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Medical Monitoring Working Group Meeting Minutes

Mike McAnulty

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December 2, 2022

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RE: Medical Monitoring Working Group Meeting Minutes

Agency Representatives:

I'm writing to you on behalf of Atlantic Richfield Company and Butte-Silver Bow to submit the minutes from the Medical Monitoring Working Group meeting held on October 25, 2022. The minutes document the agenda and discussion highlights from this meeting which focused on planning for the Phase 3 health study. The meeting minutes may be downloaded at the following link:

<https://pioneertechnicalservices.sharepoint.com/:f:/s/submitted/EtLwae2ZAhtFuglvx94LJqQBOvE2i3iKrnFwb6pYQTyDxQ>.

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

Sincerely,



Mike Mc Anulty
Liability Manager
Remediation Management Services Company
An affiliate of **Atlantic Richfield Company**



Eric Hassler, Director
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and Environmental Services
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File: MiningSharePoint@bp.com - email
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Meeting: Butte Medical Monitoring Working Group Meeting

Date/Time: October 25, 3:30 pm Mountain

Location: Atlantic Richfield's Butte office (the Kelley) and Virtual (Teams)

Attendees:

- **USEPA** (via Teams) – Nikia Greene, Dr. Charlie Partridge
- **USEPA Technical Consultant** (via Teams) – Lynn Woodbury (CDM Smith)
- **BSBHD** – Karen Maloughney (Health Officer), Kayla Harvey (Environmental Nurse), Julia Crain (RMAP), and Amanda Marinovich (Epidemiologist) (via Teams); Eric Hassler, Brandon Warner (RMAP)
- **BSB Environmental Database Consultant** – David Dobrinen (Woodard & Curran)
- **MDEQ** (via Teams)– Daryl Reed
- **AR** – Mike Mc Anulty
- **AR Technical Consultants** – Dr. Rosalind Schoof, Amanda Bailey (Ramboll)
- **MDPHHS** – (via Teams) Dawn Nelson (State Toxicologist), Abbie Phillip
- **BSB Health Advisory Group** – Dr. Seth Cornell
- **CTEC Representatives** – Dr. Bill Macgregor (via Teams), Joe Griffin

Minutes drafted by: Amanda Bailey (Ramboll)

Agenda

- Introductions
- Phase 3 2018-2020 BLL data update (neighborhood and house age summaries)
- Environmental data – Work Plan / Feasibility Study questions
- Other updates since last meeting:
 - Status of BLL data collection and venous confirmation sampling in 2022 (BSBHD)
 - Potential Montana reference population(s) (MDPHHS)
 - Implications of CDC BLRV (EPA)
- Other business, next steps, plan for next call

Introductions

Introduced Working Group (WG) members present in person and via Teams

Phase 3 2018-2020 blood lead level (BLL) data update

Presented blood lead records summary information including:

- Numbers and percentages of records by neighborhood (1-8) for children aged 60 months or less living within the study area (834 total for 2018 through Q1 2020)
- Numbers and percentages of records for children aged 60 months or less living within each neighborhood (1-8) with BLLs above the detection limit of 3.3 µg/dL, the current CDC blood lead reference value (BLRV) of 3.5 µg/dL, and the Phase 1/2 reference value of 5 µg/dL
- Numbers and percentages of houses with blood lead records falling into 4 age categories: pre-1940, 1940-1949, 1950-1977, post-1977

Discussion:

- Dr. Partridge wanted to know how many children live in each neighborhood and what percent were tested
 - This information may be obtained from the census, but will need to match census years and ages of most kids when tested
- Pre-1940 lead content in paint was higher, so looking at pre-1940 homes as a separate bin is informative
- Other bins could potentially be condensed (1940- or 1950-1977, post-1977)
- Bins are mostly to give an idea of house age differences between neighborhoods, but grouping will not be necessary for regression analysis
- House age is tracked during RMAP assessments so this could be provided with blood lead data in the future
 - Usually we use the original build date, rather than remodel date
- Question about availability of remodel data (potential exposure source)
 - Remodels are generally not well tracked because a permit is not required/obtained for most activities
 - EPA noted ICIAP covers remodeling, but this will not give complete information
- It would be helpful to know how many parcels in census tract 8 are not included in the study area
 - Influx of housing west of neighborhoods 6 and 8 in the last 10 years
- Discussed adding a new “neighborhood” comprised of the expanded RMAP area where services are now offered to include more data
 - It was explained that these data would be considered separately and would not “skew” assessment of blood lead changes over time in the existing neighborhoods
 - This could include areas such as Rocker/south of Rocker, Ramsey, Fairmont, German Gulch, Molton, White Creek Estates
 - Many of these areas are also on groundwater wells rather than municipal water supply

Environmental data – Work Plan / Feasibility Study questions

Introduced potential analyses incorporating environmental data that could be included in the Phase 3 study, and initial actions to address questions related to feasibility and neighborhood/individual level analyses

Presented the following:

- Numbers of parcels (residential and vacant lots) with soil samples, and numbers of soil samples, by neighborhood
- Heat maps showing median parcel soil lead concentrations (with kriging), for residential parcels and vacant lots, along with neighborhood boundaries, for:
 - Phase 3 study period, before and after abatement
 - Phase 1, 2, and 3 study periods, after abatement
- Comparison of data distribution among study neighborhoods for soil samples and blood lead records
- Example template for environmental data (soil only, for now) to be pulled into blood lead dataset

Discussion of Work Plan:

- A Work Plan will need to be submitted for review by a human subjects study institutional review board (IRB)
- Work that combines environmental and blood lead data needs to be done by designated staff with required training and IRB oversight because confidentiality cannot be maintained (addresses are needed to link environmental and blood lead data)

Discussion of environmental data/heat maps:

- Clarified that no post-remediation data are available; 50 mg/kg was used as a surrogate concentration to replace concentrations >1,200 mg/kg that triggered remedial action
- Mean, rather than median (current figures), is likely the most appropriate statistic for heat maps to evaluate exposure at the neighborhood (rather than individual) level
- Maps based on maximum concentrations are also included in extra slides
- Schools and parks not included to start, could add eventually
 - However, parks and schools have had very few actionable lead concentrations (even in indoor dust at schools) and including them may even lower average soil concentrations
 - Also, children ages 5 and under are the focus of this study, and will mostly spend time at parks and daycares, not schools
 - Data from schools, parks, and daycares should be captured at the end of the study
- All depth intervals are included in current figures; might look at surface soil (0-2 inches) only for assessing exposure
 - Only 0-2 inch soil was sampled under RMAP until 2010
 - UAO required triple depth (0-2, 2-6, and 6-12 inch) sampling starting in 2012, and this started proactively in 2010
- Blood lead and property information can't be kept confidential if adding soil data, so dedicated data storage and limited access (only those trained for human subjects analysis) would need to be applied
 - BSB staff have this training
 - Information would be made anonymous before reporting out
 - Dr. Macgregor noted his team used the nearest intersection to the property in question to maintain confidentiality
- Indoor dust, whether sourced from soil track-in or lead paint, has been shown to have a stronger relationship with blood lead compared to soil
- Air, diet, and water become the primary contributors when blood lead levels are lower (3.5 µg/dL or less); at 5 µg/dL soil and dust still may be significant contributors (~50%)
- Dr. Partridge observed that with most blood lead levels being less than 3.5 µg/dL, there is likely to be a discordance between blood lead values and soil concentrations
- Analyses could be conducted on Phase 1 and 2 blood lead data for which soil data are now available, to assess potential connection between soil lead concentrations and when blood lead levels were higher than they are now
- Indoor dust is currently sampled only if there is a pathway from an attic to a living space, or as part of an elevated BLL investigation
 - Only ~300 indoor dust samples have been collected so far, likely not enough for a strong analysis of blood lead/indoor dust relationship in Phase 3 study
 - BSB will start collecting indoor dust samples proactively

- There is a potential concern about reliance on indoor dust data due to potential mismatches between the timing of indoor dust data collection and blood lead samples because indoor dust concentrations may vary over time, whereas soil concentrations are expected to be stable over time unless remediated
- Clarified that blood lead sample collection is not proposed for the Phase 3 study; this study will only use data already being collected, but this could be considered for a future study
- Questionnaires administered during RMAP home evaluations include behavioral/source questions
 - This information could be used to further evaluate elevated blood lead levels, if it can be obtained (reported annually)
- Data table template – add:
 - Sample depth
 - Parcel component (e.g., front yard, side yard, play area)
- Risk assessors also want a Lab/XRF data column and XRF paint data
 - Pre-2019 soil and dust data are XRF, post-2019 data are ICP; 2019 data include both, as the change from XRF to ICP occurred during 2019
 - Lab/XRF column could be populated using a cut-off date or lab name
- Paint data are limited because inspections are only done if an elevated BLL is detected, so not likely useful for this study
- Secondary addresses are only documented in hard copy files, and only for elevated BLLs

Other updates since last meeting

Status of EPA BLL target

- Nothing new to report

Status of BLL data collection in 2022

- WIC program is fully operational and capillary sample collection resumed late June
- Environmental nurse has been able to work with parents to facilitate confirmation sampling when elevated capillary results occur
 - Venous sample collection onsite same day or within a few days, or
 - Follow-up with their primary care physician
- 126 blood lead capillary samples collected since late June
 - 19 detectable at 3.3 µg/dL
 - 13 venous confirmation samples taken onsite, 6 followed up with primary care physician
 - Confirmation sample results are kept in same data file with capillary data so all results are together in one database

Potential Montana reference population(s)

- Reporting requirement changed to 3.5 µg/dL on 9/24
- 75% increase in reportable results due to lower reporting threshold

Next Working Group meeting

- Discussed having next meeting on February 14, 21, or 28
 - No preferences noted
 - Working group members will follow up with any conflicts or preferences