

**REGION 8**

DENVER, CO 80202

April 3, 2024

EPA Responses to Dr. John Ray Emails Received on: 20 FEB 2024 | 29 FEB 2024 | 01 MAR 2024 | 06 MAR 2024

Questions from Email received 20 FEB 2024:

a. The issue of the action levels for lead in Butte given the new CDC recommendations:

1. Are these action levels still protective?

EPA Response: Scientific understanding of the risks of lead exposure has evolved since the current action level was selected, leading to the January 17, 2024, Updated Soil Lead Guidance for CERCLA Sites. The EPA's site team is working to determine any impacts to current soil-lead cleanup standards in light of the new national guidance. Butte residents continue to have the option to participate in the RMAP's multi-pathway program.

What is the warrant and justification for the different action levels for lead in Butte and Anaconda?

EPA Response: Cleanup levels for Superfund remediation in Anaconda and Butte are based on human health risk assessments, multiple bioavailability studies and the unique contamination in the towns. The EPA prepared a fact sheet on these differences; it is available on our website at the following link:

<https://semspub.epa.gov/work/08/1970898.pdf>

2. What is the review process timeline and what will be done?

EPA Response: New action levels have not yet been developed for lead in Butte soils, although the process is well underway. On January 17, 2024, the EPA issued its Updated Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities in which lowered recommended screening levels and strengthened guidance for investigating and cleaning up lead-contaminated soil in residential areas where children live and play were indicated. The

first step of developing revised action levels under this guidance is completion of a lead screening level checklist that assesses, among other things, the potential sources of lead within a community and the impacts to children's blood lead levels. This checklist helps the EPA decide the appropriate target blood lead level that should be used to develop a revised preliminary remedial goal (PRG). The revised PRG takes into account naturally occurring background levels and site-specific information, such as bioavailability. Ultimately, for Butte, any changes to the PRG would be presented to the public in a proposed plan. After consideration of public comments, a record of decision amendment would be issued that includes the new action level (formerly the PRG).

3. How will the public be involved?

EPA Response: The EPA notified the community of the upcoming anticipated change in the lead action level at the March 5, 2024, meeting. As we move forward through the process, additional information will be provided to include fact sheets and meetings. The public will be informed of any developments and completion of meaningful steps in the process. Input from the community is welcome at any time, and the community will be able to submit formal comments during the potential proposed plan comment period.

4. Will an in-depth health study independent of the Five-Year mandated studies be conducted regarding lead exposure in Butte? This was promised in the past but we haven't heard much about it lately.

EPA Response: The Residential Metals Abatement Program (RMAP) is a multi-pathway program that has operated as the RMAP since 2006 (and under a different name before 2006). Medical monitoring and community education are important components of the RMAP. The medical monitoring results are documented in a Public Health Study. The second five-year medical monitoring study (independent of the EPA's Five-Year Review Program) was released in May 2020. The third study is being worked on currently.

5. What happened to the ATSDR review and possible study?

EPA Response: The Montana Department of Public Health and Human Services (DPHHS), in coordination with the Agency for Toxic Substances and Disease Registry (ATSDR), is planning to prepare a health consultation that evaluates arsenic exposure in the community soil. That health consultation is not yet available.

6. How will environmental justice concerns affect this process going forward?

EPA Response: Thank you for your continued efforts to ensure the EPA maintains focus on environmental justice within the Butte community. The EPA will continue to follow and revise, as necessary, the 2020 Environmental Action Plan for Butte. In particular to the

implementation of the new lead policy, the EPA and partners will focus on providing detailed lead safety information, offering community discussions in a variety of communities, and broadly detailing next steps. We are actively engaging with local community organizations to further implement the Environmental Action Plan and engage with residents in their own communities.

d. A progress report on environmental justice plan implementation would be useful. Where are we in terms of implementing the provisions of Butte’s environmental justice action plan?

EPA Response: Please see answer above.

e. A progress report on where we are with regard to Westside Soils? Where are we and where are we going and when will we get there would be useful for the public to know.

EPA Response: The EPA’s December 2023 Newsletter provides an update of the West Site Soils Operable Unit: (<https://semspub.epa.gov/work/08/100014234.pdf>). The last public update was provided at the BSB council of commissioners meeting in August 2023. Responses to Butte Board of Health questions were delivered in September 2023. Given the pace of the project, we anticipate the next meaningful update to occur in summer 2024. We will likely target another BSB council of commissioners meeting to do so.

f. What is the status of the process of determining waste repositories?

EPA Response: In 2020, the EPA provided criteria for a Repository Siting Study (RSS) and a process outline for engaging the community during the study. Since then, an RSS Committee was formed, which includes members of the public appointed by BSB Chief Executive, J.P. Gallagher, representatives from Atlantic Richfield, BSB, the EPA, Montana DEQ, MR, and CTEC. The RSS committee has held multiple meetings, tours, and public presentations, most recently November 2023. Currently, Atlantic Richfield drafted a Repository Screening Report that was distributed to the RSS committee for their review and comment. Atlantic Richfield will prepare a final Repository Screen Report that will be available to the public. Following release of this report, field investigations and detailed evaluations of remaining potential repository locations will begin.

D. What are your plans going forward specifically concerning the issue of environmental justice in Butte?

EPA Response: Thank you for your continued efforts to ensure the EPA maintains focus on environmental justice within the Butte community. The EPA will continue to follow and revise, as necessary, the 2020 Environmental Action Plan for Butte. In particular to the implementation of the new lead policy, the EPA and partners will focus on providing detailed lead safety

information, offering community discussions in a variety of communities, and broadly detailing next steps. We are actively engaging with local community organizations to further implement the Environmental Action Plan and engage with residents in their own communities.

F. What new, if any, approaches to meaningful public involvement will emerge in Butte?

EPA Response: New approaches for meaningful public engagement will include reoccurring RPM office hours held in Butte to make the EPA more accessible to the community and stakeholders and to invite one-on-one conversations because we've heard feedback that some public members would prefer discussions outside of a public meeting setting.

Questions from Email received 29 FEB 2024:

Is there a one-to-one correspondence between say one unit of safe exposure level and one unit of action level, i.e. how do they interrelate?

How do safe exposure levels as determined by agencies such as the CDC, impact action levels?

Since there obviously must be some interrelationship, what protocols or procedures or methodologies are used to determine how safe exposure levels impact action levels?

EPA Response: It is important to understand the differences between and application of CDC's blood lead reference value¹ (BLRV) and the EPA's target blood lead level (BLL) value. CDC's BLRV is not equivalent to, nor should it be compared to, the EPA's target BLL value used for soil lead cleanups. The two values serve different purposes; thus, the change in CDC's BLRV does not directly impact the target BLL value used in the EPA's Office of Land and Emergency Management (OLEM) soil lead policy.

CDC's BLRV is a screening value that is used to identify children who have higher levels of lead in their blood compared with most children and is used to assess the effectiveness of prevention efforts. The BLRV value represents the 97.5th percentile of measured blood lead levels for children aged 1-5 years in the U.S. CDC's BLRV is not health-based and is not a regulatory standard. A blood lead level at or above CDC's BLRV does not mean a child is lead poisoned, nor does being below the reference value indicate that a child has not been harmed by lead. The reference value is simply the value at which a child has more lead in their blood than most U.S. children. Indeed, CDC specifically changed its terminology to use the term "reference value" to avoid the misinterpretation that this value represents a "level of concern."

¹ <https://www.cdc.gov/nceh/lead/data/blood-lead-reference-value.htm>

CDC's BLRV is to be used by physicians and other healthcare providers in evaluating individual patient blood lead results.

The EPA's target BLL value is used in a model to identify sites that warrant further investigation or action and to develop cleanup levels that will reduce risks to children's health from site-related lead exposure. For Superfund soil-lead cleanups, the EPA relies on site-specific information, such as soil-lead bioavailability and exposure parameter assumptions, along with the target BLL to inform the development of preliminary remediation goals (PRGs). These PRGs become the basis for establishing protective cleanup levels (aka action levels) specific to the site.

Does EPA still have confidence in the study methodologies that were used to determine bioavailability of lead in Butte?

EPA Response: The lead bioavailability estimates used in the Butte risk assessments and in the derivation of the site-specific soil-lead action levels encompass more than 15 years of research specific to Butte. Lead bioavailability estimates are based on multiple investigations, including both *in vitro* studies and *in vivo* studies conducted using two different test animals. These studies have been conducted using a variety of materials, including mine waste rock, tailings, and/or soils impacted with these mine wastes. These materials were selected for use because they are representative of the primary source materials in Butte to which receptors are potentially exposed in residential and public settings, such as schools and parks.

If the action level were lowered to 400 ppb for lead how many additional yards and homes would need to be resampled? How long might that take? What would be done in the interim?

EPA Response: The EPA is currently evaluating the updated Lead Guidance impact on BPSOU. This process, outlined in the [Fact sheet process guide; Lead Guidance Rollout for Butte](#) (attached) includes assessing the number of locations needed that may require sampling. EPA is anticipating issuing a potential proposed plan by Summer 2024.

In the interim, the Site team is working to avoid delays in work. Work can continue to remediate yards already identified for cleanup and to sample yards previously identified for sampling. This allows the EPA to simultaneously execute the steps required to implement the new lead guidance while site work continues.

What is the process for changing an action level?

EPA Response: The outline of the process for determining a potential change in action level is outlined in the document attached. Additional information pertaining to each step, some of which can be worked on concurrently, is outlined below:

Background Study:

The EPA will document background soil-lead concentration, using existing data, that is representative of BPSOU conditions near Butte using the 2002 Guidance for Comparing Background and Chemical Concentrations in Soil for CERCLA Sites. The EPA's response authority under CERCLA does not extend to "naturally occurring substance in its unaltered form, or altered solely through naturally occurring processes or phenomena, from a location where it is naturally found." See CERCLA section 104(a)(3)(A).

Review Site-Specific Information: The EPA will review existing site-specific documentation, including lead concentrations in various media and bioavailability and assumptions used in the risk assessment to determine the current clean up level memorialized in the 2006 ROD.

Property Query: The EPA will evaluate the impact that a potential new cleanup level will have on properties that remain to be cleaned up, properties previously cleaned up and areas that may warrant additional investigation.

Identify New Cleanup Level (As Necessary): The EPA will identify a target BLL based on the updated Lead Guidance. This updated target BLL value will be used in a model to inform the development of preliminary remediation goals (PRGs). These PRGs become the basis for establishing protective cleanup levels (aka action levels) specific to the site that will reduce risks to children's health from site-related lead exposure.

Proposed Plan (As Necessary): The EPA will prepare a proposed plan to present the proposed cleanup level established through the processes outlined above.

Public Comment Period (As Necessary): A minimum 30-day public comment period will be held after the issuance of the Proposed Plan.

Record of Decision Amendment (As Necessary): The EPA will issue a Record of Decision Amendment to memorialize the change in cleanup level.

Given that there is a signed consent decree in place for BPSOU, how would that effect be on lowering the action levels?

EPA Response: The RMAP program is currently being carried out by Atlantic Richfield and BSB pursuant to a Unilateral Administrative Order, rather than under the Consent Decree.

What is the process for lowering action levels? What would be the role of community involvement?

EPA Response: See response above for additional detail regarding the process for lowering action levels.

The role of community involvement at BPSOU is focused on providing the community and stakeholders with consistent information, updates and answering questions. We understand a large part of our role is working with BSB to ensure we are supporting their efforts and making ourselves available to the community. We are planning on using standing communication efforts (i.e. Newsletter, Community Updates) as well as taking a proactive approach to offering presentations along with question and answer sessions.

How is Butte Silver Bow currently implementing the action levels for lead in Butte? What is the current process for determining whether or not to remediate a home and/or yard?

EPA Response: The current residential action level for lead in Butte is implemented through the Multi-pathway residential metals abatement program (RMAP). This program requires that every property within BPSOU and the Adjacent Area be sampled. The sampling includes residential yard soil, interior living space dust, attic dust, and lead-based paint. Remediation will be required if sampling results indicate levels that exceed the action levels.

Are the current action levels in Butte for lead as implemented by Butte/Silver Bow protective of human health?

EPA Response: This response is provided above, responding to questions posed in an email on February 20.

When will a decision regarding the possible change of lead action levels in Butte be announced?

EPA Response: EPA is currently evaluating the updated Lead Guidance impact on BPSOU. This process, outlined in the document attached, includes assessing the number of locations needed that may require sampling. EPA is anticipating issuing a potential proposed plan by Summer 2024.

Does EPA have evidence that lead levels in Butte children have dropped or are continuing to drop as the result of remediation efforts? What is that evidence?

EPA Response: The results of the Medical Monitoring Program are the best metric for judging the success of the CERCLA cleanup. The protectiveness of the BPSOU remedy is demonstrated by the reduction in blood lead levels within the BPSOU community. As discussed in the Second Butte RMAP Medical Monitoring Report (which was released in May 2020): *“The percentage of Butte children with BLLs above 5 µg/dL has dropped dramatically over the time period evaluated in the first two health studies, with the rate of decline slowing as levels approach those found in children across the U.S. In Butte, this percentage decreased from 33 percent in 2003 to 5 percent in 2017.”*

Is there any evidence to support the contention that the RMAP has been effective?

EPA Response: Please see the answer to the question above.

EPA has said that it is constantly reviewing action levels to ensure their protectiveness. What exactly does EPA do in this regard?

EPA Response: Through the 5-year review process, the EPA evaluates the implementation of the remedy to determine whether it remains protective of human health and the environment. During this evaluation, the EPA examines three questions:

1. Is the remedy functioning as intended by the decision document?
2. Are the exposure assumptions, toxicity data and Remedial Action Objectives used at the time of the remedy still valid?
3. Has any other information come to light that could call into question the protectiveness of the remedy?

The determination of protectiveness will be based on the answers of those three questions. If the protectiveness is called into question, then the EPA will provide a resolution for how protectiveness will be achieved.

How will environmental justice considerations be incorporated into the current discussions and decision-making regarding lead action levels in Butte?

EPA Response: The EPA's risk assessments are conducted in support of its mission to protect public health and the environment. Given the uncertainty, variability, and data gaps encountered when conducting any risk assessment, a key objective for the EPA's risk assessments is that they avoid both underestimation of risk and gross overestimation of risk. Thus, the EPA's risk assessments accommodate for individuals in communities experiencing EJ concerns.

What more needs to be done in Butte to ensure that children are protective from the harmful effects of lead exposure?

EPA Response: Given the very old housing stock in Butte, one of the greatest ongoing environmental risk factors for child lead exposures is lead-based paint. It is for this reason that the RMAP was designed as a multi-pathway program. The RMAP does not limit its focus to only sampling and remediating soil/dust, but also includes paint sampling as well as educational and biomedical monitoring components.

The goal of the educational program component of the RMAP is to help local residents understand how to minimize their potential exposures (e.g., the "Be Contaminant Smart" brochure that you helped develop) and take advantage of the programs that are in place, such

as requesting an RMAP property assessment (for homes in the Expanded Area outside the BPSOU) or getting free BLL testing as provided through the Butte Silver Bow Health Department.

In addition to RMAP, the EPA has numerous other publicly available resources that provide information to people living in areas where lead contamination may exist. Those resources are located online at: <https://www.epa.gov/lead>.

Questions from Email received 01 MAR 2024:

D. What are your plans going forward specifically concerning the issue of environmental justice in Butte?

EPA Response: This response is provided above, responding to the same question posed in an email on February 29.

F. What new, if any, approaches to meaningful public involvement will emerge in Butte?

EPA Response: This response is provided above, responding to the same question posed in an email on February 20.

Questions from Email received 06 MAR 2024:

Can the public have any assurances that the current action levels in Butte are protective of human health?

EPA Response: See response to first question posed in 2/20 email.

If the action levels are changed, does that mean that they have been living in an unsafe area?

EPA Response: See response to first question posed in 2/20 email.

Would a ROD Amendment necessitate re-opening the Consent Decree?

EPA Response: The BPSOU Consent Decree states the following:

“Any such modification to the soil, dust, and/or vapor action levels may only be lawfully required under a ROD amendment.”

While the CD requires that updated soil action levels be memorialized in a ROD Amendment, as things currently stand, the CD would not need to be opened to

implement any new soil action level because the RMAP program is carried out pursuant to a Unilateral Administrative Order (UAO).

If the current action levels for lead are protective, what additional protection would new action levels provide?

EPA Response: The updated Soil Lead Guidance strengthened the EPA's authority for investigating and cleaning up lead-contaminated soil in residential areas. The science on lead has evolved to demonstrate that lead exposure is harmful to children's health at lower levels than we previously understood. The EPA's reevaluation of its lead guidance recommended a new target BLL of 5 micrograms per deciliter ($\mu\text{g}/\text{dL}$) or 3.5 ug/dL as more protective than the previous target BLL of 10 ug/dL .

The science has evolved, but we've done a considerable amount of cleanup work in Butte, and the data show that we have succeeded in significantly reducing blood lead levels across the community. The EPA has and will continue to make the community of Butte a priority. We've invested a significant number of resources within the Butte Superfund site, especially over the past year. Our goal going forward is to continue to rely on the latest science and community feedback to ensure we protect the community from the effects of lead exposure.

While we know exposure and health conditions in Butte have improved as a result of the ongoing work, we understand there is still more to do.

Is there a one-to-one correspondence between say one unit of safe exposure level and one unit of action level, i.e. how do they interrelate?

- **How do safe exposure levels as determined by agencies such as the CDC, impact action levels?**
- **Since there obviously must be some interrelationship, what protocols or procedures or methodologies are used to determine how safe exposure levels impact action levels?**

EPA Response: This response is provided above, responding to the same question posed in an email on February 29.

Does EPA still have confidence in the study methodologies that were used to determine bioavailability of lead in Butte? If so, what is the basis for that confidence?

EPA Response: This response is provided above, responding to the same question posed in an email on February 29.

If the action level were lowered to 400 ppb for lead how many additional yards and homes would need to be resampled? How long might that take? What would be done in the interim? What would be the cost?

EPA Response: This response is provided above, responding to the same question posed in an email on February 29.

What's the process for changing an action level? I would ask for more detail than was provided last evening about this process.

EPA Response: This response is provided above, responding to the same question posed in an email on February 29.

Given that there is a signed consent decree in place for BPSOU, how would new action levels affect the Consent Decree?

EPA Response: This response is provided above, responding to the same question posed in an email on February 29.

What is the process for lowering action levels? What would be the role of community involvement?

EPA Response: This response is provided above, responding to the same question posed in an email on February 29.

How is Butte Silver Bow currently implementing the action levels for lead in Butte? What is the current process for determining whether or not to remediate a home and/or yard?

EPA Response: This response is provided above, responding to the same question posed in an email on February 29.

Will this process for possibly changing lead action levels in Butte significantly delay or put on hold the cleanup?

EPA Response: The Site team is working to have little delay in work. Work can continue to remediate yards already identified for cleanup and to sample yards previously identified for sampling. This allows the EPA to simultaneously execute the steps required to implement the new lead guidance while site work continues.

When will a decision regarding the possible change of lead action levels in Butte be announced?

EPA Response: This response is provided above, responding to the same question posed in an email on February 29.

Does EPA have evidence that lead levels in Butte children have dropped or are continuing to drop as the result of remediation efforts? What is that evidence?

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Is there any evidence to support the contention that the RMAP has been effective?

EPA Response: This response is provided above, responding to the same question posed in an email on February 29.

EPA has said that it is constantly reviewing action levels to ensure their protectiveness. What exactly does EPA do in this regard?

EPA Response: This response is provided above, responding to the same question posed in an email on February 29.

How will environmental justice considerations be incorporated into the current discussions and decision-making regarding lead action levels in Butte?

EPA Response: This response is provided above, responding to the same question posed in an email on February 29.

What more needs to be done in Butte to ensure that children are protective from the harmful effects of lead exposure?

EPA Response: This response is provided above, responding to the same question posed in an email on February 29.

Specifically, how will cost benefit analysis be used in this process?

EPA Response: The EPA is assuming “this process” is referring to implementation of the updated Lead Guidance. Every step requires (following the outlined process in a previous response) a detailed evaluation, and **if necessary**, a modification proposed for the ROD Amendment will be conducted as part of the proposed plan and ROD Amendment process. Any modification will go through a detailed analysis using the nine criteria defined in the NCP, which are split into three categories: threshold criteria, primary balancing criteria (one of which is cost), and modifying criteria.