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Draft Final 2024 Residential Metals Abatement Program (RMAP) Residential Daycares Field Sampling Plan (FSP) Submittal R-04941 and R-04947

Woodard & Curran

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November 5, 2024

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RE: Draft Final 2024 Residential Metals Abatement Program (RMAP) Residential Daycares Field Sampling Plan (FSP) Submittal R-04941 and R-04947

Agency Representatives:

On behalf of Atlantic Richfield Company (AR), I am submitting the *Draft Final 2024 Residential Metals Abatement Program (RMAP) Residential Daycares Field Sampling Plan (FSP) Submittal R-04941 and R-04947* for review and approval by EPA, in consultation with MDEQ.

This field sample plan is for two residential daycare properties, 2930 Irene (R-04941) and 1310 C Street (R-04947). This Field Sampling Plan (FSP) was developed in support of the Residential Metals Abatement Program (RMAP) in Butte Montana. 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 Final 2024 Residential Metals Abatement Program (RMAP) Quality Assurance Project Plan (QAPP) Annual Update (Non-Residential Parcels and Residential Daycares) (Butte-Silver Bow County and Atlantic Richfield Company, 2024).

If you have any questions or comments, please call me at (406) 723-1834.

Regards,
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**SILVER BOW CREEK/BUTTE AREA NPL SITE
BUTTE PRIORITY SOILS OPERABLE UNIT**

Draft Final

*2024 Residential Metals Abatement Program (RMAP)
Residential Daycares Field Sampling Plan (FSP)
Submittal R-04941 and R-04947*

Butte-Silver Bow County

and

Atlantic Richfield Company

November 5, 2024

SILVER BOW CREEK/BUTTE AREA NPL SITE BUTTE PRIORITY SOILS OPERABLE UNIT

Draft Final

***2024 Residential Metals Abatement Program (RMAP)
Residential Daycares Field Sampling Plan (FSP)
Submittal R-04941 and R-04947***

Prepared for:

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November 5, 2024

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DOCUMENT MODIFICATION SUMMARY

Modification	Author	Version	Description	Date

1.0 INTRODUCTION

This Field Sampling Plan (FSP) was developed for the subject properties listed below in support of the Residential Metals Abatement Program (RMAP) in Butte Montana. 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 *Final 2024 Residential Metals Abatement Program (RMAP) Quality Assurance Project Plan (QAPP) Annual Update (Non-Residential Parcels and Residential Daycares)* (Butte-Silver Bow County and Atlantic Richfield Company, 2024).

Subject Properties:

- R-04941 (2930 IRENE STREET) – Small Fries
 - Year Built: 1968,
 - No major renovations,
 - Currently license since 2021,
 - Licensed for 15 children.
- R-04947 (1310 C STREET) – Tammy’s Daycare
 - Year Built: 1974,
 - No major renovations,
 - Currently license since 2021,
 - Licensed for 15 children.

2.0 DAYCARE SAMPLING SCOPE

Figure 1, attached, shows the location of the subject properties listed in Section 1.0, in relation to the Butte Priority Soils Operable Unit and RMAP Expanded Area boundaries. The remaining attached figures show the location and overall layout of the properties to be sampled along with the individual sampling components and associated non sample areas for the subject properties listed in Section 1.0. The field sample plan figure includes the Resident ID, address, and square footage of each sampling component. The sampling summary table on each field sample plan figure lists the anticipated number of samples to be collected along with the corresponding number of subsample locations needed for each composite sample.

3.0 DAYCARE SAMPLING SCHEDULE

Sampling schedules will be finalized through ongoing conversations with appropriate daycare representatives. Sampling efforts will begin during the fall of 2024. It is anticipated that the majority of the sampling will need to be conducted after hours or on weekends due to the operating daycare status. The appropriate utility locating service (i.e., One Call Utility Locate Services) will be contacted and informed of sampling activities a minimum of 48 hours prior to commencing soil sampling activities.

4.0 FIELD SAMPLING PLAN

4.1 Soil Sampling

Soil sampling and any earthen basements will be completed as detailed in Section 3.3 of the QAPP.

In general, sample locations within yard components will be determined by sampling personnel based upon site-specific conditions. Subsamples are anticipated to be collected at the frequency depicted on the attached figure(s). The subsamples will be collected in the shape of an X as site conditions allow. The subsamples will be composited in the field to form a single composite sample per depth interval. The composite samples will be analyzed for arsenic, lead, and mercury, as appropriate. Samples will be thoroughly mixed in a clean one-gallon plastic Ziploc® bag or stainless-steel bowl. During this homogenization process, particles greater than 0.5 inch in diameter will be discarded. To meet the preservation requirement for mercury analysis, soil samples to be analyzed for mercury shall be maintained at $\leq 6^{\circ}\text{C}$ (but not frozen) from the time of collection until receipt at the laboratory. Sample volumes will consist of approximately 500 to 800 grams of material.

Three depth samples will be collected from each identified yard component. There will be one surface sample (0 to 2 inches below ground surface [bgs]) along with two subsurface samples (2 to 6 and 6 to 12 inches bgs). Any flower gardens will be subject to two additional subsurface samples (12 to 18 and 18 to 24 inches bgs).

Generally, samples will be assigned sample identification numbers starting with S-R-nnnnn followed by a dash then the yard component code (i.e., NY-North Yard, EY-East Yard, etc.) followed by a dash and the depth code (i.e., 1 = 0 to 2 inches bgs, 2 = 2 to 6 inches bgs, etc.). For example, S-R-04933-NY-1 has the sample identification number of **S-** (soil matrix) **R-04933** (Resident ID), is located in the North Yard (**NY**), and is a sample for the depth interval of 0 to 2 inches bgs (**-1**). Site-specific sample identifiers are presented on the figures.

4.2 Attic Dust Sampling

Attic dust sampling will be completed as detailed in Section 3.4.1 of the QAPP.

In general, attic dust composite sampling (based on a minimum of two subsample locations within the attic) will be conducted using a scoop and brush. Each sample will consist of at least the minimum amount of material required for laboratory analysis. Special care will be taken to ensure enough sample volume is collected for both arsenic, lead, and mercury analysis.

Samples will be assigned a sample identification number similar to: D-R-04933-ATTIC and analyzed for arsenic, lead, and mercury.

4.3 Living Space Dust Sampling

Living space dust sampling will be completed as detailed in Section 3.4.2 of the QAPP.

Indoor living space dust sampling will be completed using a high-volume small surface sampler (HVS3). A composite sample will be collected consisting of subsamples collected from the following locations to provide a composite sample of the minimum amount of material required for laboratory analysis:

1. The floor area directly inside the main entries.

2. The floor areas in the most frequently occupied rooms (normally the living room and/or kitchen).
3. The floors in the children's bedrooms.
4. The floor areas adjacent to or under attic pathways.

The composite living space dust sample will be assigned a sample identification number similar to: D-R-04933-ID and analyzed for arsenic, lead and mercury.

4.4 Equipment Decontamination

This sampling effort will primarily use disposable sampling equipment (e.g., disposable scoops, etc.). Re-usable equipment such as shovels will be decontaminated between sampling sites as described in Section 3.2.4 of the QAPP.

5.0 LABORATORY METHODS

5.1 Soil Metals Analyses Methods

Soil metals analyses will be conducted as described in Section 3.7.1 of the QAPP.

5.2 Dust Metals Analyses Methods

Soil metals analyses will be conducted as described in Section 3.7.2 of the QAPP.

6.0 QUALITY CONTROL

6.1 Composite Soil Field Quality Control Samples

Field QC will be conducted as described in Section 3.8.1 of the QAPP for Field Duplicates and Section 3.8.5 for Field Equipment Blanks.

6.2 Dust Field Quality Control Samples

Field QC will be conducted as described in Section 3.8.2 of the QAPP for Field Duplicates and Section 3.8.6 for Field Equipment Blanks if needed.

7.0 REFERENCES

Butte-Silver Bow County and Atlantic Richfield Company, 2024. Silver Bow Creek/Butte Area NPL Site Butte Priority Soils Operable Unit. Final 2024 Residential Metals Abatement Program (RMAP) Quality Assurance Project Plan (QAPP) Annual Update (Non-Residential Parcels and Residential Daycares). July 15, 2024.

FIGURES

FSP Daycare Locations



Figure 1
Daycare Locations
Residential Metals Abatement
Program
Atlantic Richfield Company
Butte Silver Bow

Legend

RMAP_EXPANDED

BPSOU BOUNDARY

FSP DAYCARE LOCATIONS

0

2,000

Feet

N

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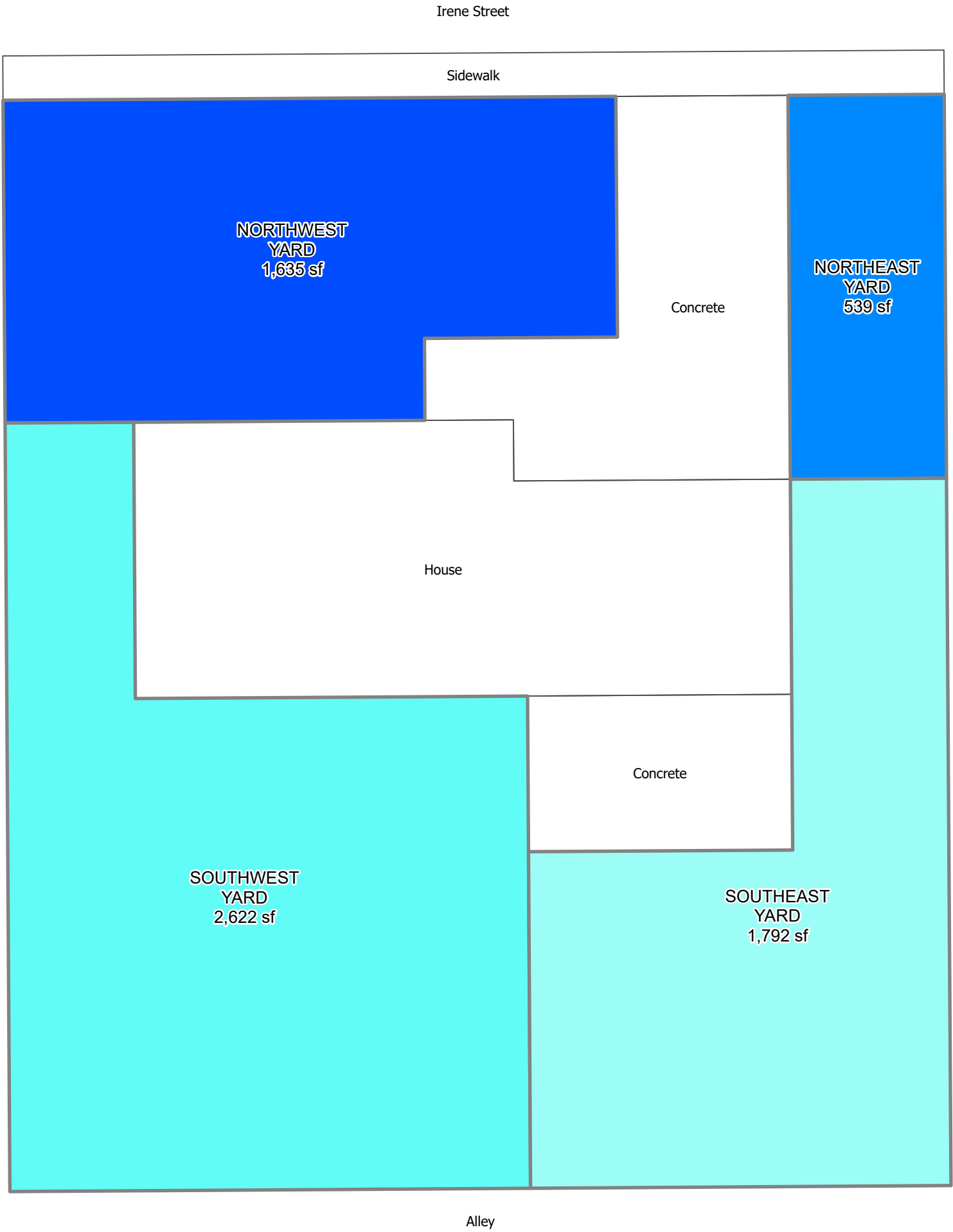
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PROPERTY ADDRESS: 2930 IRENE STREET BUTTE MT 59701
RESIDENT ID: R-04941



Resident ID
R-04941

SAMPLING SUMMARY TABLE

Sub RESID	Square Feet	# of Sub Sample Locations	# of Samples
R-04941-NEY	539	3	3
R-04941-NWY	1,635	3	3
R-04941-SWY	2,622	5	3
R-04941-SEY	1,792	3	3

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Field Sampling Plan

Residential Metals Abatement Program

Atlantic Richfield Company

Butte Silver Bow

Legend

NORTHEAST YARD - NEY

NORTHWEST YARD - NWY

SOUTHEAST YARD - SEY

SOUTHWEST YARD - SWY

0

15

Feet

N

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MAP CREATED: AUG 2024

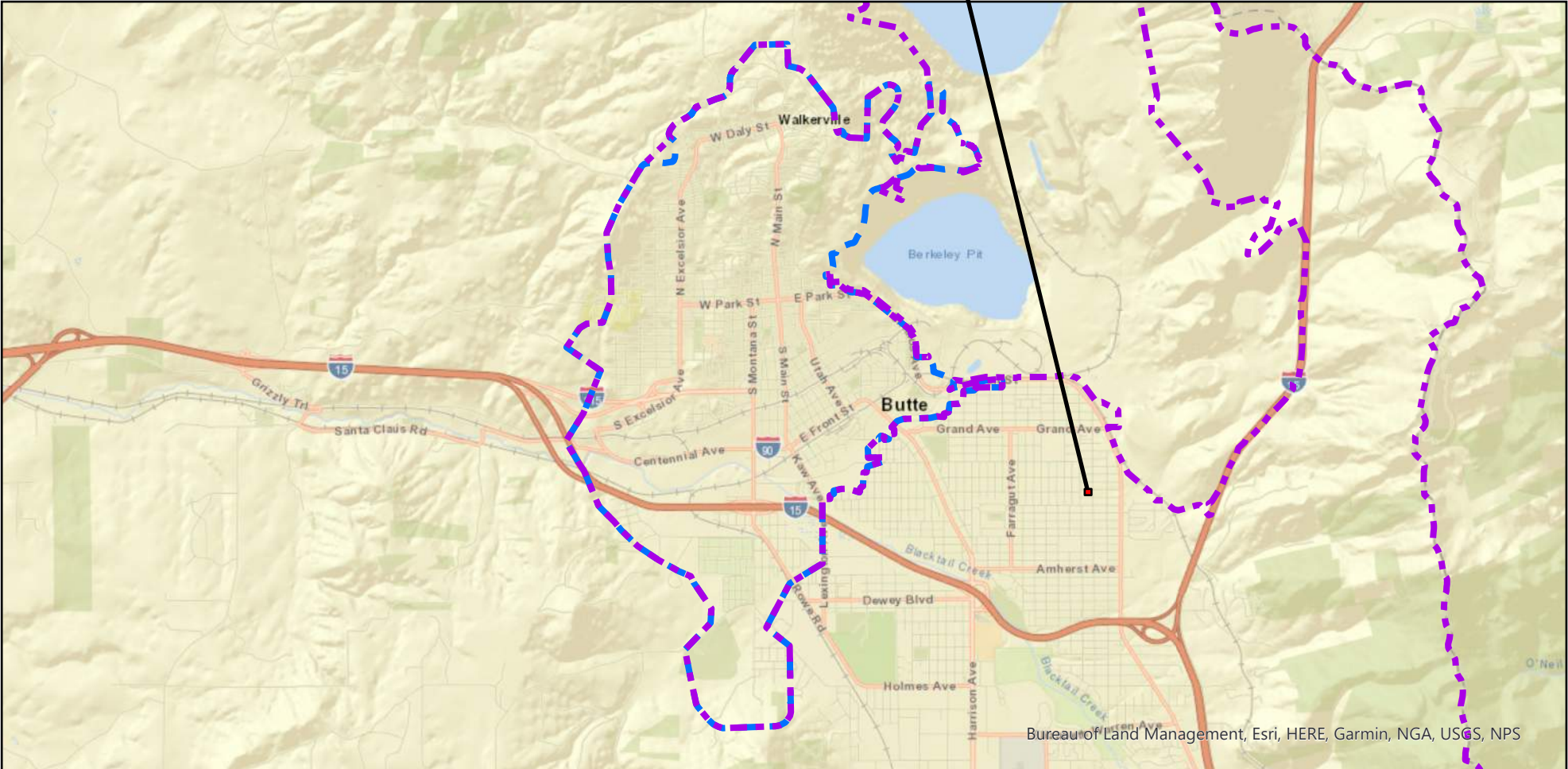
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PROPERTY ADDRESS: 2930 IRENE STREET BUTTE MT 59701
RESIDENT ID: R-04941



Esri, HERE, Garmin, IPC

Property Location



Bureau of Land Management, Esri, HERE, Garmin, NGA, USGS, NPS

Location Map

Residential Metals Abatement Program

Atlantic Richfield Company

Butte Silver Bow

Legend

RMAP_EXPANDED

BPSOU BOUNDARY

SAMPLING BOUNDARY

020

20

Feet

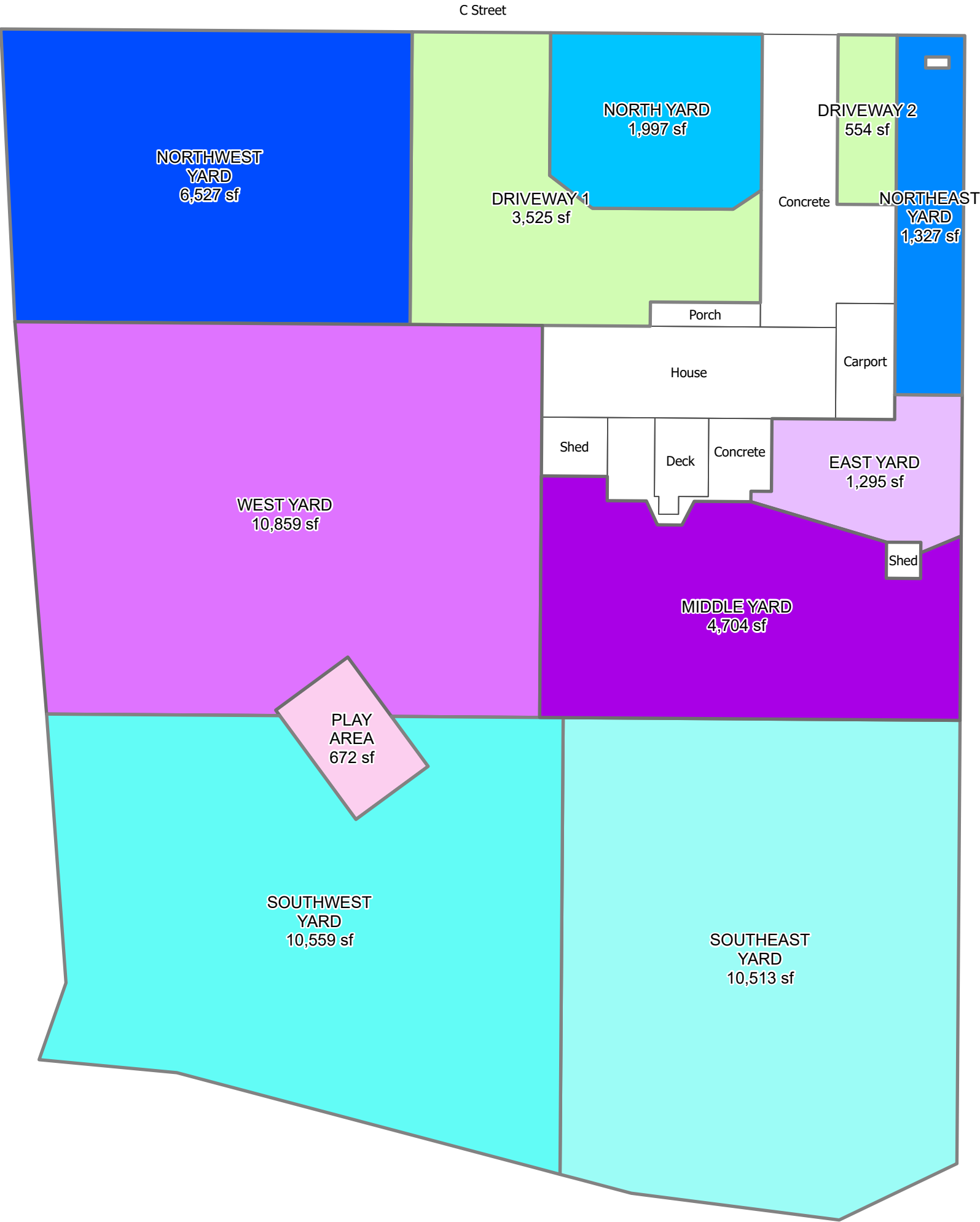
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PROPERTY ADDRESS: 1310 C STREET BUTTE MT 59701
RESIDENT ID: R-04947



Resident ID
R-04947

SAMPLING SUMMARY TABLE

Sub RESID	Square Feet	# of Sub Sample Locations	# of Samples
R-04947-DW1	3,525	3	3
R-04947-DW2	554	3	3
R-04947-EY	1,295	3	3
R-04947-MY	4,704	3	3
R-04947-NEY	1,327	3	3
R-04947-NWY	6,527	3	3
R-04947-NY	1,997	3	3
R-04947-PA	672	3	3
R-04947-SEY	10,513	5	3
R-04947-SWY	10,559	5	3
R-04947-WY	10,859	5	3

Field Sampling Plan

Residential Metals Abatement Program

Atlantic Richfield Company

Butte Silver Bow

Legend

NORTH YARD - NY

NORTHEAST YARD - NEY

NORTHWEST YARD - NWY

SOUTHWEST YARD - SWY

SOUTHEAST YARD - SEY

SOUTHWEST YARD - SWY

EAST YARD - EY

WEST YARD - WY

MIDDLE YARD - MY

DRIVEWAY - DW

PLAY AREA - PA

015

Feet

N

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PROJECT #: 0233841.00

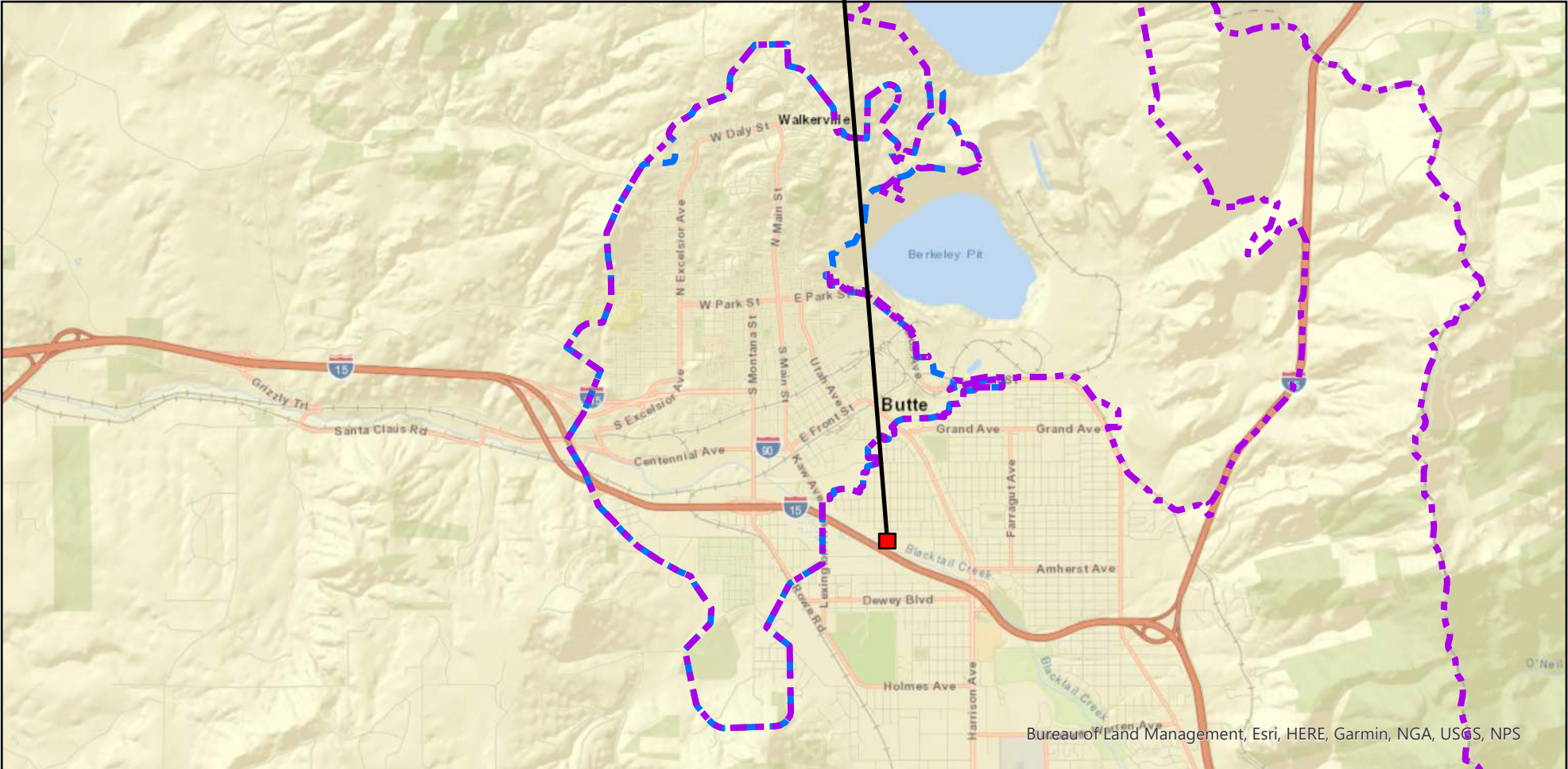
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PROPERTY ADDRESS: 1310 C STREET BUTTE MT 59701
RESIDENT ID: R-04947



Property Location



Location Map

Residential Metals Abatement Program

Atlantic Richfield Company

Butte Silver Bow

Legend

RMAP_EXPANDED

BPSOU BOUNDARY

SAMPLING BOUNDARY

060Feet

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