazard control options are discussed with the owner to determine the most effective option. The information obtained during the environmental assessment is recorded with a Residential Sample Request (Attachment 1). In the event an EBL investigation is warranted, additional EBL assessment information is obtained and recorded on the EBL Investigation Questionnaire and Observation Form per the BSB MMP Plan. A report containing all LBP information is provided to the property owner, and the report is recorded in the Program database and tracking system.

7.1.4 Drinking Water

Sampling of drinking water in residential properties is initiated through the Program. Residential drinking water will be sampled as a component of an EBL investigation under the Program where exposure pathways to other potential causes (i.e., lead-contaminated soil, dust, or paint) are not apparent. The homeowner will be asked to collect a sample of the drinking water from the primary tap of the household during these investigations. This drinking water sample will be obtained from a first draw (no purging) to identify if old lead pipes are a source contributing to EBL levels. The specific sampling and analysis procedures are described in the Residential RMAP QAPP (BSB and Atlantic Richfield Company, 2022 or latest approved version). Collected drinking water samples are sent for lead analysis. EPA and DEQ will be notified of any EBL case resulting from drinking water issues identified in the 2020 RMAP Area (Figure 1).

7.1.5 Mercury Vapor

Interior air monitoring for mercury vapor will be performed if mercury contamination in a basement soil, interior dust, or attic dust sample exceeds the residential action level listed in Table 9-1. Air monitoring for mercury vapor is completed using a real-time air monitoring device according to the procedures specified in the Residential RMAP QAPP (BSB and Atlantic Richfield Company, 2022 or latest approved version). If mercury vapor exceeds residential action levels within the residential structure or earthen basement, the structure will be remediated (Section 9.7). Properties that exceed action levels but are not remediated (due to lack of access from the property owner) will be monitored in the Program tracking and database system over the long-term to provide future opportunity to remediate the property.

7.2 Sample Management

Sample identification, preparation, logging, tracking, and custody are completed and managed according to the RMAP QAPPs.

8 COMMUNICATION

BSB RMAP will communicate sample results and remedial action (if applicable) to the property owner and Agencies as described in the following sections.

8.1 Residential Sample Results

BSB RMAP will review sample results for all analytes each sampling event and prepare a letter to communicate results with the property owner. The letter prepared to communicate results of the environmental sampling activities will reiterate the appropriate address where sampling was performed, the appropriate media (i.e., attic dust, indoor dust, soil, etc.), indicate whether the results were above or below the related action levels, and confirm if the property qualifies for remedial action. A copy of sample results and sample location map will be provided as attachments to the notification letter.

Preliminary sample results may be reported to individual landowners by RMAP along with a letter explaining what the results indicate. RMAP personnel will have the ability to distribute landowner preliminary result letters before completing data validation work and formal approval by the Agencies following the template established during the 2021 Butte area school soil sampling project. There are circumstances (extremely high metals concentrations in soil, attic sampling results, EBL scenarios, etc.) where expedited turnaround of sampling results and implementing resultant RA is vital to the health of the RMAP program and the homeowners it supports. Following data validation of the sample results, final data and corresponding action levels for arsenic, lead, and mercury will be provided by RMAP to individual landowners. Data validation information to include the meaning of any data qualifiers will be provided to landowners upon request (see result letter templates in Attachment 3[9]). In the unlikely event that data validation results change the remedial result interpretation, BSB will communicate directly with the affected property owners and send an updated letter at that time.

8.1.1 Non-Mining Related Results

To communicate non-mining related sample results, BSB RMAP will provide the property owner with the following as appropriate: a Lead Inspection Report to communicate paint inspection and testing containing XRF readings obtained from the associated property and explanation of how results are grouped and readings are reported. The report includes all XRF readings taken

[9] Separate result letters will be sent for each matrix sampled if the sampling events are conducted on different dates. If multiple matrices are sampled at the same time, these results will be combined into one result letter.

at the address and guidance on how to use the information as a tool to prioritize painted surfaces at the property. Drinking water sample results will be communicated to indicate levels of lead (Pb) **above or below** the Montana Department of Environmental Quality's Circular 7 Human Health Standard of 15 micrograms per Liter (µg/L). A copy of the laboratory results for the drinking water sample collected from the property will be included as an attachment to the letter.

8.2 Non-Residential Sample Results

Atlantic Richfield will prepare a letter to communicate sample results of non-residential sample activities to property owners. The letter will indicate if results warrant additional sampling or remedial action and include the associated laboratory report containing results of all samples as an attachment.

8.3 Residential Remedial Action

Following landowner notification of sample results above BPSOU action level(s), RMAP will develop an ISWP (see Section 9.2) for each residence requiring remedial action and provided to the owner as an attachment to the Scope of Work (as Exhibit 3 of Access Agreement). For soil sampling events, the ISWPs will summarize the number of individual yard components associated with each property, depth of each sample, and corresponding surface area of each yard component.

For non-soil sampling events (dust, LBP, water), ISWPs will provide the sample results and detail any recommended remedial efforts.

After remediation is complete on residential property, BSB RMAP will provide copies of the implemented site-specific ISWPs to the property owner for their records.

8.4 Non-Residential Remedial Action

Remedial Action Work Plans (RAWPs) will be developed for non-residential areas and submitted to the Agencies for approval prior to implementation. Non-residential RAWPs will provide detailed information to address areas where sample results exceed action levels. Information provided in the RAWP may include the overall effected remedial area, excavation depth, materials (i.e., backfill, soil pH stabilization [as needed], sod, etc.), final cover configuration, and ancillary equipment (as pertinent).

9 REMEDIATION

Remediation of eligible properties is completed if sampling data confirm that applicable action levels for arsenic, lead, and/or mercury are exceeded and, specific to attics and crawl spaces, a pathway for exposure is present. Homes in the 2020 RMAP Expanded Area where the action levels for lead, arsenic, or mercury in attic/crawl space dust are exceeded will be addressed in the same manner as homes within the BPSOU. Remediation is completed by appropriately trained Program representatives or independent contractors. All personnel conducting remediation must read, understand, and sign the BSB HASP prior to starting any remediation work. Site-specific safety concerns will be identified and discussed by the field team prior to initiating remediation, as applicable. All remediation work will be conducted according to applicable state and federal rules and regulations in addition to ordinances or procedures adopted by BSB. ISWPs, prepared by BSB, will be provided for Agency approval at residences where remediation is required and included as an attachment to the Scope of Work (as Exhibit 3 of Access Agreement).

Remediation will be completed on eligible properties in as timely a manner as possible. Prioritization is given to properties where an exposure pathway was determined during the environmental assessment and/or through biomonitoring. In the event biomonitoring tests indicate an exceedance, the affected property is placed at the top of the priority list for assessment and remediation, as needed. Circumstances that could result in expedited remediation include the previously discussed biomonitoring data, identified exposure pathway, or an elevated indoor dust result.

The criteria for determining if remediation of an eligible property is required and what form of remediation is required is provided below.

- If the COC concentration measured in the exterior soil sample exceeds the appropriate action level for arsenic lead, or mercury (Table 9-1), then the soil from the corresponding sampling area will be remediated following the process described in Section 9.3.
- If results show that the mercury concentrations in living space dust or earthen basement soil samples exceed the mercury action level (Table 9-1), interior air will be sampled for mercury vapor.
- If the COC concentration measured in living space dust sample exceeds either the arsenic, lead, or mercury action levels (Table 9-1), living space floors will be thoroughly cleaned with a remediation grade/high efficiency particulate air (HEPA) filter vacuum or carpets will be removed and replaced. Non-living spaces will also be cleaned according to Section 8.4 if dust sample results show that either arsenic, lead, or mercury exceeds an action level and there is either a pathway allowing dust into the

living space or the property owner is planning a remodel that will disturb the non-living space dust.

- If the COC concentration measured in soil samples from earthen basements exceed action levels for lead, arsenic, or mercury (Table 9-1), the soil will be capped or enclosed to limit access as appropriate for the space as determined by Agencies and BSB.
- If mercury vapor concentrations in indoor air exceed the mercury vapor action level (Table 9-1), then a mercury vapor extraction unit will be installed in the basement/crawlspace of the property. Annual mercury vapor samples will be collected to determine if the remediation is effective. After three consecutive samples below the mercury vapor action level, the annual sampling and operation of the extraction system will be discontinued.
- If EBL levels exist and no other potential source of lead is discovered during the residential investigation, painted surfaces will be sampled and analyzed for the presence of lead pending the results of the on-site investigation. Pending the results of painted surface sampling, drinking water will be sampled and analyzed for the presence of lead.

9.1 Remedial Action Levels

Action levels for remediation of the contaminants and exposure scenarios are listed in Table 9-1. These action levels apply to all eligible properties within the Program area as described herein. Action levels are protective of sensitive and vulnerable populations, including potential EJ areas.

Table 9-1. Soil, Dust, Backfill, and Vapor Action Levels in Residential Areas

Contaminant of Concern	Exposure Scenarios	Concentration
Lead	Residential Property[1]	1,200 mg/kg
	Non-Residential Property	2,300 mg/kg
Arsenic	Residential Property[1]	250 mg/kg
	Commercial/Industrial Property	500 mg/kg
	Recreational Space	1,000 mg/kg
Mercury	Residential Property[1]	147 mg/kg
	Residential Property (Vapor)	0.43 µg/m^3

1 - Includes residential living quarters within a commercial or industrial property.

µg/m^3: micrograms per cubic meter; mg/kg: milligrams per kilogram.

9.2 Work Plans

Program representatives will develop ISWPs or RAWPs that define the activities necessary to remediate eligible properties with exceedances of action levels of one or more COCs. Each eligible residential property will have an independent ISWP. Eligible non-residential properties will have an independent RAWP and will include an ISWP as an attachment. Remediation of each contaminant source (soil, dust, paint, drinking water), if more than one, will be independently discussed. Project representatives will interview property owners and residential property occupants, if different, to integrate their concerns into ISWP. At a minimum, each ISWP will include the following content:

- The COC concentrations in all collected samples at the property. Those samples with concentrations in exceedance of the action level will be highlighted and the locations or features of the property where these exceedances occur will be documented.
- The scope of the required remediation work to address the contaminant exceedance(s).
- General property description, including date of construction of any structure(s) to be remediated and an inventory of any site feature that will be intentionally removed or potentially impacted during completion of the remediation activities.
- A summary of the number of individual yard components associated with each property, and corresponding surface area of each yard component.
- A list of site features that will be repaired or replaced during completion of the work, and measures that will be taken to minimize damage to site features that are not intended to be demolished or removed during completion of the remediation activities.
- A proposed schedule for completion of the remediation activities.
- Contact information for Program oversight personnel and any third-party contractors completing the remediation activities.

Each ISWP or RAWP will be submitted to the Agencies for review prior to submittal to the property owner. Program representatives will integrate appropriate Agency comments and issue a final revision for approval by the Agencies prior to starting the work. Individual Site Work Plan (ISWPs) are attached to the Access Agreement, discussed in Section 6, as Exhibit 3, if required.

At least one week before initiating remediation activities, Program representatives will review the Agency-approved work plan with the property owner and residential property occupant, if different. Written approval of the work plan must be obtained from the property owner and property occupant, if different, prior to beginning remediation activities. Before any remediation activities are performed, the property owner must sign the Program Access Agreement (Attachment 1), including the Notice of Covenants included in the BPSOU ICIAP, to

confirm consent and the property owner's commitment to protect and preserve the integrity of the remediation activities to be performed on the property. Any dispute concerning the proposed Remediation Work Plan or procurement of access to complete the work will, after good faith efforts to resolve the dispute, be brought to the attention of the Agencies.

Property owners are required to maintain their property following completion of remediation activities according to the Program Access Agreement and Notice of Covenants (BSB and Atlantic Richfield Company, 2019).

9.3 Remedial Actions

9.3.1 Soil

Contaminated soil that exceeds arsenic, lead, or mercury action levels will be removed from residential yards and play areas to a accommodate the 12-inch cap or to the soil bedrock interface (if bedrock is encountered before the required depth) and to a depth of 24 inches in any garden areas. Contaminated soil is excavated using conventional equipment such as backhoes, small skid steer-type loaders, and hand tools. Contaminated soil that is excavated will be transported to the Butte Mine Waste Repository for disposal. At each removal location prior to backfilling, a layer of lightweight geotextile fabric is placed over the exposed surface as a marker of the extent of soil removed and as a visual indicator that the underlying soil may contain arsenic, lead, or mercury concentrations above action levels. A minimum of 12 inches of clean fill (see Section 9.3.3 below) is placed over the geotextile fabric. Final cover configuration (i.e., sod, gravel, etc.) will be identified in the ISWP.

9.3.2 Earthen Basements

Earthen basements with elevated levels of lead and/or arsenic are addressed by removing excess contaminated dirt, if necessary, from the walls and floor using the appropriate method needed for each basement project (5-gallon buckets, conveyor belt, skid steer, etc.). All contaminated dirt will be taken to the designated repository. Concrete will be placed over earthen basement floors. Stud walls will be built on top of the concrete floor using 2x4s and covered with treated plywood. Earthen walls will be covered with a geotextile liner. Following installation of geotextile liner, stud walls will be constructed around the perimeter of the crawlspace and covered with treated plywood when necessary. Access panels and vents will be installed in the walls for access to utilities and to prevent frozen pipes as needed.

If mercury vapor is still detected and the source of the mercury vapor cannot be removed, a Mercury Vapor Reduction System will be installed. The soil will be encapsulated by installing an impermeable geomembrane barrier. In the instance where mercury vapor is present and

exceeds residential action levels, a bladder and vapor mitigation system will be installed to provide adequate ventilation and air exchange of the basement. Following installation of the bladder and vapor migration system, concrete floor will be installed, stud walls will be built on top of the concrete floor using 2x4s and covered with treated plywood. Access panels and vents will be installed in the walls for access to utilities and to prevent frozen pipes as needed.

9.3.2.1 Backfill

Excavated areas will be backfilled with soil that meets the requirements described in the Butte Hill Revegetation Specifications (BHRS) included in the *Butte Reclaimed Areas Maintenance and Monitoring Plan* (Atlantic Richfield Company, 2022b). Sources of backfill material will be sampled according to the Residential RMAP QAPP, or other suitable Agency-approved QAPP, to determine soil properties and confirm the source is not a source of contamination. Each source of backfill material must be approved by the Agencies prior to use in remediation activities. Alternate backfill materials may be proposed within an ISWP, subject to approval by the Agencies.

9.3.3 Cover Materials

Cover materials used for remediated areas will be selected for the intended use and suitable for long term integrity of the remedial cap.

9.3.3.1 Driveways

For driveways, a compacted lift of pit-run gravel base capped with 6 inches of road-mix gravel will be applied in most cases. Concrete or asphalt surfaces will be replaced (in kind) if removed or damaged during completion of remediation activities.

9.3.3.2 Sod and Seeding

A weed-free sod, composed of Kentucky bluegrass and/or a sod-forming fescue species, will be placed over soil in remediated residential yards and sodded play areas of low-impact or low-intensity use. Seeding will be used for open spaces within areas described in the Large Lot Sampling Section 7.1.1.3. Soil surface preparation and seeding will be completed according to the BHRS included in the *Butte Reclaimed Areas Maintenance and Monitoring Plan* (Atlantic Richfield Company, 2022b). Before altering the seed mixture or rates, Program representatives must obtain approval from the Agencies.

Covenants associated with the residential access agreement include residential requirements with respect to sod/seed. Additional lawn maintenance education literature, included in Attachment 4, will be distributed to residents upon completion of yard remediation.

9.3.3.3 Play Surfacing

Play surfacing removed during completion of remediation activities at playgrounds or play areas will be replaced with in-kind materials to protect remediated soil in high-impact or high-intensity use areas. Such loose-fill materials may include rubber mulch, wood chips, pea gravel, or sand. Program representatives may recommend using unitary materials (e.g., rubber matting or tiles, pour-in-place surfaces) where additional protection of remediated soil is necessary.

9.4 Dust

9.4.1 Interior Living Spaces

If any living space dust samples exceed arsenic, lead, or mercury action levels, all horizontal living space surfaces will be thoroughly cleaned with a remediation-grade HEPA filter vacuum using a two-pass perpendicular approach, and confirmation sampling performed on carpeted surfaces (reference Section 7.1.2 above) to determine if COCs are below residential action levels. Hard horizontal, interior surfaces will be cleaned using a vacuum, wet-wash, and vacuum cleaning process. No confirmation sampling will be performed on clean hard horizontal surfaces.

If confirmation sampling indicates COCs above action levels, the property owner will be notified and follow-up remedial action will be scheduled. Impacted carpets will be removed and subsurface cleaned as described above, and the carpet replaced. The resident will be provided with information about protocols described in the CPMP.

9.4.2 Attics and Crawl Spaces

Attic dust exceeding action levels present in portions of homes that are seldom visited (non-living space areas), such as attics or crawl spaces, will be remediated only if at least one of the following conditions is met:

- The attic is used as living space.
- On average, the resident(s) enter the attic more than once per week.
- Ceilings in the living space immediately below the attic are in a condition of disrepair with obvious exposure to the attic.
- The resident has contacted BSB (per CPMP public outreach programs) regarding concerns about potential exposure to attic dust, which may result from a home remodeling project.
- An indoor (living space) dust sample exceeds action levels.

If none of the criteria are met, then no exposure pathway to the attic exists and the attic does not pose an unacceptable risk to the residents.

If sample results show that concentrations of arsenic, lead, or mercury exceed residential action levels and there is an exposure pathway that would allow migration of contaminated dust into the living space, then the property will be remediated.

Attic insulation (excluding heating, ventilation, and air conditioning [HVAC] insulation and thermal system insulation, and debris) will be removed in conjunction with contaminated attic dust. Removal of insulation is necessary because it cannot be efficiently segregated from contaminated dust. Any insulation that is removed will be replaced to provide a thermal insulation rating (R-value) according to municipal code. Any electrical components that may contact the thermal insulation must comply with applicable municipal codes. Note, the property owner is responsible to comply with applicable municipal codes as determined by an approved inspector before reinsulating the area. Delays associated with electrical upgrades may lead to additional delays related to remediation of the area. BSB RMAP will make every effort to complete required remediation in a timely manner after electrical upgrades are complete.

9.4.3 Residential Remodels

Existing dust contamination contained within buildings does not pose risk to human health or the environment if an exposure pathway does not exist. Completion of property renovation or remodel can create exposure pathways that did not previously exist at the time of the property sampling assessment. Application of the procedures identified in Section 2 (Community Awareness and Education) and Section 12 (Long-Term Tracking and Database Management) is critical to identify properties intended for renovation and remodel. Proactive identification of these properties, through participation of property owners, contractors and tradesmen, and increased community awareness of risks of arsenic, lead, and/or mercury through distribution educational materials at lumber and hardware retailers, inspectors, real estate agents, and BSB, can lead to mitigation of exposure to potentially contaminated dust.

The BSB Planning Department requires contractors to obtain building permits for renovations and remodels that could impact the structural integrity of a residence or that add square footage (vertically or horizontally) to a structure. Resident owners performing renovations and remodeling are encouraged to obtain a construction permit from the BSB Planning Department. Property owners can voluntarily notify Program representatives of their intent to renovate or remodel their property. Advance notification enables Program representatives to review existing property records. BSB will provide assessment results, if available, to the property owner along with educational materials related to contaminant safety, which are regularly

distributed by the RMAP program. Properties that have been previously sampled and remediated to residential action levels will not be resampled or scheduled for further remediation. Properties that have not previously been sampled or remediated may require environmental assessment as described in Section 7 and potential remediation described in Section 9. In either case, Program representatives will contact the property owner to seek access through signature of the required Property Access Agreement and to schedule an environmental assessment of the property.

During environmental assessment, Program representatives will review previous sample results (if available) and discuss the scope of the renovation or remodeling plan with the property owner and/or contractor. This will inform Program representatives of the potential for exposure to potentially contaminated dust and if an exposure pathway may result from the renovation work. If a resident's actions would change an incomplete pathway to a complete one, where previous sampling results indicate dust is known to exceed the residential action level, this will trigger remediation activities by the Program. For property components (living space, attics, crawl spaces) that have not been previously sampled and may be impacted during execution of the remodeling work, Program representatives will then conduct indoor dust sampling to determine if additional remediation is warranted.

Emergency Dust Sampling may be conducted in response to an inadvertent exposure pathway created by remodel activities or damage (i.e., roof leak) to the property without previous sampling or assessment data. Emergency Dust Sampling field sampling protocol described in the Residential RMAP QAPP (BSB and Atlantic Richfield Company, 2022b) may be implemented, in consultation with the Agencies, to expedite sampling results and identify potential mitigation measures. Analysis of samples will be expedited to the extent possible to minimize impact to the construction schedule and completion of renovation or repair activities.

If the property was not previously remediated and previously obtained dust (indoor and/or attic) sampling data applicable to the remodel area exceed residential action levels, then the property will be remediated prior to completion of the renovation or remodeling activities if consent for remediation is given by the property owner through signature of the required Property Access Agreement. Following remediation completed by RMAP, the owner will be responsible for performing the remaining residential renovation or remodeling activities.

The Program will furnish participating property owners or contractors completing renovations and remodels of areas inaccessible for implementation of remediation (i.e., wall cavities and/or structures with a flat-roof design) with the following construction materials:

- Plastic sheeting and tape to isolate portions of the property to minimize transport of construction dust.

- Tyvek suits to reduce the transfer of dust to clothing.
- HEPA-filter equipped construction vacuums to collect pre- and post-demolition dust.
- Heavy-duty construction trash bags for collection of remaining dust, remaining insulation, and plastic sheeting following completion of demolition activities.

For the property owners and contractors who provide advance notification to the Program and voluntarily participate in the remediation process described above, Program representatives will collect and dispose of any accumulated COC-impacted construction debris related to remediation efforts produced during the renovation or remodel process.

The Program is not responsible for completion of any work or provision of any materials associated with renovation or remodeling activities including but not limited to:

- Demolition.
- Disposal of non-impacted demolition debris.
- Electrical wiring upgrades.
- Pipe or plumbing upgrades not associated with lead contamination.
- Placement of wall coverings or painting if not associated with lead contamination.
- Provision or supply of any construction materials not specifically listed in this section.

9.5 Paint

Assessment of residential paint depends upon biomonitoring data obtained through participation in the medical monitoring phase of the Program as described in the MMP. Properties where an individual with an EBL level may be assessed for LBP to identify the potential lead source(s) contributing to the exposure.

Paint assessment begins with visual inspection of the residential property according to HUD guidelines summarized in the table below to determine if there are potential LBP hazards. Deteriorated and peeling lead paint will be restored according to the guidelines of the EPA LBP Renovation, Repair, and Painting Program Rule.[10] Exterior LBP that is determined to be in fair or poor condition according to HUD guidelines will be remediated when determined necessary for cap protection to prevent potential contamination of an existing remediated yard or when determined to be a potential source of elevated interior dust levels. Interior painted surfaces will be remediated when determined to be a source of exposure to an affected individual.

[10] See 40 CFR 745, Subpart E.

	Total area of deteriorated paint on each component		
Type of building component	**Intact***	**Fair***	**Poor***
Exterior components with large surface areas	Entire surface is intact	Less than or equal to 10 square feet	More than 10 square feet
Interior components with large surface areas (walls, ceilings, floors, doors)	Entire surface is intact	Less than or equal to 2 square feet	More than 2 square feet
Interior and exterior components with small surface areas (windowsills, baseboards, soffits, trim, etc.)	Entire surface is intact	Less than or equal to 10 percent of the total surface area of the component	More than 10 percent of the total surface area of the component

*Intact surfaces require only monitoring and are not considered LBP hazards.
*Surfaces in fair condition may be repaired and/or monitored but are not considered to be LBP hazards.
*Surfaces in poor condition are considered to be LBP hazards and should be addressed through remediation or interim controls.

Paint remediation will be performed if paint inspections detect the presence of lead on the painted surface determined to be in “fair” or “poor” condition (described above). Interior paint remediation will be completed according to HUD guidelines. Exterior paint surfaces will be remediated when determined to be necessary to maintain remedial cap protection.

Properties and painted surfaces are sampled per protocols provided in the RMAP Residential QAPP (BSB and Atlantic Richfield Company, 2022b or latest approved version). If LBP is detected and determined to be an exposure source, the surfaces will be remediated according to HUD guidelines. Cap protection projects will be conducted according to the HUD guidelines. The methodologies used for cap protection projects include paint stabilization, encapsulation, or enclosure.

9.6 Drinking Water

Assessment of drinking water systems depends upon biomonitoring data obtained from the MMP. Properties where an individual with an EBL level may be assessed for lead plumbing to identify the potential non-mining related lead source(s) contributing to the exposure. If lead (i.e., lead solder at pipe joints) exists in the home’s plumbing system resulting in elevated concentrations of lead in drinking water above DEQ’s action level, the plumbing system will be modified or replaced.

Properties within BPSOU with drinking water concentrations above the DEQ drinking water action level of 15 µg/L will be remediated by BSB RMAP. Properties that exceed drinking water action levels but are not remediated (due to lack of access from the property owner) will be monitored in the Program tracking and database system over the long-term to provide future opportunity to remediate the property.

9.7 Mercury Vapor

Any recorded concentration of mercury vapor above the action level (Table 9-1) will be considered a failing result and will trigger further investigation following the questionnaire in the MMP to determine remedial action of interior areas. If mercury vapor is the result of soil exceedances described in Section 7.1.5, remediation will be completed as described below.

Interim expedited measures will be implemented in coordination with the Agencies. Interim measures will include an exhaust ventilation system to reduce interior concentrations until final remediation is complete.

Mercury vapor remediation includes installing an impermeable geomembrane barrier over impacted soil. Following placement of the geomembrane, a bladder and vapor mitigation system will be installed to provide adequate ventilation and air exchange of the basement. Mercury vapor remediation includes installing an impermeable geomembrane barrier over impacted soil. Following placement of the geomembrane, a bladder and vapor mitigation system will be installed to provide adequate ventilation and air exchange of the basement. Refer to Section 9.3.2 (Earthen Basements) for additional information regarding remediation. Remediation of finished living areas will be completed by installing an interior ventilation system.

9.8 Best Management Practices and Controls

The following dust control and mitigation measures will be performed during soil remediation activities when dust is visible due to traffic or weather events.

- Fugitive dust emissions because of construction activities will be controlled using water.
- Periodic wetting of the non-paved roads and surface materials placed in the grading areas will be performed by construction personnel.
- All materials transported from the construction site will be secured, covered, tarped, etc., to prevent dust emissions.

These mitigation measures will also be described in all Agency-approved ISWPs which are provided to construction personnel for implementation.

10 REPORTING

10.1 Data Summary Reports

An annual data summary report(s) (DSR) will be prepared summarizing sampling activities completed by the RMAP. Multiple DSRs may be prepared, as appropriate, to reflect specific sampling projects completed (i.e., residential sampling, exterior areas of schools and day cares, parks, etc.). The DSRs associated with residential sampling will be completed within the following calendar and submitted to the Agencies for review and approval. Annual DSRs will include applicable figures, a summary of samples collected, analytical laboratory results, and copies of all field data. Preparation of DSRs associated with non-residential sampling will be prepared as described in the appropriate QAPP and provided to the Agencies for review and approval.

Sampling for remedial design/remedial action under the RMAP will be documented by the respondents through annual DSRs submitted for review and approval by the Agencies. Sample data, with their laboratory and data usability qualifiers, will be maintained electronically by BSB/Atlantic Richfield and reported in the annual DSR. The annual DSR will be prepared based on the guidelines in the *Clark Fork River Superfund Site Investigations* (CFRSSI) *Pilot Data Report Addendum* (AERL, 2000a) following each year of data collection. The annual DSR will describe the sampling activities for the year, provide a summary of the data obtained, discuss the results of data validation, and provide a detailed listing of any deviations from the respective RMAP QAPPs. The annual DSR will also include a data usability assessment. The data usability assessment will have a data summary table listing all the samples and analyte concentrations, along with the laboratory and data validation assigned qualifiers. The Level A/B checklists, laboratory validation checklists, and data validation summary will provide an overall assessment of the quality and usability of the data.

10.2 Medical Monitoring Plan Reporting

Biomonitoring data and completed assessment questionnaires will be recorded and stored in the Medical Monitoring database as described in the MMP. Results are communicated to Program participants per MMP Communication of Results and appropriate HIPAA protocol and summarized in an annual report.

Periodic evaluation of medical monitoring data is performed to support a comprehensive MMP review to assess the effectiveness of the RMAP. These periodic evaluation reports are anticipated to be completed every 5 years as described in the MMP.

10.3 Construction Completion Reports

A comprehensive CCR will be completed annually and will summarize the previous year's completed environmental assessment and remediation activities. The annual CCR will be distributed to the Agencies for review and approval by April 1 of the following year. A CCR documents the residential cleanup construction activities during the previous year.

The CCR will contain the following information about the cleanup actions implemented at the properties:

- A brief synopsis of the remedial action objectives.
- Description of the construction activities, construction schedule, quantities of materials, dates of work, and problems encountered during construction.
- Health and safety and educational activities.
- Post-construction yard maintenance and institutional controls (covenants) requirements.
- Documentation that the cleanup construction work was performed according to ISWPs and performance standards including field notes, borrow source and other analyses, project correspondence, as-built drawings, and electronic images. Deviations from the ISWP will also be documented.

10.4 Record Disclosure

Data and records developed and maintained by the Program are publicly available within annually submitted DSRs and CCRs. Because these reports are of public record, the Program can distribute certain property information to potential buyers, real estate agents, financiers, and insurers if requested. Program representatives can share the following information:

- Whether a property has been subject to an environmental assessment.
- If the results of the environmental assessment determined if the property was or was not contaminated.
- Whether the property was remediated.
- Covenants or deed restrictions recorded on the property following completion of environmental assessment or remediation activities.

Program representatives cannot disclose any information related to the health or personal welfare of the property owner or property occupant(s).

11 DATA QUALITY CONTROL

The Program is implemented by the Settling Defendants (SDs) (Atlantic Richfield and BSB) with oversight provided by the Agencies. The Agencies are responsible for review and approval of all Program generated sampling data and analysis results. Agency approved ISWPs are used to describe the remediation implemented by the SDs. Field oversight of all remedial activity is also performed by Agency representatives. The SDs may also provide independent oversight of remedial activity and report to the Agencies as necessary.

11.1 General Requirements

The *BPSOU Quality Management Plan* (QMP) (BSB and Atlantic Richfield Company, 2016) provides the requirements to ensure that collection and management of environmental data are completed according to EPA's quality requirements. The RMAP QAPPs provide QA/quality control (QC) procedures applied during data collection and analyses of samples.

BSB and Atlantic Richfield are in the process of developing an Existing Data Review QAPP, as required by the BPSOU Consent Decree (EPA, 2020a), which will provide guidance for reviewing existing data that are not collected under a specific EPA-approved QAPP to determine if they may potentially be used by the Program.

11.2 Field and Laboratory Quality Control

Required elements of field and laboratory QC, such as specific field and laboratory QC samples, the frequency of analysis, holding times, and corrective action to be taken when performance and acceptance criteria are not met are provided in the RMAP QAPPs. The RMAP QAPPs include sections that address field and laboratory QC requirements, including the final project checks conducted after the data collection phase of the project is complete to confirm that the data obtained meet the project objectives and to estimate the effect of any deviations on data usability. In the *CFRSSI Data Management/Data Validation Plan Addendum* (AERL, 2000b), the data review/validation process was streamlined to support the post-ROD decision-making process for laboratory-generated data. The general processes in this plan will be followed and described in the RMAP QAPPs.

Additionally, the laboratory data compiled under the respective RMAP QAPP will be subject to Level A/B criteria review and validation per the 2020 *EPA National Functional Guidelines for Inorganic Superfund Methods Data Review (ISM02.4)* (EPA, 2020c) and the project data quality objectives. Data review and validation will be conducted by a qualified technical consultant who is independent from the party conducting the sampling.

12 LONG-TERM TRACKING AND DATABASE MANAGEMENT

Detailed information on how project data are managed and maintained in the RMAP database are described in the BPSOU *Final Data Management Plan* (Atlantic Richfield Company, 2022a). All residential soil, dust, mercury vapor, tap water, and paint[11] information generated (e.g., sample results, survey data, implemented ISWPs, etc.) will be manually recorded by RMAP staff in the RMAP database and Geographic Information System and will be made available to regulators, prospective home buyers, lenders, contractors, and other interested parties, as appropriate with respect to usage and privacy concerns.

Sampling data gathered during environmental assessments and remediation will be recorded in the RMAP database system. The RMAP database is housed in an Access Structured Query Language (SQL) server database maintained by BSB. Document backups are contained in the BPSOU Document SharePoint and EPA document repository. Refer to the BPSOU *Final Data Management Plan* (Atlantic Richfield Company, 2022a) for additional details. The database includes the following information:

- Property address, geographical coordinates (Geo code), short legal description, and current roll and card numbers for the date of assessment and assessor code.
- Date of environmental assessment and remediation (if completed).
- Reason for environmental assessment (i.e., Agency request, owner request, EBL investigation, and permitting requirements).
- Property access refusal flag (if applicable) for long-term tracking and follow-up.
- Sample data including sample identification number, sample date, sample location, sample media, and sample results.
- XRF results (paint).
- Description of remediation completed, including dates of work and final inspection (if applicable).
- Flag for long-term tracking if there is any medium (i.e., soil, dust, vapor, paint, drinking water) that was not abated or if contaminated attic dust is present but was not abated due to a lack of a complete exposure pathway. Samples will be flagged if they exceed the action level for any COC.)

[11] Mercury vapor, tap water, and paint results are only tracked when required as a component of the multi-pathway assessment (i.e., mercury exceedance in soil, EBL investigation, etc.). When this sampling is performed, results will be recorded in the project database.

- Recommendations made to the property owner and whether the property owner provided work acceptance via signature.
- Notice of Covenants/Deed restrictions recorded in the Land Records Office following completion of assessment/remediation activities.

The BSB Data Management Plan (Atlantic Richfield Company, 2022a) provides additional details about the Program's tracking and database system. The Data Management Plan is in the process of being updated to address 2020 Unilateral Administrative Order Statement of Work[12] requirements specified by EPA. The system is used as an electronic repository of environmental assessment and remediation data and other pertinent property information. Information available in the database is used to complete annual DSRs and CCRs. Electronic copies of completed Sampling Forms and Property Access Agreements are maintained by the database. The database enables Program representatives to identify and prioritize environmental assessment of properties of sensitive or affected populations. A key capability of the database is to track previously unreclaimed properties and to maintain the ability to remediate those properties in the future should access be provided by subsequent property owners. The database documents changes in property ownership. Long-term tracking will continue in perpetuity.

Data collected through the Program can be used to improve collaboration between BSB departments and their respective processes. The database provides benefits to the Planning Department, Building Department, and Zoning Board when considering issues related to issuing a planning variance, building permit, or zoning adjustment, among other things.

The BSB land records database will be reviewed annually to determine if properties owned by property owners who declined to grant access for Program activities have changed ownership. If so, proactive access attempts to the new property owner will be reinitiated.

[12] The Residential Solid Media Remedial Action Statement of Work outlines the remaining residential remedial action elements for the 2020 Amendment to the Administrative Order for Partial Remedial Design/Remedial Action Implementation and certain Operation and Maintenance at the BPSOU/Butte Site, Docket No. CERCLA-08-2011-0011 (2020 Order Amendment) in consideration of the 2006 BPSOU ROD, as modified by the 2011 BPSOU ESD, and the 2020 RODA (EPA, 2020a). The 2020 RODA requires an expanded RMAP.

13 REFERENCES

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EPA, 2020b. Environmental Justice Action Plan, Butte, MT / Region 8. U.S. Environmental Protection Agency, December 2020. Available at https://semspub.epa.gov/work/08/100009205.pdf.

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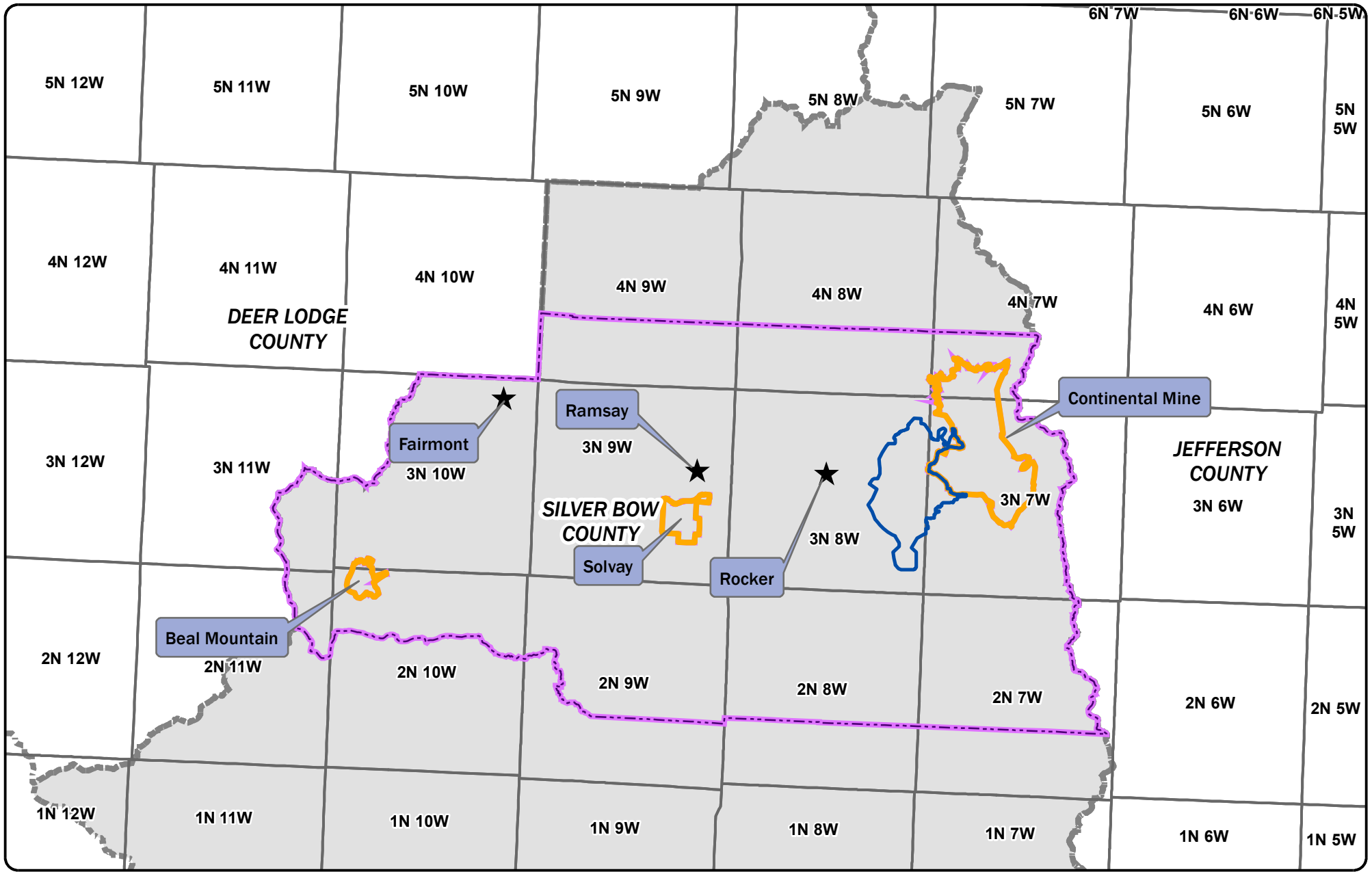
Figures

Figure 1. 2020 RMAP Area Butte Priority Soils Operable Unit (Boundary)



LEGEND
- 2019 RMAP EXPANSION
- AREAS EXCLUDED FROM RMAP
- BPSOU BOUNDARY
- SILVER BOW COUNTY
- COUNTY BOUNDARY

N

DISPLAYED AS:
PROJECTION/ZONE: MSP
DATUM: NAD 83
UNITS: INT'L FT
SOURCE: PIONEER

0 2 4 8
Miles

FIGURE 1

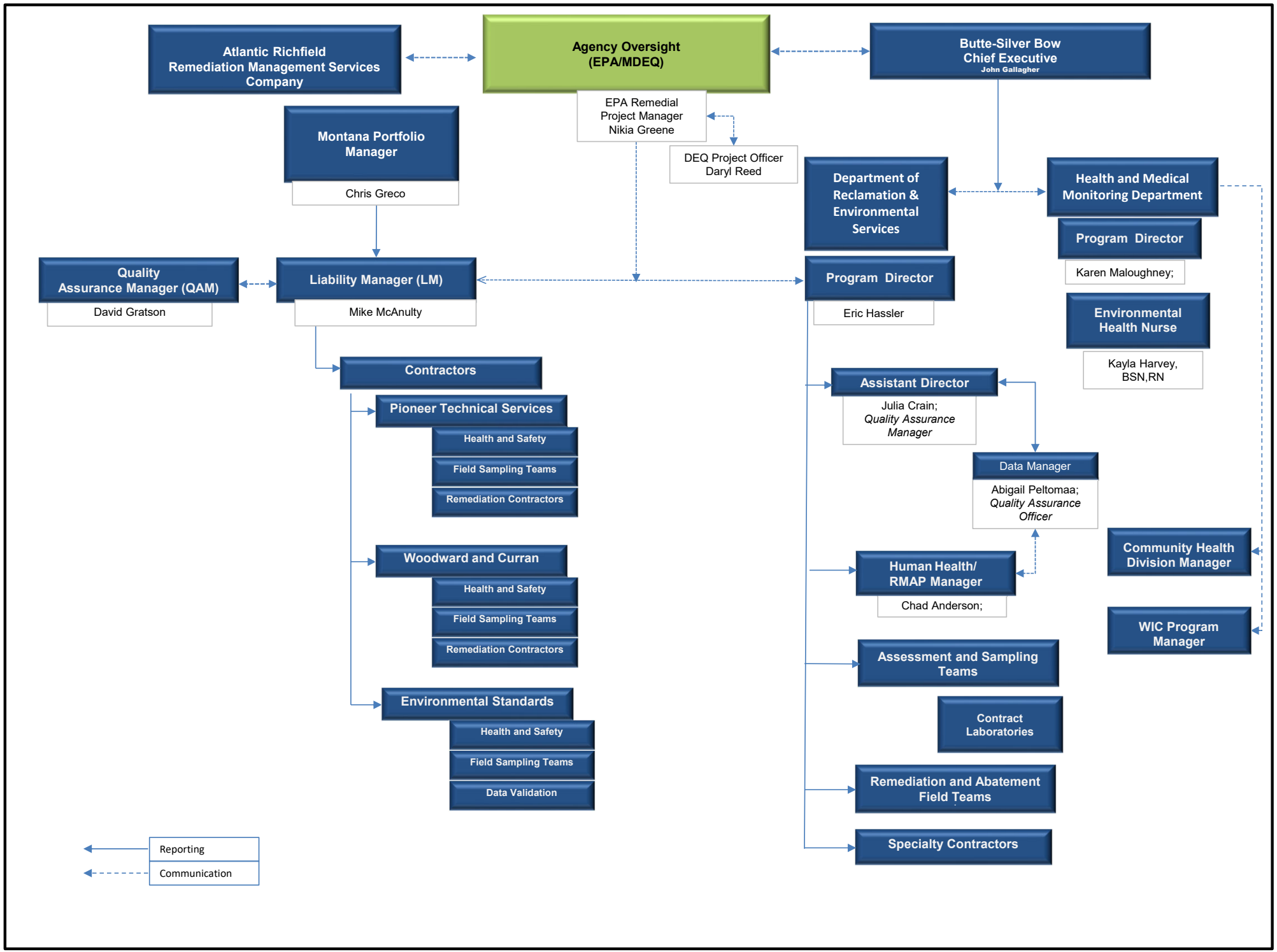
2020 RMAP AREA
BUTTE PRIORITY SOILS
OPERABLE UNIT

PIONEER TECHNICAL SERVICES, INC.

DATE: 7/11/2023

Path: Z:\Shared\Active Projects\ARCO\BPSOU\LandSupport\SolidMedia\RMAP\RMAP_2019ExpArea_Figure1_2023.mxd

Attachment A: BPSOU RMAP and Medical Monitoring Program Organization and Communication Structure



Attachment 1
Sample Request Form and Access Agreements

Attachment 1.1 Residential Sample Request Form and Access Agreement

Attachment 1.2 Non-Residential Soil Sampling Access Agreement and Soil Remediation Access Agreement

Attachment 1.1
Access Agreement Forms
Butte-Silver Bow County Operations
Index

Document Title	# Pages
Residential Access Agreement/Sample Request Form	1

EXHIBIT 3 TO RESIDENTIAL ACCESS AGREEMENT

SAMPLE REQUEST

I, the undersigned, am the owner, his/her legal representative, or otherwise control the Property described herein. I have granted access to BSB and their representatives, to enter the Property and to take samples of environmental media from the Property.

I hereby request BSB provide to me a report of the results of that sampling.

Signature of person making request (if made on behalf of another person or company, please identify that party also):

*_____ Date*_____
Signature

Print Name: *_____

The following is the address at which the requesting party may be contacted:

Mailing address: *_____

Property addresses to be sampled: *_____

_____

Email address:*_____

Phone #'s*_____

(For RMAP Inspector use only)

Attic description: _____

_____

Basement description: _____

_____

ATTACHMENT 1.2

EXAMPLE ACCESS AGREEMENT FORM

(ATLANTIC RICHFIELD COMPANY OPERATIONS)

Attachment 1.2
Atlantic Richfield Company Access Agreement Forms
Index

Document Title	**# Pages**
Soil Sampling Access Agreement	2
Soil Remediation Access Agreement	6

ACCESS AGREEMENT

John Doe ("OWNER"), whose mailing address is, 205 E Aluminum Street, Butte, MT 59701 and **Atlantic Richfield Company** ("Atlantic Richfield"), whose mailing address is 317 Anaconda Road, Butte, MT 59701, enter into this Access Agreement ("Agreement") this _____ day of _____, 2021 and agree as follows:

1. GRANT OF ACCESS. OWNER hereby grants to Atlantic Richfield, including its authorized representatives (and, as may be appropriate, to EPA and/or the State of Montana and the authorized representatives of each) the right to enter OWNER's real property, as described in Exhibit A, which is attached hereto and incorporated herein by reference (the "Property"), to conduct all activities related to sampling of interior/attic dust and/or soils (collectively referred to as "Sampling"). OWNER represents to Atlantic Richfield that, to the best of OWNER's knowledge, OWNER possesses ownership interests in the Property sufficient to grant access to Atlantic Richfield to conduct the Sampling.

2. ATLANTIC RICHFIELD REPRESENTATIONS. Atlantic Richfield or its representative will notify OWNER, either in writing or verbally, at least 24 hours prior to first commencing Sampling on the Property. Atlantic Richfield will make every reasonable effort to minimize any inconvenience to OWNER during its Sampling on the Property, to return the Property to the condition it was in at the time Atlantic Richfield first entered the Property under this Agreement, and to consult with OWNER to address any concerns OWNER may have about the Sampling activity.

3. SPLIT SAMPLE. Atlantic Richfield agrees to use its best efforts to provide, upon OWNER's prior written request a portion of any sample taken on OWNER's Property for subsequent laboratory analysis, provided that a sufficient quantity of the materials to be sampled are available on the day of sampling, and provided further that the sampling requirements of Atlantic Richfield are satisfied.

4. TERMINATION. This Access Agreement will terminate thirty (30) days following receipt of the written notice from Atlantic Richfield stating the Sampling activities on your Property have been completed.

IN WITNESS WHEREOF, OWNER and Atlantic Richfield Company have executed this Agreement effective as of the date first written above.

OWNER:

By: _____

Title (If other than Home Owner): _____

Telephone Contact No. _____

ATLANTIC RICHFIELD COMPANY

By: _____

Title: Project Manager

EXHIBIT A

For the purposes of this Access Agreement, the term Property refers to the following described real estate, situated in the County of Silver Bow, State of Montana:

Sample Identification: R-00001

Property Address: 205 E Aluminum Street, Butte, MT 59701

Property Geocode: 01119713436010000

Legal Description: NOYES AND UPTON R R NO 2, S13, T03 N, R08 W, BLOCK 7, Lot 1

ACCESS AGREEMENT

JOHN DOE ("Owner") and **Atlantic Richfield Company** ("Atlantic Richfield") enter into this Access Agreement ("Agreement") this _____ day of _____, 2021.

1. Atlantic Richfield is conducting certain remedial activities on properties in and near Butte.

2. Access to property owned by Owner and as described in Exhibit A is needed to conduct this remedial work.

3. Owner agrees to permit Atlantic Richfield to conduct such work on Owner's property.

Therefore, in the mutual interest of Owner and Atlantic Richfield, Owner and Atlantic Richfield further agree as follows:

1. GRANT OF ACCESS. Owner hereby grants to Atlantic Richfield, Environmental Protection Agency ("EPA") and the State of Montana ("State"), including the authorized representatives of each, the right to enter Owner's real property described in Exhibit A hereto (the "Property"), to conduct all activities described in the Individual Site Work Plan attached as Exhibit B hereto, including without limitation, excavation and/or removal of soils, ingress and egress of equipment, machinery and personnel, staging and temporary storage of equipment, and conducting other information gathering activities such as field investigation, data collection, surveys and testing (collectively referred to as "Work"). Owner warrants and represents to Atlantic Richfield that, to the best of Owner's knowledge, Owner possesses ownership interests in the Property sufficient to grant access to Atlantic Richfield to conduct the Work. Atlantic Richfield shall provide Owner, either in writing or verbally, with at least 24 hours notice prior to first commencing the Work on the Property. Atlantic Richfield will make every reasonable effort to minimize any inconvenience to Owner during its Work on the Property, and will work closely with Owner to address any concerns Owner may have about the Work.

2. INDEMNIFICATION OF OWNER. Atlantic Richfield agrees to indemnify and hold harmless Owner from any and all actions, claims, damages, losses, liabilities, or expenses, including damage to property or for loss of use of property ("Liabilities"), which may be imposed on or incurred by Owner as a result of Atlantic Richfield's negligent, wrongful acts or omissions while on the Property to conduct the Work, except to the extent that such liabilities result from the acts or omissions of Owner. Provided that the Work is conducted without negligence or wrongful acts or omissions by Atlantic Richfield, Owner and Atlantic Richfield agree that the Work conducted pursuant to this Agreement shall not give rise to a claim for indemnification under this provision.

3. NOTICE. All written notices pertaining to this Agreement shall be sent to Owner and Atlantic Richfield at the respective addresses below. Either Owner or Atlantic Richfield may

designate a different address for receipt of notice by providing written notice of such change to the other.

TO Atlantic Richfield: Mike Mc Anulty
317 Anaconda Road
Butte, MT 59701
(406) 723-1822

TO OWNER: JOHN DOE.
205 E ALUMINUM STREET
BUTTE, MT 59701

4. CONDITION OF THE PROPERTY. Upon completion of the Remedial Action Work, Atlantic Richfield will use reasonable efforts to return the Property to the condition it was in at the time Atlantic Richfield first entered the Property under this Agreement, provided such condition is not inconsistent with the Remedial Action Work conducted pursuant to this Agreement. Atlantic Richfield may photograph the Property prior to and upon completion of the Remedial Action Work to document and obtain a fair and accurate representation of the present condition of the Property.

5. MISCELLANEOUS.

a. Effect of Agreement. This Agreement and the rights and obligations created hereby shall be binding upon and inure to the benefit of Owner and Atlantic Richfield and their respective assigns and successors in interest.

b. Negation of agency relationship. This Agreement shall not be construed to create, either expressly or by implication, the relationship of agency or partnership between Owner and Atlantic Richfield. Neither Owner nor Atlantic Richfield is authorized to act on behalf of the other in any manner relating to the subject matter of this Agreement.

c. Termination. Except with respect to paragraphs 2, 3 and 5.a of this Agreement, this Agreement will terminate thirty (30) days following Atlantic Richfield's written notification to Owner that the Work is complete.

d. Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the State of Montana.

e. Construction. The invalidity or unenforceability of any provision of this Agreement shall not affect the validity or enforceability of any other provision.

f. Entire Agreement. This Agreement embodies the entire agreement of Owner and Atlantic Richfield with respect to the subject matter hereof, and no prior oral or written representation shall serve to modify or amend this Agreement. This Agreement may be modified only by a written agreement signed by Owner and Atlantic Richfield.

IN WITNESS WHEREOF, Owner and Atlantic Richfield have executed this Agreement effective as of the date first written above.

OWNER	Atlantic Richfield Company
JOHN DOE	
By: _____	By: _____
Title (If other than Owner): _____	Title: Liability Manager_____
Telephone Contact No. _____	

EXHIBIT A

For the purposes of this Access Agreement, the term Property refers to the following described real estate, situated in the County of Silver Bow, State of Montana:

Name	Geocode	Legal Description
R-00001 (205 E Aluminum Street)	01119713436010000	- NOYES AND UPTON R R NO 2, S13, T03 N, R08 W, BLOCK 7, Lot 1

EXHIBIT B

INDIVIDUAL SITE WORK PLAN

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FOR THIS TEMPLATE

Attachment 2
Agency Notice Letter

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8, MONTANA OFFICE
FEDERAL BUILDING, 10 West 15TH Street, Suite 3200
Helena, MT 59626-0096
Phone 866-457-2690
www.epa.gov/region8

Ref: 8 ORC-LEP/MO

DRAFT 9/16/2019 EPA DATE

URGENT: FINAL OPPORTUNITY. PLEASE READ AND RESPOND.

Ref: 8EPR-SR

NAME
ADDRESS
CITY, STATE, ZIP

Re: PROPERTY LEGAL DESCRIPTION:_____

Dear Property Owner:

The U.S. Environmental Protection Agency (EPA) requests access to your property for environmental assessment, including the collection and analysis of samples of exterior yard soils, interior living space dust and attic dust if exposure pathways are identified. These activities are components of the Multi-Pathway Residential Metals Abatement Program (RMAP) which is designed to mitigate potentially harmful residential exposures to sources of lead, arsenic and mercury contamination. The RMAP is being implemented pursuant to EPA's authority under the federal Superfund law known as the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA).

You were previously contacted by (Butte Silver Bow County) *or* (the Atlantic Richfield Company) for such access in letters dated _____. An affirmative reply to those requests has not been received.

This is your final opportunity to provide voluntary access to your residential property so that the environmental assessment and abatement activities, if required, can occur as required by CERCLA. If you do not provide access to your property by _____, you may be responsible for any future assessment and cleanup of your property.

Assessment and abatement actions, if indicated by the sampling results collected during the initial assessment, will protect human health and meet objectives of the final remedy as defined in the EPA's Butte Priority Soils Record of Decision, as amended. If the EPA is unable to complete the investigation of your property, be advised that EPA or the State of Montana have authority to and will consider recording a copy of this letter in the chain of title for your property in the Butte-Silver Bow County real property records. The purpose of such recording is to inform future potential owners of your property that your property has not been assessed and appropriately remediated, as indicated by the results of sampling conducted in the course of the RMAP assessment.

To grant access for assessment of your property, please call an EPA representative at _____ or

return the enclosed access form in the postage-paid return envelope **to the EPA by _____. We will attempt to schedule the RMAP inspection and future abatement activities, if required based upon the results of the initial environmental assessment activities, at a time that is convenient for you; however, the assessment and sampling of your property must be scheduled by _____.**

After the inspection and assessment of your property is complete, including the receipt of any sampling results, you will receive a letter from Butte Silver Bow County documenting the results of the environmental assessment. Thank you for considering this opportunity. Please contact the Nikia Greene at 406 457-5019 if you have any questions or concerns.

Sincerely,

Site Attorney, BPSOU

Enclosures: Access form and return envelope

Attachment 3
Sample Result Letters

Attachment 3.1 Residential Sample Result Letters

Attachment 3.2 Non-Residential Sample Result Letters

Butte-Silver Bow

Residential Metals Abatement Program

November xx, 2022

(Owner's name)
145 Example St.
Butte, MT 59701

Dear (owner's name):

Enclosed you will find the Lead Inspection Report containing the XRF readings obtained at your 145 Example St. property. The lead content of the painted surfaces is reported in mg/cm^2. A value of ≥ 1.0 is generally considered to be lead-based paint--as defined by the U.S. Department of Housing and Urban Development. The enclosed "Detailed Report" includes all readings taken at this address including calibration readings. Montana does not have regulations regarding the removal of lead-based paint; therefore, we can only reference federal standards.

You will notice that the reports group readings according to which wall they were taken on. The "wall" specifies a wall of the structure--Wall A being that of the street-side entrance. Walls are then designated B-D in a clockwise direction. The "substrate" identifies the specific surface and "location" indicates where the sample was taken on the wall or in relation to the wall (left, center, right).

This report should be used as a tool to prioritize painted surfaces at this property. Top priority should be given to surfaces above the action level and in poor condition--noted as "P" on the report. We would recommend that such surfaces be stabilized to ensure that lead-containing dust is not released into the home. At a minimum, children's access to these surfaces should be restricted. For your information, surfaces were classified as poor ("P"), fair ("F"), or intact ("I") (see attached).

If you have renovation activities planned, please reference the informational brochure enclosed. Any work related to lead painted surfaces should be carefully planned to avoid contaminating your property with lead dust.

I have also enclosed EPA pamphlets regarding the real-estate disclosure law. This law requires sellers and landlords to disclose known lead-based paint and lead-based paint hazards and provide available reports to buyers and renters. I would recommend that you retain this report and associated information in your records, should you need to reference it in the future.

Testing was conducted on a random sampling of various locations on components likely to have a different painting history. The presence or absence of lead-based paint on the surfaces, which were not tested, cannot be guaranteed based on these results. When a particular component tests positive, all other components of the same type should be considered positive unless they are tested and proven negative.

This report is meant to give you information regarding the presence of lead in the subject property by random sampling of lead paint and should not be considered an exhaustive study of all surfaces. Given the age of the home, if paint or dust is disturbed in any way, the safest way to proceed is to assume there is lead unless you have tested and found otherwise.

Thank you for participating in our program's activities. If you have any questions, please call (406) 497-5040.

Sincerely,

RMAP Staff
(406)497-5040

Enclosures

Owner
Address

Lead Based Paint Report

Butte-Silver Bow RMAP _____
155 W. Granite St. Butte, MT 59701_____

Reading No	Time	Room	Wall	Location (L,C,R)	Component	Substrate	Condition (I,F,P)	Color	Inspector	Results	Action Level	Units	Reading
1	1/01/2001 8:30am	Calibration							CA			cps	1.34
2	1/01/2001 8:40am	Calibration							CA	Negative	1	mg / cm ^2	0
3	1/01/2001 8:42am	Calibration							CA	Positive	1	mg / cm ^2	1.1
4	1/01/2001 8:43am	Calibration							CA	Negative	1	mg / cm ^2	0
5	1/01/2001 8:45am	Calibration							CA	Positive	1	mg / cm ^2	1.3
6	1/01/2001 8:47am	Calibration							CA	Negative	1	mg / cm ^2	0
7	1/01/2001 9:32am	2nd Floor W. Bedroom	D	L	Window casing	Wood	F	Blue	CA	Negative	1	mg / cm ^2	0.01
8	1/01/2001 9:35am	2nd Floor W. Bedroom	D	C	Window sash	Wood	I	Blue	CA	Negative	1	mg / cm ^2	0.22
9	1/01/2001 9:36am	2nd Floor W. Bedroom	A	L	Upper Wall	Plaster	I	White	CA	Negative	1	mg / cm ^2	0.28
10	1/01/2001 9:39am	2nd Floor W. Bedroom	D	R	Baseboard	Wood	I	Blue	CA	Negative	1	mg / cm ^2	-0.18
11	1/01/2001 9:43am	2nd Floor W. Bedroom	C	R	Door jamb	Wood	P	Blue	CA	Negative	1	mg / cm ^2	0.24
12	1/01/2001 9:45am	2nd Floor W. Bedroom	C	C	Door	Wood	I	White	CA	Positive	1	mg / cm ^2	10
13	1/01/2001 9:46am	2nd Floor W. Bedroom	C	C	Floor	Wood	F	Stain	CA	Positive	1	mg / cm ^2	4.3
14	1/01/2001 9:49am	2nd Floor Bathroom	B	C	Window sill	Wood	F	Green	CA	Negative	1	mg / cm ^2	0.3
15	1/01/2001 9:51am	2nd Floor Bathroom	B	L	Window casing	Wood	I	Green	CA	Negative	1	mg / cm ^2	0.19
16	1/01/2001 9:55am	2nd Floor Bathroom	D	R	Medicine cabinet	Metal	F	White	CA	Negative	1	mg / cm ^2	0.11
17	1/01/2001 10:01am	2nd Floor Bathroom	A	R	Door casing	Wood	I	Green	CA	Negative	1	mg / cm ^2	0.21
18	1/01/2001 10:04am	2nd Floor Bathroom	A	L	Door	Wood	I	Stain	CA	Negative	1	mg / cm ^2	0.5
19	1/01/2001 10:06am	2nd Floor Bathroom	C	C	Upper Wall	Plaster	I	White	CA	Positive	1	mg / cm ^2	1.7
20	1/01/2001 10:09am	Kitchen	B	R	Window sash	Wood	I	Tan	CA	Positive	1	mg / cm ^2	3.6
21	1/01/2001 10:12am	Kitchen	C	R	Upper cabinet	Wood	I	Tan	CA	Positive	1	mg / cm ^2	1.5
22	1/01/2001 10:16am	Kitchen	A	C	Floor	Wood	F	Stain	CA	Negative	1	mg / cm ^2	0.6
23	1/01/2001 10:20am	Exterior	A	R	Storm sash	Wood	P	Grey	CA	Positive	1	mg / cm ^2	1.1
24	1/01/2001 10:21am	Exterior	A	L	Wall	Brick	P	White	CA	Negative	1	mg / cm ^2	0.8
25	1/01/2001 10:21am	Exterior	A	C	Fascia	Wood	F	Grey	CA	Negative	1	mg / cm ^2	0
26	1/01/2001 10:56am	Calibration							CA	Positive	1	mg / cm ^2	1.1
27	1/01/2001 10:58am	Calibration							CA	Negative	1	mg / cm ^2	0
28	1/01/2001 11:00am	Calibration							CA	Positive	1	mg / cm ^2	1.1
29	1/01/2001 11:01am	Calibration							CA	Negative	1	mg / cm ^2	0
30	1/01/2001 11:02am	Calibration							CA	Positive	1	mg / cm ^2	1.2
31	1/01/2001 11:04am	Calibration							CA	Negative	1	mg / cm ^2	0
32													

Butte-Silver Bow

Residential Metals Abatement Program

155 W. Granite

Butte, MT 59701

Phone: (406) 497-5040

April X, 2023

Ms. Jane Doe
123 Example Street
Butte, MT 59701

Dear Ms. Doe,

This letter is in response to the Residential Metals Abatement Program (RMAP) sampling activities conducted on your **123 Example Street** property. Enclosed is a copy of the laboratory results and sample location map for the samples collected during the environmental assessment of your property.

The attic dust results indicate levels of lead (Pb) **above** the local action level of 1200 mg/kg, levels of arsenic (As) below the local action level of 250 mg/kg, and levels of mercury below the local action level of 147 mg/kg. This property qualifies for attic dust remediation.

The indoor dust results indicate levels of lead (Pb) **above** the local action level of 1200 mg/kg, levels of arsenic (As) below the local action level of 250 mg/kg, and levels of mercury below the local action level of 147 mg/kg. This property qualifies for indoor dust remediation.

The basement results indicate levels of lead (Pb) **above** the local action level of 1200 mg/kg, levels of arsenic (As) below the local action level of 250 mg/kg, and levels of mercury below the local action level of 147 mg/kg. This property qualifies for basement soil remediation.

The soil results for the **East Yard and the West Yard** indicate levels of lead (Pb) **above** the local action level of 1200 mg/kg for lead, and levels of arsenic for the **West Yard** (As) **above** the local action level of 250 mg\kg for arsenic, and levels of mercury below the local action level of 147 mg/kg for mercury. This property qualifies for soil remediation.

Thank you for participating in the Residential Metals Abatement Program activities. Please contact this office to schedule remediation activities. Please contact RMAP at 497-5040 with any questions.

Sincerely,

Residential Metals Abatement Program
Department of Reclamation & Environmental Services
Butte-Silver Bow
406-497-5040
rmap@bsb.mt.gov

Enclosure

Butte-Silver Bow

Residential Metals Abatement Program

155 W. Granite

Butte, MT 59701

Phone: (406) 497-5040

April X, 2023

Ms. Jane Doe
123 Example Street
Butte, MT 59701

Dear Ms. Doe,

This letter is in response to the Residential Metals Abatement Program (RMAP) sampling activities conducted on your **123 Example Street** property. Enclosed is a copy of the laboratory results for the samples collected during the environmental assessment of your property.

The attic dust results indicate levels of lead (Pb) below the local action level of 1200 mg/kg, levels of arsenic (As) below the local action level of 250 mg/kg, and levels of mercury below the local action level of 147 mg/kg.

The indoor dust results indicate levels of lead (Pb) below the local action level of 1200 mg/kg, levels of arsenic (As) below the local action level of 250 mg/kg, and levels of mercury below the local action level of 147 mg/kg.

The basement results indicate levels of lead (Pb) below the local action level of 1200 mg/kg, levels of arsenic (As) below the local action level of 250 mg/kg, and levels of mercury below the local action level of 147 mg/kg.

The soil results indicate levels of lead (Pb) below the local action level of 1200 mg/kg, levels of arsenic (As) below the local action level of 250 mg/kg, and levels of mercury below the local action level of 147 mg/kg.

Thank you for participating in the Residential Metals Abatement Program activities. Please contact RMAP at 497-5040 with any questions.

Sincerely,

Residential Metals Abatement Program
Department of Reclamation & Environmental Services
Butte-Silver Bow
406-497-5040
rmap@bsb.mt.gov

Enclosure

Butte-Silver Bow

Residential Metals Abatement Program

155 W. Granite

Butte, MT 59701

Phone: (406) 497-5040

April X, 2023

Ms. Jane Doe
123 Example Street
Butte, MT 59701

Dear Ms. Doe,

This letter is in response to the Residential Metals Abatement Program (RMAP) sampling activities conducted on your **123 Example Street** property.

Enclosed is a copy of the results for the mercury vapor samples collected from your **123 Example Street** property. The results indicate levels of mercury below the local action level of 0.43 $\mu g/m^3$.

Thank you for participating in the Residential Metals Program activities. If you have questions, please contact the Residential Metals Abatement Program.

Sincerely,

Residential Metals Abatement Program
Department of Reclamation & Environmental Services
Butte-Silver Bow
406-497-5040
rmap@bsb.mt.gov

Enclosure

Butte-Silver Bow

Residential Metals Abatement Program

155 W. Granite

Butte, MT 59701

Phone: (406) 497-5040

April X, 2023

Ms. Jane Doe
123 Example Street
Butte, MT 59701

Dear Ms. Doe,

This letter is in response to the Residential Metals Abatement Program (RMAP) sampling activities conducted on your **123 Example Street** property.

Enclosed is a copy of the results for the mercury vapor samples collected from your **123 Example Street** property. The results indicate levels of mercury **above** the local action level of .43 µg/m^3.

Thank you for participating in the Residential Metals Abatement Program activities. A program representative will reach out immediately to discuss the path forward for completing the necessary remediation at your property, including guidance on how to limit exposure in the interim. If you'd like to discuss your results sooner or have any questions, please contact the Residential Metals Abatement Program directly.

Sincerely,

Residential Metals Abatement Program
Department of Reclamation & Environmental Services
Butte-Silver Bow
406-497-5040
rmap@bsb.mt.gov

Enclosure

Butte-Silver Bow

Residential Metals Abatement Program

155 W. Granite

Butte, MT 59701

Phone: (406) 497-5040

April X, 2023

Ms. Jane Doe
123 Example Street
Butte, MT 59701

Dear Ms. Doe,

This letter is in response to the Residential Metals Abatement Program (RMAP) sampling activities conducted on your **123 Example Street** property.

Enclosed is a copy of the laboratory results for the drinking water sample collected from your 123 Example Street property. The results indicate levels of lead (Pb) below the Montana Department of Environmental Quality's Circular 7 Human Health Standard of 15 µg/L.

Thank you for participating in the Residential Metals Abatement Program activities. If you have questions, please contact the Residential Metals Abatement Program.

Sincerely,

Residential Metals Abatement Program
Department of Reclamation & Environmental Services
Butte-Silver Bow
406-497-5040
rmap@bsb.mt.gov

Enclosure

Butte-Silver Bow

Residential Metals Abatement Program

155 W. Granite

Butte, MT 59701

Phone: (406) 497-5040

April X, 2023

Ms. Jane Doe
123 Example Street
Butte, MT 59701

Dear Ms. Doe,

This letter is in response to the Residential Metals Abatement Program (RMAP) sampling activities conducted on your **123 Example Street** property.

Enclosed is a copy of the laboratory results for the drinking water sample collected from your 123 Example Street property. The results indicate levels of lead (Pb) **above** the Montana Department of Environmental Quality's Circular 7 Human Health Standard of 15 µg/L.

Thank you for participating in the Residential Metals Abatement Program activities. A program representative will reach out within the next two weeks to provide educational materials and guidance on how to limit exposure. If you'd like to discuss your results sooner or have any questions, please contact the Residential Metals Abatement Program directly.

Sincerely,

Residential Metals Abatement Program
Department of Reclamation & Environmental Services
Butte-Silver Bow
406-497-5040
rmap@bsb.mt.gov

Enclosure

RESIDENTIAL IDENTIFIER	RESIDENTIAL YARD COMPONENTS	COMPONENT ARSENIC CONCENTRATION (mg/kg)					COMPONENT LEAD CONCENTRATION (mg/kg)					COMPONENT MERCURY CONCENTRATION (mg/kg)				
R-00000		0-2"	2-6"	6-12"	12-18"	18-24"	0-2"	2-6"	6-12"	12-18"	18-24"	0-2"	2-6"	6-12"	12-18"	18-24"
SOXXXXXX-1	North Yard	83	96	212	-	-	321	183	280	-	-	-	-	-	-	-
SOXXXXXX-1	South Yard	47	59	59	-	-	280	125	88	-	-	-	-	-	-	-
SOXXXXXX-1	West Yard	56	64	44	-	-	1070	1070	638	-	-	1.6	0.86	1.1	-	-
SOXXXXXX-1	Northwest Yard	82	95	135	-	-	571	372	384	-	-	0.92	0.6	0.76	-	-
SOXXXXXX-1	Boulevard	35	-	-	-	-	177	-	-	-	-	-	-	-	-	-
SOXXXXXX-1	Driveway	60	70	81	-	-	1420	1980	1980	-	-	4.5	12	17	-	-
SOXXXXXX-1	East Yard	65	78	114	-	-	457	298	330	-	-	-	-	-	-	-

[number]	Component Arsenic Concentration Over Limit
[number]	Component Lead Concentration Over Limit
[number]	Component Mercury Concentration Over Limit
[number]	Analyte Concentration Within Acceptable Limits
-	Not Applicable or Not Sampled

Exceedances	Upper Limit
Arsenic	237.5
Lead	1140
Mercury	139.65

Property Address 123 ANYWHERE STREET Butte MT 59701


NORTH BOULEVARD
Driveway
NORTH YARD
EAST YARD
Sidewalk
Sidewalk
1801 Example St. House
Garage
WEST YARD
NORTH-WEST YARD
EAST YARD
SOUTH YARD

ATTACHMENT 3.2

EXAMPLE RESULT LETTER TEMPLATES

(ATLANTIC RICHFIELD COMPANY OPERATIONS)

EXAMPLE NO ACTION

YARD SOIL RESULT LETTER

Atlantic Richfield Company

317 Anaconda Road
Butte, MT 59701
Main: (406) 723-1822

June 5, 2021

Ms. Jane Doe
123 W Daly St
Butte, MT 59701

Dear Ms. Doe:

This letter is in response to Residential Metals Abatement Program (RMAP) soil sampling activities conducted by Atlantic Richfield Company on your property. Soil sampling was conducted pursuant to the Silver Bow Creek/Butte Area National Priorities List (NPL) Site, Butte Priority Soils Operable Unit (BPSOU) Unilateral Administrative Order (UAO) Amendment issued by the U.S. Environmental Protection Agency (EPA) in August 2020 (UAO Amendment) and under the direct supervision of the EPA. On behalf of the EPA and Atlantic Richfield Company, we would like to provide you the results from the sampling that was conducted on your property.

The arsenic, lead, and mercury concentrations for soil samples collected from your property are attached to this letter. Your results are below the action levels established by the EPA for RMAP soils within the Silver Bow Creek/Butte Area NPL Site. Therefore, further sampling or remediation is not required on your property.

We would like to thank you for your cooperation during this effort. If you have any questions or require further explanation concerning the above information, please give me a call at the number listed below. Alternatively, you may also call Nikia Greene with the EPA (406-457-5019) or Daryl Reed with the MDEQ (406-444-6433) with any questions or concerns.

Sincerely,

Mike McAnulty

Mike Mc Anulty
Liability Manager
Remediation Management Services Company
An affiliate of Atlantic Richfield Company
(406) 723-1822

Attachment: Analytical Soil Sampling Results

cc: Nikia Greene/EPA
Daryl Reed/MDEQ

File: MiningSharePoint@bp.com

ANALYTICAL RESULTS FROM SOIL SAMPLING
CONDUCTED ON YOUR PROPERTY

Geocode: 0119712136130000

Physical Address: 123 W Daly Street

Legal Description: -WEST WALKERVILLE ADD, S12, T03N, R08W, BLOCK 14, Lot 17 - 18

Residential ID: R-0001

Resident ID	SAMPLING COMPONENTS	COMPONENT SURFACE AREA (Square Feet)	COMPONENT ARSENIC CONCENTRATION (mg/kg)					COMPONENT LEAD CONCENTRATION (mg/kg)					COMPONENT MERCURY CONCENTRATION (mg/kg)				
R-0001			0-2"	2-6"	6-12"	12-18"	18-24"	0-2"	2-6"	6-12"	12-18"	18-24"	0-2"	2-6"	6-12"	12-18"	18-24"
R-0001-NY	North Yard (NY)	1,000	150	88	75	N/A	N/A	343	315	425	N/A	N/A	18	25	12	N/A	N/A
R-0001-SY	South Yard (SY)	1,000	142	95	65	N/A	N/A	422	366	358	N/A	N/A	55	38	33	N/A	N/A
R-0001-EY	East Yard (EY)	1,000	88	62	105	N/A	N/A	707	255	243	N/A	N/A	23	17	33	N/A	N/A
	Total:	3,000															

Component Arsenic Concentration is ≥ 250 mg/kg.

Component Lead Concentration is ≥ 1,200 mg/kg.

Component Mercury Concentration is ≥ 147 mg/kg.

N/A = Not applicable per 2021 RMAP Quality Assurance Project Plan.

EPA Action Levels to Determine the Need for Additional Testing or Remediation in RMAP Soils:

Arsenic: Any Component ≥ 250 ppm

Lead: Any Component ≥ 1,200 ppm

Mercury: Any Component ≥ 147 ppm

Definitions of words and abbreviations used above:

COMPONENT CONCENTRATION - The concentration of arsenic, lead, or mercury within a sampling component at a given depth interval.

PARTS PER MILLION (PPM) – Parts per million, an expression of concentration. A good analogy: If you had 20ppm, it would be like having 20 white marbles and 999,980 black marbles in a group of 1,000,000 total marbles.

N/A – Not applicable per the 2021 RMAP Quality Assurance Project Plan (QAPP)

EXAMPLE REMEDIAL ACTION

YARD SOIL RESULT LETTER

317 Anaconda Road
Butte, MT 59701
Main: (406) 723-1822

Atlantic Richfield Company

June 5, 2021

Ms. Jane Doe
123 W Daly St
Butte, MT 59701

Dear Ms. Doe:

This letter is in response to Residential Metals Abatement Program (RMAP) soil sampling activities conducted by Atlantic Richfield Company on your property. Soil sampling was conducted pursuant to the Silver Bow Creek/Butte Area National Priorities List (NPL) Site, Butte Priority Soils Operable Unit (BPSOU) Unilateral Administrative Order (UAO) Amendment issued by the U.S. Environmental Protection Agency (EPA) in August 2020 (UAO Amendment) and under the direct supervision of the EPA. On behalf of the EPA and Atlantic Richfield Company, we would like to provide you the results from the sampling that was conducted on your property.

You will see that one or more of the samples contained arsenic, lead, or mercury above the Residential Metals Abatement Program (RMAP) soil action levels established by the U.S. Environmental Protection Agency (EPA) for this area. EPA has determined that such soil should be removed from the surface of your property and replaced with clean soil and new vegetation.

This letter describes the work that is proposed for your property and asks you for permission to complete that work at Atlantic Richfield Company's expense. The proposal is described in more detail below, and in the proposed access agreement and work plan attached to this letter.

Sample Results

Soil sampling was conducted pursuant to the Silver Bow Creek/Butte Area National Priorities List (NPL) Site, Butte Priority Soils Operable Unit (BPSOU) Unilateral Administrative Order (UAO) Amendment issued by the U.S. Environmental Protection Agency (EPA) in August 2020 (UAO Amendment) and under the direct supervision of the EPA.

The arsenic, lead, and mercury concentrations for soil samples collected from your property are attached to this letter. Your sample results, which have been reviewed and approved by EPA, indicate that the concentrations of arsenic, lead, and/or mercury detected within your property exceed the RMAP soil action level(s) established by EPA within the Silver Bow Creek/Butte Area National Priorities List (NPL) Site. Therefore, some or all of your property is eligible for soil remediation.

Proposed Remedy and Access Agreement

Atlantic Richfield Company requests your permission to complete the soil remedy that EPA has selected for your property, at Atlantic Richfield's own expense. In order to move forward with soil remediation on your property, you will need to provide us with an access agreement that allows us to complete that work.

An Individual Site Work Plan (ISWP) for your property is attached as Exhibit B to the Access Agreement. The ISWP, which also has been approved by EPA, describes the details of the soil remediation work proposed for your property.

Next Steps

Atlantic Richfield respectfully asks that you review the attached Access Agreement and ISWP. If you concur with these documents and would like to proceed with the proposed soil remediation, please sign the Access Agreement. If you return the fully executed Access Agreement to me in the enclosed self-addressed stamped envelope, I will countersign the Access Agreement and provide you with a copy for your records. Once we receive your executed Access Agreement, we will contact you to schedule the remediation work.

We would like to thank you for your cooperation during this effort. If you have any questions or would like further explanation concerning the above, please call me at **406-723-1822**.

Sincerely,

Mike McAnulty

Mike Mc Anulty
Liability Manager
Remediation Management Services Company
An affiliate of Atlantic Richfield Company
(406) 723-1822

Attachments: Analytical Soil Sampling Results
Construction Access Agreement
Individual Site Work Plan (ISWP)

cc: Nikia Greene/EPA
Daryl Reed/MDEQ

File: MiningSharePoint@bp.com

ANALYTICAL RESULTS FROM SOIL SAMPLING
CONDUCTED ON YOUR PROPERTY

Geocode: 01119712136130000

Physical Address: 123 W Daly Street

Legal Description: -WEST WALKERVILLE ADD, S12, T03N, RO8W, BLOCK 14, Lot 17 - 18

Residential ID: R-0001

Resident ID	SAMPLING COMPONENTS	COMPONENT SURFACE AREA (Square Feet)	COMPONENT ARSENIC CONCENTRATION (mg/kg)					COMPONENT LEAD CONCENTRATION (mg/kg)					COMPONENT MERCURY CONCENTRATION (mg/kg)				
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R-0001-NY	North Yard (NY)	1,000	150	88	75	N/A	N/A	1,217	315	425	N/A	N/A	18	25	12	N/A	N/A
R-0001-EY	East Yard (EY)	1,000	142	255	65	N/A	N/A	422	366	358	N/A	N/A	55	38	33	N/A	N/A
R-0001-SY	South Yard (SY)	1,000	88	62	105	N/A	N/A	707	255	243	N/A	N/A	23	174	33	N/A	N/A
	Total:	3,000															

Component Arsenic Concentration is ≥ 250 mg/kg.

Component Lead Concentration is ≥ 1,200 mg/kg.

Component Mercury Concentration is ≥ 147 mg/kg.

N/A = Not applicable per 2021 RMAP Quality Assurance Project Plan.

EPA Action Levels to Determine the Need for Additional Testing or Remediation in RMAP Soils:

Arsenic: Any Component ≥ 250 ppm

Lead: Any Component ≥ 1,200 ppm

Mercury: Any Component ≥ 147 ppm

Definitions of words and abbreviations used above:

COMPONENT CONCENTRATION - The concentration of arsenic, lead, or mercury within a sampling component at a given depth interval.

PARTS PER MILLION (PPM) – Parts per million, an expression of concentration. A good analogy: If you had 20ppm, it would be like having 20 white marbles and 999,980 black marbles in a group of 1,000,000 total marbles.

N/A – Not applicable per the 2021 RMAP Quality Assurance Project Plan (QAPP)

ACCESS AGREEMENT

JANE DOE ("Owner") and **Atlantic Richfield Company** ("Atlantic Richfield") enter into this Access Agreement ("Agreement") this_____day of_____, 2021.

1. Atlantic Richfield is conducting certain remedial activities on properties in and near Butte.

2. Access to property owned by Owner and as described in Exhibit A is needed to conduct this remedial work.

3. Owner agrees to permit Atlantic Richfield to conduct such work on Owner's property.

Therefore, in the mutual interest of Owner and Atlantic Richfield, Owner and Atlantic Richfield further agree as follows:

1. GRANT OF ACCESS. Owner hereby grants to Atlantic Richfield, Environmental Protection Agency ("EPA") and the State of Montana ("State"), including the authorized representatives of each, the right to enter Owner's real property described in Exhibit A hereto (the "Property"), to conduct all activities described in the Individual Site Work Plan attached as Exhibit B hereto, including without limitation, excavation and/or removal of soils, removal of attic dust, monitoring and sampling (or to receive split samples) of environmental media, ingress and egress of equipment, machinery and personnel, staging and temporary storage of equipment, and conducting other information gathering activities such as field investigation, data collection, surveys and testing (collectively referred to as "Work"). Owner warrants and represents to Atlantic Richfield that, to the best of Owner's knowledge, Owner possesses ownership interests in the Property sufficient to grant access to Atlantic Richfield to conduct the Work. Atlantic Richfield shall provide Owner, either in writing or verbally, with at least 24 hours notice prior to first commencing the Work on the Property. Atlantic Richfield will make every reasonable effort to minimize any inconvenience to Owner during its Work on the Property, and will work closely with Owner to address any concerns Owner may have about the Work.

2. INDEMNIFICATION OF OWNER. Atlantic Richfield agrees to indemnify and hold harmless Owner from any and all actions, claims, damages, losses, liabilities, or expenses, including damage to property or for loss of use of property ("Liabilities"), which may be imposed on or incurred by Owner as a result of Atlantic Richfield's negligent, wrongful acts or omissions while on the Property to conduct the Work, except to the extent that such liabilities result from the acts or omissions of Owner. Provided that the Work is conducted without negligence or wrongful acts or omissions by Atlantic Richfield, Owner and Atlantic Richfield agree that the Work conducted pursuant to this Agreement shall not give rise to a claim for indemnification under this provision.

3. NOTICE. All written notices pertaining to this Agreement shall be sent to Owner and Atlantic Richfield at the respective addresses below. Either Owner or Atlantic Richfield may

designate a different address for receipt of notice by providing written notice of such change to the other.

TO Atlantic Richfield: Mike Mc Anulty
317 Anaconda Road
Butte, MT 59701
(406) 723-1822

TO OWNER: Jane Doe
123 W Daly Street
Butte, MT 59701

4. CONDITION OF THE PROPERTY. If the Work entails the excavation and removal of soils and/or the removal of attic dust, Atlantic Richfield may photograph the Property prior to and upon completion of the excavation and removal of soils to document and obtain a fair and accurate representation of the condition of the Property.

5. RESTORATION OF PROPERTY. Upon completion of the Work, Atlantic Richfield will use its best efforts to return the Property to the condition it was in at the time Atlantic Richfield first entered the Property under this Agreement, provided such restoration is not inconsistent with the Work conducted pursuant to this Agreement.

6. MISCELLANEOUS.

a. Effect of Agreement. This Agreement and the rights and obligations created hereby shall be binding upon and inure to the benefit of Owner and Atlantic Richfield and their respective assigns and successors in interest.

b. Negation of agency relationship. This Agreement shall not be construed to create, either expressly or by implication, the relationship of agency or partnership between Owner and Atlantic Richfield. Neither Owner nor Atlantic Richfield is authorized to act on behalf of the other in any manner relating to the subject matter of this Agreement.

c. Termination. Except with respect to paragraphs 2, 3 and 6.a of this Agreement, this Agreement will terminate thirty (30) days following Atlantic Richfield's written notification to Owner that the Work is complete.

d. Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the State of Montana.

e. Construction. The invalidity or unenforceability of any provision of this Agreement shall not affect the validity or enforceability of any other provision.

f. Entire Agreement. This Agreement embodies the entire agreement of Owner and Atlantic Richfield with respect to the subject matter hereof, and no prior oral or written representation shall serve to modify or amend this Agreement. This Agreement may be modified only by a written agreement signed by Owner and Atlantic Richfield.

IN WITNESS WHEREOF, Owner and Atlantic Richfield have executed this Agreement effective as of the date first written above.

OWNER	Atlantic Richfield Company
Jane Doe	
By: _____	By: _____
Title (If other than Owner): _____	Title: Liability Manager_____
Telephone Contact No. _____	

EXHIBIT A
(Legal Description of the Property)

For the purposes of this Access Agreement, the term Property refers to the following described real estate, situated in the County of Silver Bow, State of Montana:

Physical Address	Geocode	Legal Description
123 W Daly Street	01119712136130000	-WEST WALKERVILLE ADD, S12, T03N, R08W, BLOCK 14, Lot 17 - 18

EXHIBIT B
(Individual Site Work Plan)

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FOR THIS TEMPLATE

Attachment 4
Miscellaneous Communications

Attachment 4.1 Communication and Outreach - Door flyers & postcards
Attachment 4.2 Lawn Maintenance - Caring for Newly Planted Sod

LEAD
poisoning

5 Things you can do
to help lower your child's lead level.

If your child has a high lead level, there are things you can do at home to help.

1 Make a plan with your doctor.

Work together with your doctor to find the best treatment for your child. Ask questions if you don't understand something.

You may need to:

- Go back for a second lead test.
- Test your child for learning and development problems. This test is called a "developmental assessment."

2 Find the lead in your home.

Most children get lead poisoning from lead paint in homes built before 1978. It is important to find and fix lead in your home as soon as possible. Have your home inspected by a licensed lead inspector.

Don't remodel or renovate until your home has been inspected for lead. Home repairs like sanding or scraping paint can make dangerous lead dust.

3 Clean up lead dust.

When old paint cracks and peels, it makes lead dust. Lead dust is so small you cannot see it. Children get lead poisoning from swallowing dust on their hands and toys.

- Use wet paper towels to clean up lead dust.
- Clean around windows, play areas, and floors.
- Wash hands and toys often with soap and water. Alwayswash hands before eating and sleeping.
- Use contact paper or duct tape to cover chipping or peeling paint.

4 Give your child healthy foods.

Feed your child healthy foods with calcium, iron, and vitamin C. These foods may help keep lead out of the body.

- Calcium is in milk, yogurt, cheese, and green leafy vegetables like spinach.
- Iron is in lean red meats, beans, peanut butter, and cereals.
- Vitamin C is in oranges, green and red peppers, and juice.

5 Learn more. Get support.

Contact your local health department. Trained staff will answer your questions and connect you to other resources in your community.

Dealing with lead poisoning can be stressful. Be sure to ask for support. You may want to talk to other parents who have children with lead poisoning.

Contact us for more information:

DEPARTMENT OF HEALTH & HUMAN SERVICES · USA

CDC
CENTERS FOR DISEASE CONTROL AND PREVENTION

Protect Your Family From Lead in Your Home

United States Environmental Protection Agency

United States Consumer Product Safety Commission

United States Department of Housing and Urban Development

September 2013

Are You Planning to Buy or Rent a Home Built Before 1978?

Did you know that many homes built before 1978 have **lead-based paint**? Lead from paint, chips, and dust can pose serious health hazards.

Read this entire brochure to learn:

- How lead gets into the body
- About health effects of lead
- What you can do to protect your family
- Where to go for more information

Before renting or buying a pre-1978 home or apartment, federal law requires:

- Sellers must disclose known information on lead-based paint or lead-based paint hazards before selling a house.
- Real estate sales contracts must include a specific warning statement about lead-based paint. Buyers have up to 10 days to check for lead.
- Landlords must disclose known information on lead-based paint and lead-based paint hazards before leases take effect. Leases must include a specific warning statement about lead-based paint.

If undertaking renovations, repairs, or painting (RRP) projects in your pre-1978 home or apartment:

- Read EPA's pamphlet, *The Lead-Safe Certified Guide to Renovate Right,* to learn about the lead-safe work practices that contractors are required to follow when working in your home (see page 12).

Simple Steps to Protect Your Family from Lead Hazards

If you think your home has lead-based paint:

- Don't try to remove lead-based paint yourself.
- Always keep painted surfaces in good condition to minimize deterioration.
- Get your home checked for lead hazards. Find a certified inspector or risk assessor at epa.gov/lead.
- Talk to your landlord about fixing surfaces with peeling or chipping paint.
- Regularly clean floors, window sills, and other surfaces.
- Take precautions to avoid exposure to lead dust when remodeling.
- When renovating, repairing, or painting, hire only EPA- or state-approved Lead-Safe certified renovation firms.
- Before buying, renting, or renovating your home, have it checked for lead-based paint.
- Consult your health care provider about testing your children for lead. Your pediatrician can check for lead with a simple blood test.
- Wash children's hands, bottles, pacifiers, and toys often.
- Make sure children avoid fatty (or high fat) foods and eat nutritious meals high in iron and calcium.
- Remove shoes or wipe soil off shoes before entering your house.

Lead Gets into the Body in Many Ways

Adults and children can get lead into their bodies if they:

- Breathe in lead dust (especially during activities such as renovations, repairs, or painting that disturb painted surfaces).
- Swallow lead dust that has settled on food, food preparation surfaces, and other places.
- Eat paint chips or soil that contains lead.

Lead is especially dangerous to children under the age of 6.

- At this age, children's brains and nervous systems are more sensitive to the damaging effects of lead.
- Children's growing bodies absorb more lead.
- Babies and young children often put their hands and other objects in their mouths. These objects can have lead dust on them.

Women of childbearing age should know that lead is dangerous to a developing fetus.

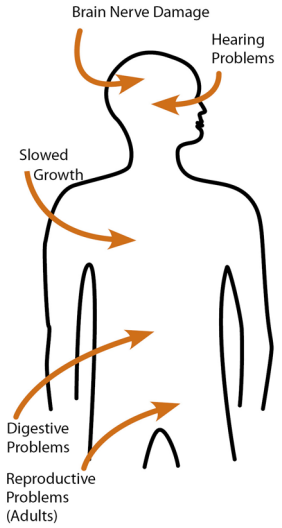
- Women with a high lead level in their system before or during pregnancy risk exposing the fetus to lead through the placenta during fetal development.

Health Effects of Lead

Lead affects the body in many ways. It is important to know that even exposure to low levels of lead can severely harm children.

In children, exposure to lead can cause:

- Nervous system and kidney damage
- Learning disabilities, attention deficit disorder, and decreased intelligence
- Speech, language, and behavior problems
- Poor muscle coordination
- Decreased muscle and bone growth
- Hearing damage



While low-lead exposure is most common, exposure to high amounts of lead can have devastating effects on children, including seizures, unconsciousness, and, in some cases, death.

Although children are especially susceptible to lead exposure, lead can be dangerous for adults, too.

In adults, exposure to lead can cause:

- Harm to a developing fetus
- Increased chance of high blood pressure during pregnancy
- Fertility problems (in men and women)
- High blood pressure
- Digestive problems
- Nerve disorders
- Memory and concentration problems
- Muscle and joint pain

Check Your Family for Lead

Get your children and home tested if you think your home has lead.

Children's blood lead levels tend to increase rapidly from 6 to 12 months of age, and tend to peak at 18 to 24 months of age.

Consult your doctor for advice on testing your children. A simple blood test can detect lead. Blood lead tests are usually recommended for:

- Children at ages 1 and 2
- Children or other family members who have been exposed to high levels of lead
- Children who should be tested under your state or local health screening plan

Your doctor can explain what the test results mean and if more testing will be needed.

Where Lead-Based Paint Is Found

In general, the older your home or childcare facility, the more likely it has lead-based paint.[1]

Many homes, including private, federally-assisted, federally-owned housing, and childcare facilities built before 1978 have lead-based paint. In 1978, the federal government banned consumer uses of lead-containing paint.[2]

Learn how to determine if paint is lead-based paint on page 7.

Lead can be found:

- In homes and childcare facilities in the city, country, or suburbs,
- In private and public single-family homes and apartments,
- On surfaces inside and outside of the house, and
- In soil around a home. (Soil can pick up lead from exterior paint or other sources, such as past use of leaded gas in cars.)

Learn more about where lead is found at epa.gov/lead.

[1] "Lead-based paint" is currently defined by the federal government as paint with lead levels greater than or equal to 1.0 milligram per square centimeter (mg/cm), or more than 0.5% by weight.

[2] "Lead-containing paint" is currently defined by the federal government as lead in new dried paint in excess of 90 parts per million (ppm) by weight.

Identifying Lead-Based Paint and Lead-Based Paint Hazards

Deteriorating lead-based paint (peeling, chipping, chalking, cracking, or damaged paint) is a hazard and needs immediate attention. **Lead-based paint** may also be a hazard when found on surfaces that children can chew or that get a lot of wear and tear, such as:

- On windows and window sills
- Doors and door frames
- Stairs, railings, banisters, and porches

Lead-based paint is usually not a hazard if it is in good condition and if it is not on an impact or friction surface like a window.

Lead dust can form when lead-based paint is scraped, sanded, or heated. Lead dust also forms when painted surfaces containing lead bump or rub together. Lead paint chips and dust can get on surfaces and objects that people touch. Settled lead dust can reenter the air when the home is vacuumed or swept, or when people walk through it. EPA currently defines the following levels of lead in dust as hazardous:

- 40 micrograms per square foot ($\mu g/ft^2$) and higher for floors, including carpeted floors
- 250 $\mu g/ft^2$ and higher for interior window sills

Lead in soil can be a hazard when children play in bare soil or when people bring soil into the house on their shoes. EPA currently defines the following levels of lead in soil as hazardous:

- 400 parts per million (ppm) and higher in play areas of bare soil
- 1,200 ppm (average) and higher in bare soil in the remainder of the yard

Remember, lead from paint chips—which you can see—and lead dust—which you may not be able to see—both can be hazards.

The only way to find out if paint, dust, or soil lead hazards exist is to test for them. The next page describes how to do this.

Checking Your Home for Lead

You can get your home tested for lead in several different ways:

- A lead-based paint **inspection** tells you if your home has lead-based paint and where it is located. It won't tell you whether your home currently has lead hazards. A trained and certified testing professional, called a lead-based paint inspector, will conduct a paint inspection using methods, such as:
  - Portable x-ray fluorescence (XRF) machine
  - Lab tests of paint samples

- A **risk assessment** tells you if your home currently has any lead hazards from lead in paint, dust, or soil. It also tells you what actions to take to address any hazards. A trained and certified testing professional, called a risk assessor, will:
  - Sample paint that is deteriorated on doors, windows, floors, stairs, and walls
  - Sample dust near painted surfaces and sample bare soil in the yard
  - Get lab tests of paint, dust, and soil samples
- A combination inspection and risk assessment tells you if your home has any lead-based paint and if your home has any lead hazards, and where both are located.

Be sure to read the report provided to you after your inspection or risk assessment is completed, and ask questions about anything you do not understand.

Checking Your Home for Lead, continued

In preparing for renovation, repair, or painting work in a pre-1978 home, Lead-Safe Certified renovators (see page 12) may:

- Take paint chip samples to determine if lead-based paint is present in the area planned for renovation and send them to an EPA-recognized lead lab for analysis. In housing receiving federal assistance, the person collecting these samples must be a certified lead-based paint inspector or risk assessor
- Use EPA-recognized tests kits to determine if lead-based paint is absent (but not in housing receiving federal assistance)
- Presume that lead-based paint is present and use lead-safe work practices

There are state and federal programs in place to ensure that testing is done safely, reliably, and effectively. Contact your state or local agency for more information, visit epa.gov/lead, or call **1-800-424-LEAD (5323)** for a list of contacts in your area.[3]

[3] Hearing- or speech-challenged individuals may access this number through TTY by calling the Federal Relay Service at 1-800-877-8399.

What You Can Do Now to Protect Your Family

If you suspect that your house has lead-based paint hazards, you can take some immediate steps to reduce your family's risk:

- If you rent, notify your landlord of peeling or chipping paint.
- Keep painted surfaces clean and free of dust. Clean floors, window frames, window sills, and other surfaces weekly. Use a mop or sponge with warm water and a general all-purpose cleaner. (Remember: never mix ammonia and bleach products together because they can form a dangerous gas.)
- Carefully clean up paint chips immediately without creating dust.
- Thoroughly rinse sponges and mop heads often during cleaning of dirty or dusty areas, and again afterward.
- Wash your hands and your children's hands often, especially before they eat and before nap time and bed time.
- Keep play areas clean. Wash bottles, pacifiers, toys, and stuffed animals regularly.
- Keep children from chewing window sills or other painted surfaces, or eating soil.
- When renovating, repairing, or painting, hire only EPA- or state-approved Lead-Safe Certified renovation firms (see page 12).
- Clean or remove shoes before entering your home to avoid tracking in lead from soil.
- Make sure children avoid fatty (or high fat) foods and eat nutritious meals high in iron and calcium. Children with good diets absorb less lead.

Reducing Lead Hazards

Disturbing lead-based paint or removing lead improperly can increase the hazard to your family by spreading even more lead dust around the house.

- In addition to day-to-day cleaning and good nutrition, you can **temporarily** reduce lead-based paint hazards by taking actions, such as repairing damaged painted surfaces and planting grass to cover lead-contaminated soil. These actions are not permanent solutions and will need ongoing attention.
- You can minimize exposure to lead when renovating, repairing, or painting by hiring an EPA- or state-certified renovator who is trained in the use of lead-safe work practices. If you are a do-it-yourselfer, learn how to use lead–safe work practices in your home.
- To remove lead hazards permanently, you should hire a certified lead abatement contractor. Abatement (or permanent hazard elimination) methods include removing, sealing, or enclosing lead-based paint with special materials. Just painting over the hazard with regular paint is not permanent control.

Always use a certified contractor who is trained to address lead hazards safely.

- Hire a Lead-Safe Certified firm (see page 12) to perform renovation, repair, or painting (RRP) projects that disturb painted surfaces.
- To correct lead hazards permanently, hire a certified lead abatement professional. This will ensure your contractor knows how to work safely and has the proper equipment to clean up thoroughly.

Certified contractors will employ qualified workers and follow strict safety rules as set by their state or by the federal government.

Reducing Lead Hazards, continued

If your home has had lead abatement work done or if the housing is receiving federal assistance, once the work is completed, dust cleanup activities must be conducted until clearance testing indicates that lead dust levels are below the following levels:

- 40 micrograms per square foot (µg/ft^2) for floors, including carpeted floors
- 250 µg/ft^2 for interior windows sills
- 400 µg/ft^2 for window troughs

For help in locating certified lead abatement professionals in your area, call your state or local agency (see pages 14 and 15), or visit epa.gov/lead, or call 1-800-424-LEAD.

Renovating, Remodeling, or Repairing (RRP) a Home with Lead-Based Paint

If you hire a contractor to conduct renovation, repair, or painting (RRP) projects in your pre-1978 home or childcare facility (such as pre-school and kindergarten), your contractor must:

- Be a Lead-Safe Certified firm approved by EPA or an EPA-authorized state program
- Use qualified trained individuals (Lead-Safe Certified renovators) who follow specific lead-safe work practices to prevent lead contamination
- Provide a copy of EPA's lead hazard information document, *The Lead-Safe Certified Guide to Renovate Right*

RRP contractors working in pre-1978 homes and childcare facilities must follow lead-safe work practices that:

- **Contain the work area.** The area must be contained so that dust and debris do not escape from the work area. Warning signs must be put up, and plastic or other impermeable material and tape must be used.
- **Avoid renovation methods that generate large amounts of lead-contaminated dust.** Some methods generate so much lead-contaminated dust that their use is prohibited. They are:
  - Open-flame burning or torching
  - Sanding, grinding, planing, needle gunning, or blasting with power tools and equipment not equipped with a shroud and HEPA vacuum attachment and
  - Using a heat gun at temperatures greater than 1100°F
- **Clean up thoroughly.** The work area should be cleaned up daily. When all the work is done, the area must be cleaned up using special cleaning methods.
- **Dispose of waste properly.** Collect and seal waste in a heavy duty bag or sheeting. When transported, ensure that waste is contained to prevent release of dust and debris.

To learn more about EPA's requirements for RRP projects visit epa.gov/getleadsafe, or read *The Lead-Safe Certified Guide to Renovate Right*.

Other Sources of Lead

While paint, dust, and soil are the most common sources of lead, other lead sources also exist:

- **Drinking water.** Your home might have plumbing with lead or lead solder. You cannot see, smell, or taste lead, and boiling your water will not get rid of lead. If you think your plumbing might contain lead:
  - Use only cold water for drinking and cooking.
  - Run water for 15 to 30 seconds before drinking it, especially if you have not used your water for a few hours.

  Call your local health department or water supplier to find out about testing your water, or visit epa.gov/lead for EPA's lead in drinking water information.
- **Lead smelters** or other industries that release lead into the air.
- **Your job.** If you work with lead, you could bring it home on your body or clothes. Shower and change clothes before coming home. Launder your work clothes separately from the rest of your family's clothes.
- **Hobbies** that use lead, such as making pottery or stained glass, or refinishing furniture. Call your local health department for information about hobbies that may use lead.
- Old **toys** and **furniture** may have been painted with lead-containing paint. Older toys and other children's products may have parts that contain lead.[4]
- Food and liquids cooked or stored in **lead crystal** or **lead-glazed pottery or porcelain** may contain lead.
- Folk remedies, such as **"greta"** and **"azarcon,"** used to treat an upset stomach.

[4] In 1978, the federal government banned toys, other children's products, and furniture with lead-containing paint (16 CFR 1303). In 2008, the federal government banned lead in most children's products. The federal government currently bans lead in excess of 100 ppm by weight in most children's products (76 FR 44463).

For More Information

The National Lead Information Center
Learn how to protect children from lead poisoning and get other information about lead hazards on the Web at epa.gov/lead and hud.gov/lead, or call **1-800-424-LEAD (5323).**

EPA's Safe Drinking Water Hotline
For information about lead in drinking water, call **1-800-426-4791**, or visit epa.gov/lead for information about lead in drinking water.

Consumer Product Safety Commission (CPSC) Hotline
For information on lead in toys and other consumer products, or to report an unsafe consumer product or a product-related injury, call **1-800-638-2772,** or visit CPSC's website at cpsc.gov or saferproducts.gov.

State and Local Health and Environmental Agencies
Some states, tribes, and cities have their own rules related to lead-based paint. Check with your local agency to see which laws apply to you. Most agencies can also provide information on finding a lead abatement firm in your area, and on possible sources of financial aid for reducing lead hazards. Receive up-to-date address and phone information for your state or local contacts on the Web at epa.gov/lead, or contact the National Lead Information Center at **1-800-424-LEAD.**

Hearing- or speech-challenged individuals may access any of the phone numbers in this brochure through TTY by calling the toll-free Federal Relay Service at **1-800-877-8339**.

U. S. Environmental Protection Agency (EPA) Regional Offices

The mission of EPA is to protect human health and the environment. Your Regional EPA Office can provide further information regarding regulations and lead protection programs.

Region 1 (Connecticut, Massachusetts, Maine, New Hampshire, Rhode Island, Vermont)

Regional Lead Contact
U.S. EPA Region 1
5 Post Office Square, Suite 100, OES 05-4
Boston, MA 02109-3912
(888) 372-7341

Region 2 (New Jersey, New York, Puerto Rico, Virgin Islands)

Regional Lead Contact
U.S. EPA Region 2
2890 Woodbridge Avenue
Building 205, Mail Stop 225
Edison, NJ 08837-3679
(732) 321-6671

Region 3 (Delaware, Maryland, Pennsylvania, Virginia, DC, West Virginia)

Regional Lead Contact
U.S. EPA Region 3
1650 Arch Street
Philadelphia, PA 19103
(215) 814-2088

Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee)

Regional Lead Contact
U.S. EPA Region 4
AFC Tower, 12th Floor, Air, Pesticides & Toxics
61 Forsyth Street, SW
Atlanta, GA 30303
(404) 562-8998

Region 5 (Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin)

Regional Lead Contact
U.S. EPA Region 5 (DT-8J)
77 West Jackson Boulevard
Chicago, IL 60604-3666
(312) 886-7836

Region 6 (Arkansas, Louisiana, New Mexico, Oklahoma, Texas, and 66 Tribes)

Regional Lead Contact
U.S. EPA Region 6
1445 Ross Avenue, 12th Floor
Dallas, TX 75202-2733
(214) 665-2704

Region 7 (Iowa, Kansas, Missouri, Nebraska)

Regional Lead Contact
U.S. EPA Region 7
11201 Renner Blvd.
WWPD/TOPE
Lenexa, KS 66219
(800) 223-0425

Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming)

Regional Lead Contact
U.S. EPA Region 8
1595 Wynkoop St.
Denver, CO 80202
(303) 312-6966

Region 9 (Arizona, California, Hawaii, Nevada)

Regional Lead Contact
U.S. EPA Region 9 (CMD-4-2)
75 Hawthorne Street
San Francisco, CA 94105
(415) 947-4280

Region 10 (Alaska, Idaho, Oregon, Washington)

Regional Lead Contact
U.S. EPA Region 10
Solid Waste & Toxics Unit (WCM-128)
1200 Sixth Avenue, Suite 900
Seattle, WA 98101
(206) 553-1200

Consumer Product Safety Commission (CPSC)

The CPSC protects the public against unreasonable risk of injury from consumer products through education, safety standards activities, and enforcement. Contact CPSC for further information regarding consumer product safety and regulations.

CPSC
4330 East West Highway
Bethesda, MD 20814-4421
1-800-638-2772
cpsc.gov or saferproducts.gov

U. S. Department of Housing and Urban Development (HUD)

HUD's mission is to create strong, sustainable, inclusive communities and quality affordable homes for all. Contact HUD's Office of Healthy Homes and Lead Hazard Control for further information regarding the Lead Safe Housing Rule, which protects families in pre-1978 assisted housing, and for the lead hazard control and research grant programs.

HUD
451 Seventh Street, SW, Room 8236
Washington, DC 20410-3000
(202) 402-7698
hud.gov/offices/lead/

U. S. EPA Washington DC 20460
U. S. CPSC Bethesda MD 20814
U. S. HUD Washington DC 20410

EPA-747-K-12-001
September 2013

IMPORTANT!

Lead From Paint, Dust, and Soil in and Around Your Home Can Be Dangerous if Not Managed Properly

- Children under 6 years old are most at risk for lead poisoning in your home.
- Lead exposure can harm young children and babies even before they are born.
- Homes, schools, and child care facilities built before 1978 are likely to contain lead-based paint.
- Even children who seem healthy may have dangerous levels of lead in their bodies.
- Disturbing surfaces with lead-based paint or removing lead-based paint improperly can increase the danger to your family.
- People can get lead into their bodies by breathing or swallowing lead dust, or by eating soil or paint chips containing lead.
- People have many options for reducing lead hazards. Generally, lead-based paint that is in good condition is not a hazard (see page 10).

United States Environmental Protection Agency | Prevention, Pesticides, and Toxic Substances (7404) | EPA-747-F-96-002 March 1996 (Revised 12/96)

FACT SHEET

EPA and HUD Move to Protect Children from Lead-Based Paint Poisoning; Disclosure of Lead-Based Paint Hazards in Housing

SUMMARY

The Environmental Protection Agency (EPA) and the Department of Housing and Urban Development (HUD) are announcing efforts to ensure that the public receives the information necessary to prevent lead poisoning in homes that may contain lead-based paint hazards. Beginning this fall, most home buyers and renters will receive known information on lead-based paint and lead-based paint hazards during sales and rentals of housing built before 1978. Buyers and renters will receive specific information on lead-based paint in the housing as well as a Federal pamphlet with practical, low-cost tips on identifying and controlling lead-based paint hazards. Sellers, landlords, and their agents will be responsible for providing this information to the buyer or renter before sale or lease.

LEAD-BASED PAINT IN HOUSING

Approximately three-quarters of the nation's housing stock built before 1978 (approximately 64 million dwellings) contains some lead-based paint. When properly maintained and managed, this paint poses little risk. However, 1.7 million children have blood-lead levels above safe limits, mostly due to exposure to lead-based paint hazards.

EFFECTS OF LEAD POISONING

Lead poisoning can cause permanent damage to the brain and many other organs and causes reduced intelligence and behavioral problems. Lead can also cause abnormal fetal development in pregnant women.

BACKGROUND

To protect families from exposure to lead from paint, dust, and soil, Congress passed the Residential Lead-Based Paint Hazard Reduction Act of 1992, also known as Title X. Section 1018 of this law directed HUD and EPA to require the disclosure of known information on lead-based paint and lead-based paint hazards before the sale or lease of most housing built before 1978.

WHAT IS REQUIRED

Before ratification of a contract for housing sale or lease:

- Sellers and landlords must disclose known lead-based paint and lead-based paint hazards and provide available reports to buyers or renters.

- Sellers and landlords must give buyers and renters the pamphlet, developed by EPA, HUD, and the Consumer Product Safety Commission (CPSC), titled *Protect Your Family from Lead in Your Home*.

- Home buyers will get a 10-day period to conduct a lead-based paint inspection or risk assessment at their own expense. The rule gives the two parties flexibility to negotiate key terms of the evaluation.

- Sales contracts and leasing agreements must include certain notification and disclosure language.

- Sellers, lessors, and real estate agents share responsibility for ensuring compliance.

WHAT IS NOT REQUIRED

- This rule does not require any testing or removal of lead-based paint by sellers or landlords.
- This rule does not invalidate leasing and sales contracts.

TYPE OF HOUSING COVERED

Most private housing, public housing, Federally owned housing, and housing receiving Federal assistance are affected by this rule.

TYPE OF HOUSING NOT COVERED

- Housing built after 1977 (Congress chose not to cover post-1977 housing because the CPSC banned the use of lead-based paint for residential use in 1978).
- Zero-bedroom units, such as efficiencies, lofts, and dormitories.
- Leases for less than 100 days, such as vacation houses or short-term rentals.
- Housing for the elderly (unless children live there).
- Housing for the handicapped (unless children live there).
- Rental housing that has been inspected by a certified inspector and found to be free of lead-based paint.
- Foreclosure sales.

EFFECTIVE DATES

- For owners of more than 4 dwelling units, the effective date is September 6, 1996.
- For owners of 4 or fewer dwelling units, the effective date is December 6, 1996.

THOSE AFFECTED

The rule will help inform about 9 million renters and 3 million home buyers each year. The estimated cost associated with learning about the requirements, obtaining the pamphlet and other materials, and conducting disclosure activities is about $6 per transaction.

EFFECT ON STATES AND LOCAL GOVERNMENTS

This rule should not impose additional burdens on states since it is a Federally administered and enforced requirement. Some state laws and regulations require the disclosure of lead hazards in housing. The Federal regulations will act as a complement to existing state requirements.

FOR MORE INFORMATION

- For a copy of *Protect Your Family from Lead in Your Home* (in English or Spanish) , the sample disclosure forms, or the rule, call the National Lead Information Clearinghouse (NLIC) at (800) 424–LEAD, or TDD (800) 526–5456 for the hearing impaired. You may also send your request by fax to (202) 659–1192 or by Internet E-mail to ehc@cais.com. Visit the NLIC on the Internet at http://www.nsc.org/nsc/ehc/ehc.html.
- Bulk copies of the pamphlet are available from the Government Printing Office (GPO) at (202) 512–1800. Refer to the complete title or GPO stock number 055–000–00507–9. The price is $26.00 for a pack of 50 copies. Alternatively, persons may reproduce the pamphlet, for use or distribution, if the text and graphics are reproduced in full. Camera-ready copies of the pamphlet are available from the National Lead Information Clearinghouse.
- For specific questions about lead-based paint and lead-based paint hazards, call the National Lead Information Clearinghouse at (800) 424–LEAD, or TDD (800) 526–5456 for the hearing impaired.
- The EPA pamphlet and rule are available electronically and may be accessed through the Internet.

  Electronic Access:

  Gopher: gopher.epa.gov:70/11/Offices/PestPreventToxic/Toxic/lead_pm

  WWW: http://www.epa.gov/opptintr/lead/index.html
  http://www.hud.gov

  Dial up: (919) 558–0335

  FTP: ftp.epa.gov (*To login, type "anonymous." Your password is your Internet E-mail address.*)

EPA and HUD Real Estate Notification and Disclosure Rule Questions and Answers

The Rule

What is the purpose of this rule and who is affected?

To protect the public from exposure to lead from paint, dust, and soil, Congress passed the Residential Lead-Based Paint Hazard Reduction Act of 1992, also known as Title X. Section 1018 of this law directed HUD and EPA to require disclosure of information on lead-based paint and lead-based paint hazards before the sale or lease of most housing built before 1978. The rule would ensure that purchasers and renters of housing built before 1978 receive the information necessary to protect themselves and their families from lead-based paint hazards.

When does the rule take effect?

The rule's effective date depends on the number of housing units owned.

- For owners of more than 4 dwelling units, the effective date is September 6, 1996.
- For owners of 4 or fewer dwelling units, the effective date is December 6, 1996.

Affected Housing

What type of housing is affected by this rule?

This rule applies to all housing defined as target housing, which includes most private housing, public housing, housing receiving federal assistance, and federally owned housing built before 1978.

What type of housing is not affected by this rule?

Housing that is not affected by this rule includes:

- 0-bedroom dwellings, such as lofts, efficiencies, and studios.
- Leases of dwelling units of 100 days or fewer, such as vacation homes or short-term rentals.
- Designated housing for the elderly and the handicapped unless children reside or are expected to reside there.
- Rental housing that has been inspected by a certified inspector and is found to be free of

lead-based paint.

How does this rule apply to housing common areas such as stairwells, lobbies, and laundry rooms?

Common areas are those areas in multifamily housing structures that are used or are accessible to all occupants. The rule requires that sellers and lessors disclose available lead information about common areas so that families can be informed about preventive actions.

Why doesn't this rule affect housing built after 1978?

Congress did not extend the law to housing built after 1978 because the Consumer Product Safety Commission banned the use of lead-based paint in housing in 1978.

Is my home unsafe if it contains lead-based paint?

Approximately three-quarters of the nation's housing built before 1978 contains some lead-based paint. This paint, if properly managed and maintained, poses little risk. If allowed to deteriorate, lead from paint can threaten the health of occupants, especially children under 6 years old. If families and building owners are aware of the presence of lead-based paint and the proper actions to take, most lead-based paint hazards can be managed. The EPA pamphlet *Protect Your Family From Lead in Your Home* provides important information for families and home owners to help them identify when lead-based paint is likely to be a hazard and how to get their home checked.

Seller & Lessor Responsibilities

What if I'm selling target housing?

Property owners who sell target housing must:

- **!** Disclose all known lead-based paint and lead-based paint hazards in the housing and any available reports on lead in the housing.
- **!** Give buyers the EPA pamphlet Pr*otect Your Family from Lead in Your Home*.
- **!** Include certain warning language in the contract as well as signed statements from all parties verifying that all requirements were completed.
- **!** Retain signed acknowledgments for 3 years, as proof of compliance.
- **!** Give buyers a 10-day opportunity to test the housing for lead.

What if I'm renting target housing?

Property owners who rent out target housing must:

- **!** Disclose all known lead-based paint and lead-based paint hazards in the home and any available

reports on lead in the housing.

- Give renters the EPA pamphlet *Protect Your Family From Lead in Your Home*.
- Include certain warning language in the lease as well as signed statements from all parties verifying that all requirements were completed.
- Retain signed acknowledgments for 3 years, as proof of compliance.

Am I required to give the EPA pamphlet *Protect Your Family From Lead in Your Home* to existing tenants?

No, but when tenants renew their leases, you must give them the pamphlet and any available reports. In other words, you must give them the same information that you are required to provide new tenants.

What if the buyers/renters don't speak English?

In cases where the buyer or renter signed a purchase or lease agreement in a language other than English, the rule requires that the disclosure language be provided in the alternate language. The EPA pamphlet *Protect Your Family From Lead in Your Home* is printed in English and Spanish and will be made available to the public. EPA and HUD are considering publishing the pamphlet in other languages as well.

Must I check my house for lead prior to sale?

No. The rule does not require that a seller conduct or finance an inspection or risk assessment. The seller, however, is required to provide the buyer a 10-day period to test for lead-based paint or lead-based paint hazards.

Is the seller required to remove any lead-based paint that is discovered during an inspection?

No. Nothing in the rule requires a building owner to remove lead-based paint or lead-based paint hazards discovered during an inspection or risk assessment. In addition, the rule does not prevent the two parties from negotiating hazard reduction activities as a contingency of the purchase and sale of the housing.

What if I know there is lead-based paint in my home?

If you know there is lead-based paint in your home, you are required to disclose this information to the buyer or renter along with any other available reports on lead.

What if the lessor knows that there is no lead-based paint in my rental

housing?

If your rental housing has been found to be free of lead-based paint by a certified inspector, this rule does not apply. However, landlords seeking an exclusion to this rule must use state certified inspectors. If your state does not have a certification program, you may use a certified inspector from another state. In addition, EPA is developing certification requirements for individuals and firms conducting lead-based paint inspections, risk assessments, and abatements.

Agent Responsibilities

What are my responsibilities as an agent?

Agents must ensure that:

- Sellers and landlords are made aware of their obligations under this rule.
- Sellers and landlords disclose the proper information to lessors, buyers, and tenants.
- Sellers give purchasers the opportunity to conduct an inspection.
- Lease and sales contracts contain the appropriate notification and disclosure language and proper signatures.

What is the responsibility of an agent if the seller or landlord fails to comply with this rule?

The agent is responsible for informing the seller or lessor of his or her obligations under this rule. In addition, the agent is responsible if the seller or lessor fails to comply. However, an agent is not responsible for information withheld by the seller or lessor.

Purchaser & Renter Rights

As a purchaser, am I required to conduct and finance an inspection?

No. The rule simply ensures that you have the opportunity to test for lead before purchase.

Can the inspection/risk assessment period be waived?

Yes. The inspection or risk assessment period can be lengthened, shortened, or waived by mutual written consent between the purchaser and the seller.

If I am renting, do I have the same opportunity to test for lead?

Under the law, the 10-day inspection period is limited to sales transactions, but nothing prevents

the renter from negotiating with the lessor to allow time for an inspection before rental.

Where can I find a qualified professional to conduct an inspection?

State agencies can provide helpful information for locating qualified professionals in your area. The EPA pamphlet *Protect Your Family From Lead in Your Home* provides the phone numbers of these state agencies. It is important to verify the qualifications of individuals and firms before hiring them.

Must inspectors be certified?

Some cities and states have their own rules concerning inspector certification. These requirements, which may be administered at the state or federal level, may not be in place for several years. Once these requirements are in place, professionals who offer to perform lead-based paint inspections must be certified. The certification requirements that EPA is developing will ensure that inspectors engaged in lead-based paint activities have completed an EPA-certified training program or an EPA-approved state program. Meanwhile, EPA and HUD recommend that people inspect the qualifications and training of individuals and firms before hiring them to conduct risk assessments, inspections, or abatements.

Liability

Does this rule increase my liability for future lead poisoning on my property?

In some cases, disclosure may actually reduce the owner's liability since occupants may be able to prevent exposure from the beginning. Under this rule, however, sellers, landlords, or agents who fail to provide the required notices and information are liable for triple the amount of damages.

Are mortgage lenders liable under these rules if the seller or lessor fails to disclose?

Under the disclosure regulation, the rule does not identify mortgage lenders as liable parties. This rule does not affect other state and federal provisions regarding the obligations and responsibilities of lenders.

What if a seller or lessor fails to comply with these regulations?

A seller, lessor, or agent who fails to give the proper information can be sued for triple the amount of damages. In addition, they may be subject to civil and criminal penalties. Ensuring that disclosure information is given to home buyers and tenants helps all parties avoid misunderstandings before, during, and after sales and leasing agreements.

345 Anaconda Rd
Butte, MT, 59701

Did you know...?

If you live in Butte, **arsenic** and **lead** might be in your attic or yard! Stay safe, get your home tested. It's 100% free!

Did you know...?

The Residential Metals Abatement Program will clean up these dangerous metals for free? Call us today!

Butte-Silver Bow

Residential Metals Abatement Program

(406) 497-5040

Photo: Butte-Silver Bow Public Archives 33.068.04

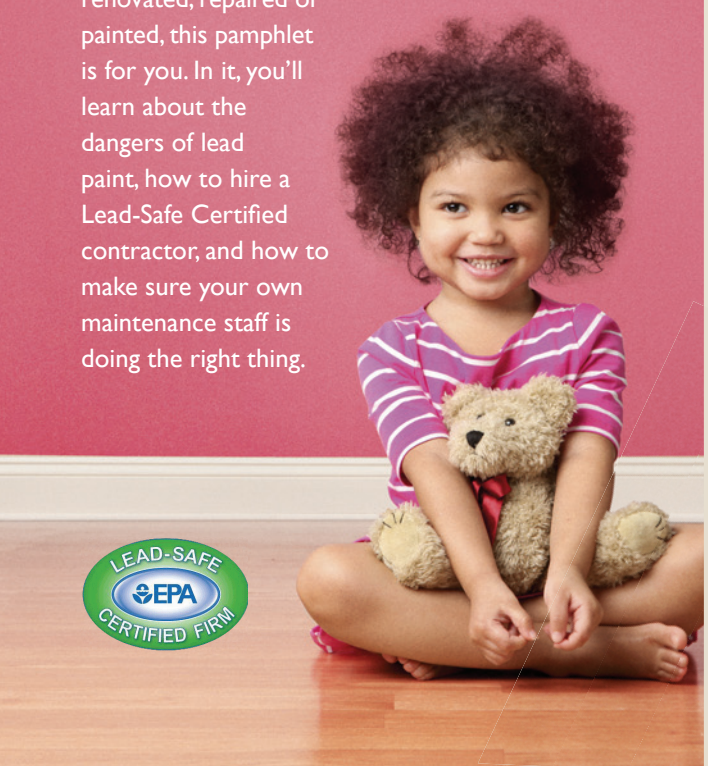
Lead Paint:

Is it in your child-care center, home, school or anywhere children may be present?

Many contractors and maintenance workers who have been on the job for years believe they know all about the dangers of and the precautions necessary for working with lead paint. Others think lead paint poisoning simply went away years ago. It didn't.

That's why you need to know the facts about lead paint, and how disturbing it poses serious health risks to the people in your building, especially children.

There are requirements in place to protect children from these dangers. If your pre-1978 in-home daycare, child-care center, school or hospital is being renovated, repaired or painted, this pamphlet is for you. In it, you'll learn about the dangers of lead paint, how to hire a Lead-Safe Certified contractor, and how to make sure your own maintenance staff is doing the right thing.



LEAD-SAFE EPA CERTIFIED FIRM

The Truth About Lead Paint Poisoning

Lead paint is an invisible danger. Here are some facts about lead paint that everyone should know:

- Even small levels of exposure to lead paint can harm both children and adults.
- Hundreds of thousands of kids are affected by lead paint with some level of irreversible damage, such as lower intelligence, learning disabilities and behavioral issues.
- New cases of childhood lead paint poisoning are diagnosed every year. Many more go unreported.
- Recent research shows that new cases can be directly linked to renovations where the work environment was inadequately cleaned and contained.
- Adults exposed to lead paint can suffer from high blood pressure, headaches, dizziness, diminished motor skills, fatigue and memory loss.
- It's not just lead paint chips that poison. Contamination can be caused by only a little bit of lead dust that is easily inhaled or ingested.
- Once poisoned, effects may be for life.

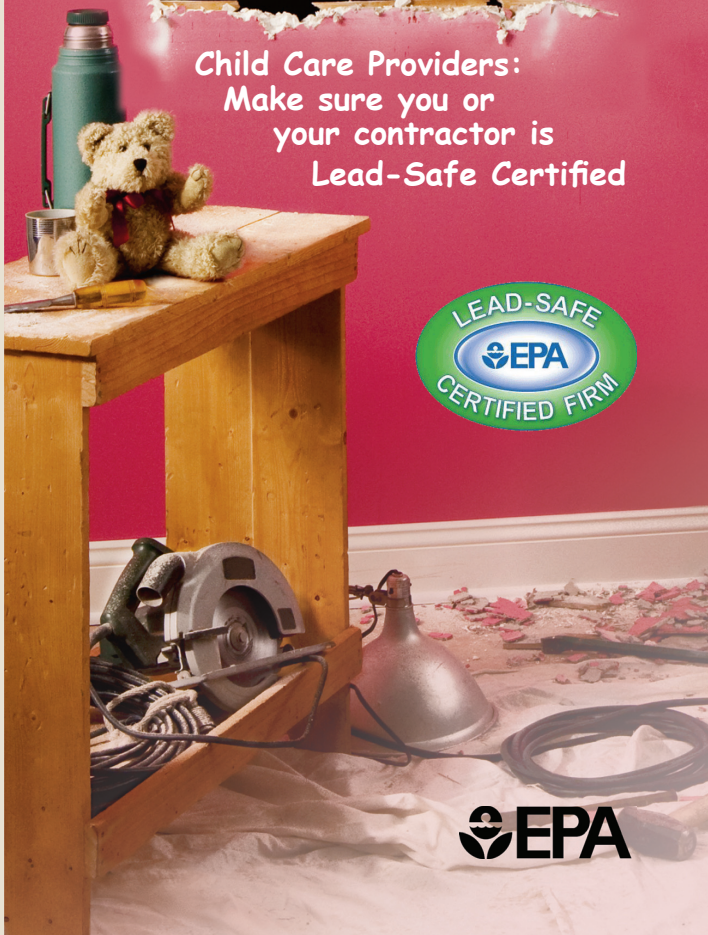
EPA United States Environmental Protection Agency

To learn more, visit epa.gov/getleadsafe or call 800-424-LEAD

To report a violation, visit epa.gov/tips

IF YOU DISTURB PAINT YOU MUST GET LEAD-SAFE CERTIFIED

Child Care Providers: Make sure you or your contractor is Lead-Safe Certified



LEAD-SAFE EPA CERTIFIED FIRM

EPA

Was Your Child-Care Facility Built Before 1978? If Yes, Then:

Where Does The Lead Danger Come From Today?

In earlier decades, the fear of children eating lead paint chips was the main concern when it came to poisoning. But since then, research has shown that the most common way to get lead in the body is from inhaling or ingesting microscopic dust.

Day-to-day wear, as well as common renovation and repair activities, like sanding, cutting and demolition, can create hazardous lead dust and chips. Proper work practices can help protect the people in your building, especially children, from this dust.

Even for small jobs, the key is to use lead-safe work practices such as containing dust inside the work area, using dust-minimizing work methods and conducting a careful cleanup. It also means keeping people out of the work area. Most importantly, it means making sure that anyone who does work in your building is Lead-Safe Certified.

How Do I Choose The Right Contractor?

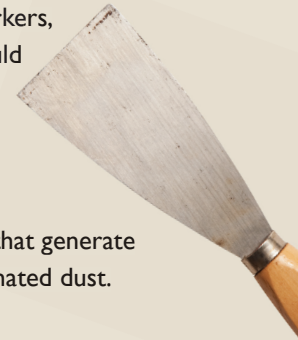
A responsible operator of a child-care facility will be sure to hire only contractors who are Lead-Safe Certified to work in a building built prior to 1978.

Here are a few helpful tips:

- Verify that a contractor is certified by checking the EPA website at **epa.gov/getleadsafe** or by calling **1-800-424-LEAD**. You can also ask to see a copy of the contractor's Lead-Safe RRP firm certification.
- Ask if the contractor is trained to perform lead-safe work practices and ask to see a copy of their lead-safe training certificate.
- Make sure your contractor can explain clearly the details of the job and how the firm will minimize lead hazards during the work process.
- Ask what lead-safe methods will be used to set up and perform the job in your in-home daycare, child-care center, school or hospital.
- Always make sure the contract is clear about how the work will be set up, performed and cleaned.

Does My Staff Have To Be Lead-Safe Certified?

Federal law requires that if you or someone on your staff is performing the work (including routine maintenance that disturbs paint), your organization must be Lead-Safe Certified as a firm and your staff must be trained in lead-safe work practices. If not, you could face tens of thousands of dollars in fines. Plus, you put the health of yourself, your workers, and your children at risk, which could result in lawsuits. These work practices include:



- Containing the work area.
- Avoiding renovation methods that generate large amounts of lead-contaminated dust.
- Cleaning up thoroughly.

Becoming Lead-Safe Certified

1. Individual renovators must be certified. Get certified by attending a one-day Renovation, Repair and Painting (RRP) Rule course. The price for this course is set by private trainers accredited by the EPA. To find an accredited trainer near you, visit **epa.gov/getleadsafe** or call **1-800-424-LEAD**.
2. Your firm also must be certified. Apply for certification by completing and submitting an application and fee.
3. Visit our website epa.gov/getleadsafe to find a training course, download the application and get more information.

LEAD-SAFE EPA CERTIFIED FIRM

Look for the Logo

EPA regulations now mandate that any contractor or maintenance staff, from plumbers to electricians to painters, who disturbs more than six square feet of paint or replaces windows while working in a pre-1978 home or child-care facility, must now be Lead-Safe Certified and trained in lead-safe work practices. If not, they could face tens of thousands of dollars in fines.

CARING FOR NEWLY PLANTED SOD

Initial care of your newly planted grass is critical to its establishment and ultimate success, particularly in the first weeks. By following the instructions below, your new sod lawn can be fully functional in as little as 2 weeks after planting.

Maintenance: 0-14 days

Avoid Foot Traffic

Walking on newly planted sod can slow or damage the establishment of your lawn. Keep non-essential foot traffic to a minimum for at least the first 2 weeks. Place stakes, string, or bright flags around the borders to help keep neighbors and children off your lawn.

Ensure Sufficient Watering

Watering the new grass will be the most important step in establishing your new lawn. Once the sod is in place, water it every day for 2 weeks until the roots have sufficiently knitted with the underlying soil. An inch of water is sufficient to fully wet soil and sod. Pay close attention to local weather forecasts. Hot weather can cause the grass to pull apart at the seams. The soil should remain moist, but not saturated. Also be careful not to let the water run off the lawn area as this will not benefit the grass. Once the sod begins to knit with the soil, you can begin a regular watering schedule. *Do not fertilize or mow the lawn yet.*

Maintenance: 2 weeks and beyond

First Mowing

After at least 2 weeks, you can mow the grass. Mow when the grass is 2-1/2 to 3 inches high. Mow often enough so you are not cutting more than 1/3 of the growth at one mowing.

Fertilization

The grass planted was a balanced selection of different varieties of turf grasses particularly suited to the Anaconda area. It was planted on prepared soil that included a starter fertilizer. Periodic fertilization during the first year will help establish the new sod. Apply 1/2 pounds of actual nitrogen (N) for every 1,000 square feet at 6-week intervals until October 1. If the turf turns yellow or light green, you may need to fertilize more frequently. Do not apply the fertilizer if the grass is wet. Once you apply the fertilizer, water the grass heavily to help the process.

Aerating

Consider aerating your new lawn about 2 to 3 months after installation, especially if your lawn is heavily used. Aeration will help form well-rooted turf. Moisture, air, and fertilizer can then easily pass through the turf into the root zone. When aerating, the soil should be moist—not too wet and not too dry.

Enjoy your new lawn! Remember, a lawn that is properly watered and fertilized will have fewer problems with weeds and disease. Whether you are a full-time *lawn connoisseur* or someone who just wants a nice yard, your new lawn should provide a lifetime of enjoyment through regular care.