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Draft 2022 Residential Metals Abatement Program (RMAP) Field Sampling Plan (FSP) Butte High School – Indoor Soil

Environmental Resource Management (ERM)

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Atlantic Richfield Company and Butte-Silver
Bow County

22 March 2022

Project No.: 0612471

Signature Page

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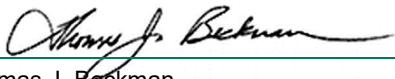
Atlantic Richfield Company and Butte-Silver Bow County



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Acronyms and Abbreviations

| Name | Description |
|----------|--|
| Agencies | U.S. Environmental Protection Agency and Montana Department of Environmental Quality |
| BPSOU | Butte Priority Soils Operable Unit |
| DEQ | Montana Department of Environmental Quality |
| FSP | Field Sampling Plan |
| ICP-MS | inductively coupled plasma mass spectrometry |
| QC | quality control |
| QAPP | Quality Assurance Project Plan |
| RL | reporting limit |
| RMAP | Residential Metals Abatement Program |
| SOP | standard operating procedure |
| USEPA | U.S. Environmental Protection Agency |

APPROVAL PAGE

Butte Priority Soils Operable Unit Residential Metals Abatement Program Field Sampling Plan Butte High School – Indoor Soil

Approved: _____ Date: _____

Nikia Greene, Remedial Project Manager
U.S. Environmental Protection Agency, Region 8
Quality Assurance Approval Official

Approved: _____ Date: _____

Daryl Reed, Project Officer
Montana Department of Environmental Quality

Approved: _____ Date: _____

Eric Hassler, Director
Department of Reclamation and Environmental Services
Butte-Silver Bow County

Approved: _____ Date: _____

Mike Mc Anulty, Liability Manager
Atlantic Richfield Company

The Field Sampling Plan is effective on date of approval.

DISTRIBUTION LIST

Butte Priority Soils Operable Unit Residential Metals Abatement Program Field Sampling Plan Butte High School – Indoor Soil

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A complete list of personnel to receive this document is provided on the associated cover letter distribution list. Atlantic Richfield Company will distribute the original Agency approved document.

1. INTRODUCTION

This Field Sampling Plan (FSP) was developed to outline a portion of the 2022 Butte Priority Soils Operable Unit (BPSOU) Residential Metals Abatement Program (RMAP) earthen basement and crawlspace area soil sampling plan for a single Butte, Montana area school. Indoor soil sampling procedures, data quality objectives (DQOs), standard operating procedures (SOPs), sampling analytical methods, sampling equipment, quality control (QC) samples, and data validation and assessment will be in accordance with the RMAP Quality Assurance Project Plan (QAPP) (Non-Residential Parcels – Indoor dust) (Atlantic Richfield Company, 2022).

2. SCHOOL INDOOR SOIL SAMPLING SCOPE

The scope of work covered by this FSP includes the Butte High School.

The earthen basement and crawlspace areas to be sampled for the school are shown in Figure 1. Table 1 lists the school property (along with Resident ID's, geocode, ownership information, and age of school), and Table 2 shows the anticipated sampling quantities covered by this FSP.

3. SCHOOL INDOOR SOIL SAMPLING SCHEDULE

Sampling schedules will be finalized through ongoing conversations with U.S. Environmental Protection Agency (USEPA), Montana Department of Environmental Quality (DEQ) (the Agencies), and the appropriate school representatives. Sampling efforts will occur during the week of spring break, beginning 11 April 2022.

4. FIELD SAMPLING PLAN

Indoor soil sampling will be performed in earthen basement and crawlspaces areas to delineate impacts in accordance with the sampling procedures discussed below.

4.1 Sampling Delineation

Representatives from Atlantic Richfield, USEPA, Butte Silver Bow County, and the Butte School District conducted inspections of the buildings on 23 November and 8 December 2021. The inspections and ensuing discussions among the field personnel led to the selection of location of the soil samples, as discussed below. The planned number, type, and location of samples to be collected at the school are shown in Table 2. The steps for collecting soil samples are provided in Section 5.5 of the QAPP (Atlantic Richfield Company, 2022.). Opportunistic sampling or deviations from the sampling plan will be confirmed with USEPA in advance.

4.2 Soil Sampling Procedures

Soil sampling density, location, and compositing decisions will be made according to the information provided in Section 3.3 of the QAPP (Atlantic Richfield Company, 2022).

Soil samples will be collected from four earthen basement or crawlspace area locations in the Butte High School, as shown on Figure 1. One soil composite will be collected from Area 1 (comprised of 2 sampling points in the crawlspace); one soil composite will be collected from Area 2 (comprised of 5 sampling points from the earthen basement); and one soil composite will be collected from Area 3 (comprised of 2 sampling points from the earthen basement/crawlspace). One grab sample will be collected from crawlspace Area 4. The locations of the composites were selected based on readily available access to the earthen basement and crawlspace areas. ERM field team members will collect soil samples from

accessible areas not defined as confined spaces under United States Occupational Health and Safety Administration regulations.

4.3 Deviations

This section addresses any deviations to the Agencies-approved QAPP (Atlantic Richfield Company, 2022) pertaining to 2022 BPSOU RMAP school indoor soil sampling defined in this FSP. Deviations include the following:

- No known deviations at this time
- Any future deviations will be discussed with the Agencies' field representative, documented in the field notes, and the associated Investigation and Data Summary Reports

5. LABORATORY METHODS

5.1 Indoor Soil Metals Analyses Methods

Soil samples will be sieved to 250 micrometers prior to digestion. The soil samples will be digested according to USEPA Method 3050B, and arsenic and lead concentrations will be determined per USEPA Method 6020B (inductively coupled plasma mass spectrometry [ICP-MS]). Mercury concentrations will be determined per USEPA Method 7471B (Manual Cold-Vapor Technique).

6. QUALITY CONTROL

6.1 Field Quality Control Samples

A soil field duplicate sample will be prepared from a split sample at one location. Additional sample mass will be collected for matrix spike/matrix spike duplicate analysis at one location. Equipment blanks will not be required for soil samples since disposable sampling equipment will be used.

7. REFERENCES

Atlantic Richfield Company, 2022. Residential Metals Abatement Program Quality Assurance Project Plan (Non-Residential Parcels – Indoor Dust). February 2022.

TABLES

Table 1
School Property List
Butte RMAP School Indoor Soil Sampling
Butte, Montana

| Count | Res-ID | Geocode | Name | Physical Address | Owner | Construction Date |
|-------|--------|-------------------|---------------------------|---------------------------------------|--------------------|-------------------|
| 1 | S-0009 | 01119713454100000 | Butte High School / Annex | 401 S Wyoming Street, Butte, MT 59701 | School District #1 | 1937/1968 |

Table 2
Sample Task and Location Summary
Butte High School / Annex
Butte RMAP School Indoor Soil Sampling
Butte, Montana

| Task | Time Frame | Locations | Subsamples | Number of Composite Samples |
|----------------------|------------|---|------------|-----------------------------|
| Indoor Soil Sampling | Day 1 | Area 1 Crawlspace | 2 | 1 |
| | | Area 2 Earthen Basement | 5 | 1 |
| | | Area 3 Earthen Basement (North) /Crawlspace (South) | 2 | 1 |
| | | Area 4 Crawlspace | 1 | 1 |
| | | Total | 10 | 4 |

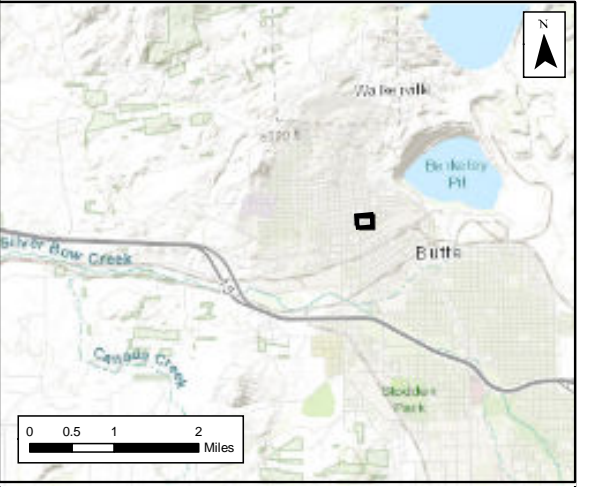
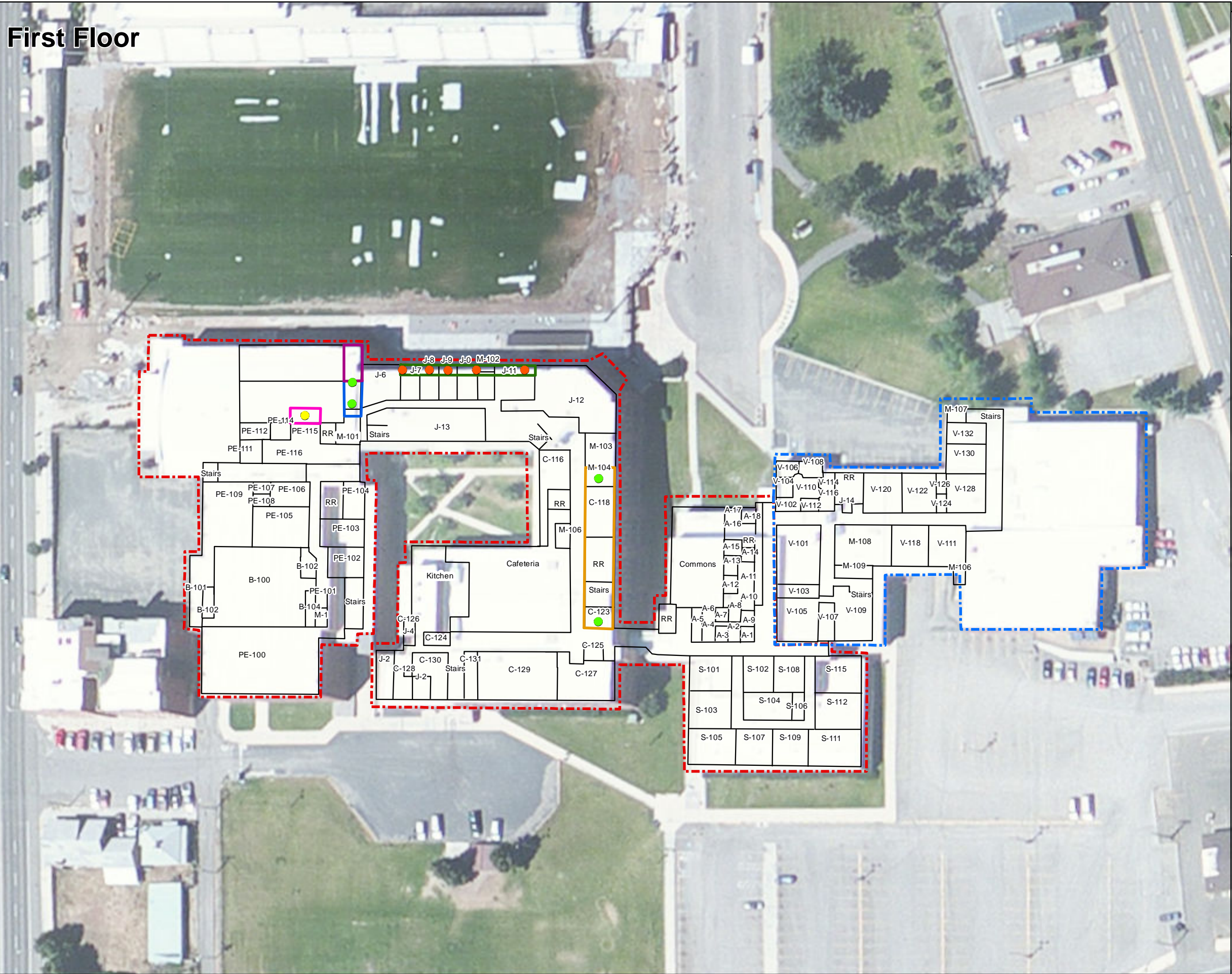
FIGURES

DRAWN BY: CRT

FILE: M:\Projects\0612471 - BP Butte\Maps\Butte High School - Annex_Soil.mxd . REVISED: 03/23/2022 . SCALE: 1:900 when printed at 11x17

Source: Esri - USGS Topo Webservice; NAD 1983 StatePlane Montana FIPS 2500 Feet

First Floor



Legend

- Grab Soil Sampling Point
- 2 Point Composite Soil Sampling Point
- 5 Point Composite Soil Sampling Point
- Earthen Basement (589.83 sq ft)
- Earthen Basement (314.08 sq ft)
- Crawl Space (314.08 sq ft)
- Crawl Space (2824.12 sq ft)
- Crawl Space (214.90 sq ft)
- High School
- Annex

Notes:
Room ID's reflect verbiage used on site maps provided by Butte School District

- Key:
- A Administrative
 - B Band
 - C Classroom
 - H Halls
 - PE Physical Education
 - J Janitorial/Maintenance
 - RR Restroom
 - S Science
 - V Annex
 - N Nurse
 - M Mechanical/Electrical
 - L Library

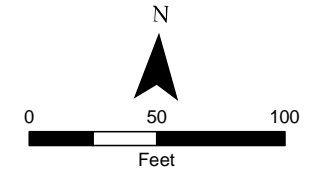


Figure 1
Butte High School / Annex
401 S Wyoming Street
Butte, MT 59701

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