## Montana Tech Library

## Digital Commons @ Montana Tech

Silver Bow Creek/Butte Area Superfund Site

Montana Superfund

Fall 11-2-2022

# Approved Final Butte Priority Soils Operable Unit (BPSOU) Unreclaimed Sites Field Sampling Plan (FSP) Package #7: UR-01, UR-12, UR-03, UR-04, UR-15, and UR-17

Mike McAnulty

Follow this and additional works at: https://digitalcommons.mtech.edu/superfund\_silverbowbutte Part of the Environmental Health and Protection Commons, Environmental Indicators and Impact Assessment Commons, and the Environmental Monitoring Commons

Mike Mc Anulty Liability Manager 317 Anaconda Road Butte MT 59701 Direct (406) 782-9964 Fax (406) 782-9980

November 2, 2021

Nikia Greene Remedial Project Manager US EPA – Montana Office Baucus Federal Building 10 West 15th Street, Suite 3200 Helena, Montana 59626

Erin Agee Senior Assistant Regional Counsel US EPA Region 8 Office of Regional Counsel CERCLA Enforcement Section 1595 Wynkoop Street Denver, CO 80202 Mail Code: 80RC-C

Daryl Reed DEQ Project Officer P.O. Box 200901 Helena, Montana 59620-0901 Jonathan Morgan, Esq. DEQ, Legal Counsel P.O. Box 200901 Helena, Montana 59620-0901

#### RE: Approved Final Butte Priority Soils Operable Unit (BPSOU) Unreclaimed Sites Field Sampling Plan (FSP) Package #7: UR-01, UR-12, UR-03, UR-04, UR-15, and UR-17

Agency Representatives:

I am writing to you on behalf of Atlantic Richfield Company to distribute the approved **Final Butte Priority Soils Operable Unit (BPSOU) Unreclaimed Sites Field Sampling Plan (FSP) Package #7: UR-01, UR-12, UR-03, UR-04, UR-15, and UR-17.** The final version was approved by the Agencies on October 27, 2021. The document is available at the link below.

https://pioneertechnicalservices.sharepoint.com/:b:/s/submitted/EaLORiXqVIICv\_emSByAGBgB6EM N- Oncmp1aiNJvdL1VQ

If you have any questions or comments, please call me at (907) 355-3914.

Sincerely,

Mike Mednulty

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

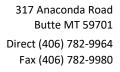


**Mike Mc Anulty** 

Liability Manager

Cc:

Patricia Gallery / Atlantic Richfield - email Chris Greco / Atlantic Richfield – email Josh Bryson / Atlantic Richfield - email Mike Mc Anulty / Atlantic Richfield - email Loren Burmeister / Atlantic Richfield – email Dave Griffis / Atlantic Richfield - email Jean Martin / Atlantic Richfield - email Irene Montero / Atlantic Richfield - email David A. Gratson / Environmental Standards / email Mave Gasaway / DGS - email John Davis / PRR - email Joe Vranka / EPA - email David Shanight / CDM - email Curt Coover / CDM - email James Freeman / DOJ - email John Sither / DOJ - email Jenny Chambers / DEQ - email Dave Bowers / DEQ - email Carolina Balliew / DEQ - email Matthew Dorrington / DEQ - email Jim Ford / NRDP - email Ray Vinkey / NRDP - email Harley Harris / NRDP - email Katherine Hausrath / NRDP - email Meranda Flugge / NRDP - email Ted Duaime / MBMG - email Gary Icopini / MBMG - email Becky Summerville / MR - email Kristen Stevens / UP - email Robert Bylsma / UP - email John Gilmour / Kelley Drye - email Leo Berry / BNSF - email Robert Lowry / BNSF - email Brooke Kuhl / BNSF – email Mark Engdahl / BNSF - email Jeremie Maehr / Kennedy Jenks - email Annika Silverman / Kennedy Jenks - email Matthew Mavrinac / RARUS - email Harrison Roughton / RARUS - email Brad Gordon / RARUS - email Mark Neary / BSB - email Eric Hassler / BSB - email Julia Crain / BSB - email





**Mike Mc Anulty** 

Liability Manager

Chad Anderson / BSB - email Brandon Warner / BSB – email Abigail Peltomaa / BSB - email Eileen Joyce / BSB – email Sean Peterson/BSB – email Gordon Hart / BSB – email Jeremy Grotbo / BSB – email Josh Vincent / WET - email Craig Deeney / TREC - email Scott Bradshaw / TREC - email Brad Archibald / Pioneer - email Pat Sampson / Pioneer - email Mike Borduin / Pioneer - email Joe McElroy / Pioneer – email Andy Dare / Pioneer – email Karen Helfrich / Pioneer - email Leesla Jonart / Pioneer - email Connie Logan/ Pioneer – email Ian Magruder/ CTEC- email CTEC of Butte - email Scott Juskiewicz / Montana Tech – email

File: MiningSharePoint@bp.com - email BPSOU SharePoint - upload 317 Anaconda Road Butte MT 59701 Direct (406) 782-9964 Fax (406) 782-9980





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

Ref: 8MO

October 27, 2021

Mike Mcanulty Liability Manager Remediation Management Services Company An affiliate of **Atlantic Richfield Company** 317 Anaconda Rd Butte, MT 59701 On behalf of Respondents

Re: Approval letter for the Butte Priority Soils Operable Unit (BPSOU) Unreclaimed Sites – Final Field Sampling Plan (FSP) #7; UR-01, UR-02, UR-03, UR-04, UR-15, and UR-17, (dated October 18, 2021)

Dear Mike:

The U. S. Environmental Protection Agency (EPA), in consultation with the Montana Department of Environmental Quality (DEQ), is approving the *BPSOU Unreclaimed Sites - Final Field Sampling Plan* (*FSP*) #7; *UR-01*, *UR-02*, *UR-03*, *UR-04*, *UR-15*, and *UR-17* (*October 18*, 2021). Please distribute this FSP submittal #7 as final.

If you have any questions or concerns, please call me at (406) 457-5019.

Sincerely,



Digitally signed by NIKIA GREENE Date: 2021.10.27 15:14:12 -06'00'

Nikia Greene Remedial Project Manager

cc: (email only) Butte File Jenny Chambers; DEQ Matt Dorrington, DEQ Daryl Reed; DEQ Jon Morgan: DEO counsel Carolina Balliew; DEQ Harley Harris; NRDP Katherine Hausrath; NRDP Jim Ford; NRDP Ray Vinkey; NRDP John Gallagher; BSBC Eileen Joyce; BSBC Sean Peterson; BSBC Eric Hassler; BSBC Brandon Warner: BSBC Chad Anderson; BSBC Karen Sullivan; BSBC Julia Crain; BSBC Abby Peltomaa; BSBC Jeremy Grotbo; BSBC Anne Walsh; UP Robert Bylsma; UP counsel Leo Berry; BNSF and UP counsel Mark Engdahl; BNSF Brooke Kuhl; BNSF counsel Jeremie Maehr; Kennedy Jenks for BNSF and UP Annika Silverman; Kennedy Jenks for BNSF and UP Bob Andreoli; Patroit/RARUS Becky Summerville; counsel for Inland Properties Inc. Robert Lowry, BNSF counsel Loren Burmeister; AR Josh Bryson; AR Mike Mcanulty; AR Dave Griffis; AR Jean Martin; Counsel AR Mave Gasaway; attorney for AR Adam Cohen; Counsel for AR Pat Sampson; Pioneer for AR Scott Sampson; Pioneer for AR Scott Bradshaw; TREC Mike Borduin: Pioneer for AR Karen Helfrich; Pioneer for AR Andy Dare; Pioneer for AR Scott Sampson; Pioneer for AR Brad Archibald; Pioneer for AR Andy Dare; Pioneer for AR Tina Donovan; Woodardcurran for AR Don Booth; AR consultant Ted Duaime; MBMG

Gary Icopini; MBMG David Shanight, CDM Smith Curt Coover, CDM Smith Chapin Storrar; CDM Smith Erin Agee, EPA Joe Vranka; EPA Joe Vranka; EPA Chris Wardell; EPA Dana Barnicoat; EPA Charlie Partridge; EPA Jean Belille; EPA Ian Magruder; CTEC (Tech Advisor) Janice Hogan; CTEC Kristi Carroll; Montana Tech Library

Mike Mc Anulty Liability Manager

October 18, 2021

317 Anaconda Road Butte MT 59701 Direct (406) 782-9964 Fax (406) 782-9980

Nikia Greene Remedial Project Manager US EPA – Montana Office Baucus Federal Building 10 West 15th Street, Suite 3200 Helena, Montana 59626

Erin Agee Senior Assistant Regional Counsel US EPA Region 8 Office of Regional Counsel CERCLA Enforcement Section 1595 Wynkoop Street Denver, CO 80202 Mail Code: 80RC-C

Daryl Reed DEQ Project Officer P.O. Box 200901 Helena, Montana 59620-0901 Jonathan Morgan, Esq. DEQ, Legal Counsel P.O. Box 200901 Helena, Montana 59620-0901

RE: Response to Comments to the Butte Priority Soils Operable Unit (BPSOU) Unreclaimed Sites Draft Final Field Sampling Plan (FSP) Package #7: UR-01, UR-12, UR-03, UR-04, UR-15, and UR-17

Agency Representatives:

I am writing to you on behalf of Atlantic Richfield Company to provide response to comments to the **Butte Priority Soils Operable Unit (BPSOU) Unreclaimed Sites Draft Final Field Sampling Plan (FSP) Package #7: UR-01, UR-12, UR-03, UR-04, UR-15, and UR-17** provided by the Agencies on September 27, 2021. The revised plan may be downloaded at the following link:

https://pioneertechnicalservices.sharepoint.com/:b:/s/submitted/EZcENghSErpJnAC6vJ1Om0ABM 19 WfXZS4aqir0nM7sdA

Agency Comments:

Site: UR-01 Between Ryan Rd. and Alice St., UR-04 NW Corner of Center St. and Idaho St, and UR-15 S of Ryan Rd and W of 4th St:

*Please remove "J" within Table 1 in the concentrations for Arsenic, Copper, Zink or define what the "J" represents.* 

**Atlantic Richfield Response:** Atlantic Richfield respectfully declines altering final data. As noted in the FSP #7 text, sample data were obtained from the BPSOU Geocortex web-based database, which contains final data from previous sampling activities. The letter "J" accompanying sample results typically indicates specific criteria may not have been met when analysis was performed, and results are considered qualified. These criteria are dependent upon laboratory protocol. Laboratory data qualifiers are defined in the data



**Mike Mc Anulty** 

Liability Manager

317 Anaconda Road Butte MT 59701 Direct (406) 782-9964 Fax (406) 782-9980

deliverable provided by the laboratory which performed the analysis. The U.S. Environmental Protection Agency (EPA) 2020 National Functional Guidelines for Inorganic Superfund Methods Data Review provides the following definition for J qualified data. *"The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample."* The text has been updated accordingly.

#### All Figure:

Please remove the private property owner names or business names from all figures.

Atlantic Richfield Response: Private property ownership and business names have been removed from figures and text.

#### **End of Comments**

If you have any questions or comments, please call me at (907) 355-3914.

Sincerely,

Mike Mcanulty

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



**Mike Mc Anulty** 

Liability Manager

317 Anaconda Road Butte MT 59701 Direct (406) 782-9964 Fax (406) 782-9980

Cc: Patricia Gallery / Atlantic Richfield - email Chris Greco / Atlantic Richfield – email Josh Bryson / Atlantic Richfield - email Mike Mc Anulty / Atlantic Richfield - email Loren Burmeister / Atlantic Richfield – email Dave Griffis / Atlantic Richfield - email Jean Martin / Atlantic Richfield - email Irene Montero / Atlantic Richfield - email David A. Gratson / Environmental Standards / email Mave Gasaway / DGS - email John Davis / PRR - email Joe Vranka / EPA - email David Shanight / CDM - email Curt Coover / CDM - email James Freeman / DOJ - email John Sither / DOJ - email Jenny Chambers / DEQ - email Dave Bowers / DEQ - email Carolina Balliew / DEQ - email Matthew Dorrington / DEQ - email Jim Ford / NRDP - email Ray Vinkey / NRDP - email Harley Harris / NRDP - email Katherine Hausrath / NRDP - email Meranda Flugge / NRDP - email Ted Duaime / MBMG - email Gary Icopini / MBMG - email Becky Summerville / MR - email Kristen Stevens / UP - email Robert Bylsma / UP - email John Gilmour / Kelley Drye - email Leo Berry / BNSF - email Robert Lowry / BNSF - email Brooke Kuhl / BNSF – email Mark Engdahl / BNSF - email Jeremie Maehr / Kennedy Jenks - email Annika Silverman / Kennedy Jenks - email Matthew Mavrinac / RARUS - email Harrison Roughton / RARUS - email Brad Gordon / RARUS - email Mark Neary / BSB - email Eric Hassler / BSB - email



**Mike Mc Anulty** 

Liability Manager

Julia Crain / BSB - email Chad Anderson / BSB - email Brandon Warner / BSB – email Abigail Peltomaa / BSB - email Eileen Joyce / BSB – email Sean Peterson/BSB – email Gordon Hart / BSB – email Jeremy Grotbo / BSB – email Josh Vincent / WET - email Craig Deeney / TREC - email Scott Bradshaw / TREC - email Brad Archibald / Pioneer - email Pat Sampson / Pioneer - email Mike Borduin / Pioneer - email Joe McElroy / Pioneer – email Andy Dare / Pioneer – email Karen Helfrich / Pioneer - email Leesla Jonart / Pioneer - email Connie Logan/ Pioneer – email lan Magruder/ CTEC- email CTEC of Butte - email Scott Juskiewicz / Montana Tech - email

File: MiningSharePoint@bp.com - email BPSOU SharePoint - upload 317 Anaconda Road Butte MT 59701 Direct (406) 782-9964 Fax (406) 782-9980



Mike Mc Anulty Liability Manager 317 Anaconda Road Butte MT 59701 Direct (406) 782-9964 Fax (406) 782-9980

#### October 18, 2021

Nikia Greene Remedial Project Manager US EPA – Montana Office Baucus Federal Building 10 West 15th Street, Suite 3200 Helena, Montana 59626

Erin Agee Senior Assistant Regional Counsel US EPA Region 8 Office of Regional Counsel CERCLA Enforcement Section 1595 Wynkoop Street Denver, CO 80202 Mail Code: 80RC-C

Daryl Reed DEQ Project Officer P.O. Box 200901 Helena, Montana 59620-0901 Jonathan Morgan, Esq. DEQ, Legal Counsel P.O. Box 200901 Helena, Montana 59620-0901

# Butte Priority Soils Operable Unit (BPSOU) Unreclaimed Sites Final Field Sampling Plan (FSP) Package #7: UR-01, UR-02, UR-03, UR-04, UR-15, and UR-17

Dear Agency Representatives:

As described in Appendix D, Attachment C to the 2020 Consent Decree, areas listed as Unreclaimed Solid Media Sites within Butte Priority Soils Operable Unit (BPSOU) may have potentially been impacted by historic mining and therefore may pose a threat to human health, contribute metals-impacted sediments to existing or planned wet weather control features, or contribute to the degradation of surface water quality. There are a total of 39 unclaimed sites, multiple sites will be organized in a package for approval.

Field sampling plan (FSP) package #7 (FSP Package #7) includes Unreclaimed (UR) Sites UR-01, UR-02, UR-03, UR-04, UR-15, and UR-17. Site evaluations will be performed using means and methods provided in the Atlantic Richfield Company Final Unreclaimed Sites Quality Assurance Project Plan (QAPP) published October 12, 2018, which was prepared in accordance with U.S. Environmental Protection Agency (EPA) guidance documents EPA QA/R-5 and EPA QA/G-5 for QAPP development. The QAPP was updated in 2021 (referred to herein as UR Sites QAPP) as a component of the BPSOU Solid Media Management Project Plan. Results from site evaluations will be used to prepare site declarations and assist with determination of site remediation requirements. Site evaluations will begin in the third quarter 2021 and are anticipated to be completed 2022, or as site access allows. Site declarations for sites sampled in 2021 are anticipated to be provided for Agency review and approval by the end of 2021. Declarations of sites sampled after 2021 will be provided as soon as feasible. Remedial action will be performed following Agency approval of pertinent site-specific remedial action work plans.



A preliminary list of FSP packages, provided below, will be updated to record the status and progress related to FSP package submittals.

Package	Sites	Submittal Date	Approval Date
1	UR-23, 31, 32, and 39	May 19, 2021	June 8, 2021
2	UR-24, 26, and 40	June 30, 2021	August 27, 2021
3	UR-06, 07, 20, 22, 35, and 36	July 2, 2021	August 27, 2021
4	UR-16 and 21	August 20, 2021	August 30, 2021
5	UR-12, 13, 33, and 38	August 23, 2021	August 30, 2021
6	UR-05, 27, 28, 29, 30, and 34	September 14, 2021	TBD
7	UR-01, 02, 03, 04, 15, and 17	September 14, 2021	TBD

The crosswalk list provided below references where pertinent field sample collection and documentation elements are discussed.

	Reference Location	
Element	FSP	UR Sites QAPP
Title page and approval authority.		Page i
Introduction and appropriate Agency-approved UR Sites QAPP reference.	х	
Goals and objectives of sampling.		Section 2.4, 3.2
Proposed schedule for field work.	Х	
Site figure including sampling locations, number, and depth of samples to be collected, and sample field identification.	х	Section 3.2.1
Field activity methods and procedures, standard operating procedures.		Section 3.2, Table 4
Sample labeling and shipping.		Section 3.2.5, Appendix C
Sample analysis, specifying X-ray fluorescence (XRF) vs. laboratory analysis and laboratory name.		Section 3.3
Figure showing the site and/or area represented by a sample, sample ID, and aliquot locations for composite samples.	х	

Soil sampling is proposed for FSP Package #7 at 6 UR Sites located in the uptown area of Butte, Montana, south of Walkerville. The results of the soil sampling will be used to support the site declaration and potential future remediation requirements for each site. This FSP is consistent with Section 3.0 Data Acquisition protocol described in the UR Sites QAPP. These 6 UR Sites vary from 0.3 acres to 12.8. Sites UR-01, 02, 03, and 15 are located along the northern outskirts of Butte and are vacant lots that appear to have motor vehicle travel across various parts of the sites. Sites UR-4 and 17 are located near residential housing. Each site is discussed separately below. The attachments at the end of this document include figures for each site showing the proposed soil sampling locations.

### Site: UR-01 Between Ryan Rd. and Alice St.

#### Background

Site UR-01 is approximately 9.2 acres and is located north of Walkerville and just north of the Alice Pit. Site UR-01 is bounded on the south by North Alice Street and on the north by Ryan Road (Figure 1). Ownership of Site UR-01 includes Atlantic Richfield Company and a private third party.

Site UR-01 is vacant land with well-established vegetation and several bare areas including windrows of dumped material. The dumped material is covered with established weeds and grasses. Erosion rill starting from the middle of the site running northwest into the drainage ditch appears to have iron staining and impacted soils. There are residences within 200 feet of UR-01 in several directions. Site UR-01 is in the Beef Straight Gulch drainage basin.

#### **Previous Sampling Efforts**

Data obtained from the Geocortex web-based database at

https://eis2.woodardcurran.com/Html5Viewer/index.html?viewer=BPButte.BPSOU contain the record for one previous soil sample near Site UR-01. Arsenic sample results contain the letter "J" which is indicative of a data qualifier. The letter "J" accompanying sample results typically indicates specific criteria may not have been met when analysis was performed, and results are considered qualified. These criteria are dependent upon laboratory protocol. Laboratory data qualifiers are defined in the data deliverable provided by the laboratory which performed the analysis. The EPA 2020 National Functional Guidelines for Inorganic Superfund Methods Data Review provides the following definition for J qualified data, "*The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.*" The approximate sample location is shown on Figure 1 with the results provided in Table 1 below. None of the results listed exceed the BPSOU action levels. The BPSOU action levels are listed in Tables 1 and 2 of the UR Sites QAPP.

#### Table 1: Previous Sampling Results from BPSOU Soil Sampling

	Sample Station ID	
COC	WD-029	
Arsenic	25 J	
Cadmium	5	
Copper	103	
Lead	33	
Zinc	152	
Sample Date	6/18/87	

#### (units are milligrams per kilograms)

COC: contaminant of concern. J: estimated result.

### Site: UR-02 E. Scrap H Point Rd. Near Moose Dump

#### Background

Site UR-02 is approximately 12.8 acres and is located east of Scrap H Point Road in Walkerville near Moose Dump (BRES No. 12). Site UR-02 is bounded by a 4-strand barbed wire fence on the west along Scrap H Point Road (Figure 2). Site UR-02 is located on property owned by Atlantic Richfield Company and a private third party.

Site UR-02 is vacant land with several bare areas and heavily impacted with mining waste including debris and garbage dumps. The Moose Ditch (AB-D-S001) riprap-lined drainage channel is located between the barbed fence and Scrap H point.

#### **Previous Sampling Efforts**

Data obtained from the Geocortex web-based database at

<u>https://eis2.woodardcurran.com/Html5Viewer/index.html?viewer=BPButte.BPSOU</u> contain the records for previous soil samples near Site UR-02. The approximate sample locations are shown on Figure 2 with the results provided in Table 2 below. Results above BPSOU action levels are highlighted in Table 2. The BPSOU action levels are listed in Tables 1 and 2 of the UR Sites QAPP.

(4			
	Sample S	tation ID	
COC	WD-075	WD-076	
Arsenic	128	108	
Cadmium	42	36	
Copper	314	360	
Lead	<mark>2,210</mark>	<mark>3,200</mark>	
Zinc	<mark>10,000</mark>	<mark>7,220</mark>	
Sample Date	6/9/1987	6/9/1987	

# Table 2: Previous Sampling Results from BPSOUSoil Sampling

#### (units are milligrams per kilograms)

COC: contaminant of concern.

## Site: UR-03 S. of Dewey Point Rd. and Rising Star Rd. near Surprise Dump

#### Background

Site UR-03 is approximately 0.3 acres and is located in the northwest part of Walkerville. The site is southwest of the intersection of Rising Star Road and Harrison Street (or Dewey Point Road) (Figure 3). The majority of Site UR-03 is owned by Atlantic Richfield Company. A small portion in the south part of Site UR-03 is owned by a private third-party resident.

Site UR-03 is vacant land and almost the entire site consists of several lobes of waste rock dumps. The site is mostly bare ground. On top of the piles there are approximately 3-foot diameter sink holes or small excavation activity. A residential area in Walkerville is located about 400 feet to the southeast of UR-03. Site UR-03 is in the Beef Straight Gulch drainage basin.

#### **Previous Sampling Efforts**

There is no record of previous soil sampling at Site UR-03 nor in its vicinity.

## Site: UR-04 NW Corner of Center St. and Idaho St.

#### Background

Site UR-04 is approximately 0.9 acres. It is located slightly south of Walkerville and just northwest of the intersection of North Idaho and Center Streets (Figure 4), on the east side of the Missoula Gulch drainage. Site UR-04 consists of a poorly vegetated, southwest facing slope that is immediately southwest of the former Missoula Mine yard. An especially steep area in the middle of the site appears to consist of mine waste, based on yellow color and clayey texture of the soil. The south lobe of site UR-04 has better vegetation than the rest of the site, but there are still bare areas and a dump area that may contain waste rock.

Site UR-04 is owned by a private third-party. Site UR-04 is vacant land in a largely open-space area. There are several residences about 150 feet south of Site UR-04 along Missoula Avenue. Site UR-04 is in the Missoula Gulch drainage basin.

#### **Previous Sampling Efforts**

Data obtained from the Geocortex web-based database at

https://eis2.woodardcurran.com/Html5Viewer/index.html?viewer=BPButte.BPSOU contain the record for previous soil samples within or near Site UR-04. Some sample results contain the letter "J" which is indicative of a data qualifier. The letter "J" accompanying sample results typically indicates specific criteria may not have been met when analysis was performed, and results are considered qualified. These criteria are dependent upon laboratory protocol. Laboratory data qualifiers are defined in the data deliverable provided by the laboratory which performed the analysis. The EPA 2020 National Functional Guidelines for Inorganic Superfund Methods Data Review provides the following definition for J qualified data, "*The result is an estimated quantity*. *The associated numerical value is the approximate concentration of the analyte in the sample*." The approximate sample locations are shown on Figure 4 with the results provided in Table 3 below. Some of the results listed show exceedances of BPSOU action levels for lead and zinc (highlighted in yellow). The BPSOU action levels are listed in Tables 1 and 2 of the UR Sites QAPP.

(units are in milligrams per kilogram)						
	Sample Station ID					
сос	08-05	08-04	08-03	08-06	WD-018	WD-019
Arsenic	33	35	44	73	67 J	63 J
Cadmium	4	6	2	6	14 J	13 J
Copper	324	258	122	157	146	128
Lead	651	<mark>1,320</mark>	771	<mark>1,820</mark>	<mark>2,080</mark>	430
Zinc	<mark>1,210</mark>	<mark>1,780</mark>	979	<mark>2,260</mark>	<mark>3,190</mark>	<mark>2,720</mark>
Date	4/18/1994	4/18/1994	4/18/1994	4/18/1994	6/16/1987	6/16/1987

#### Table 3: Previous Sampling Results Near Site UR-04 (units are in milligrams per kilogram)

COC: contaminant of concern. J: estimated result.

## Site: UR-15 S of Ryan Rd and W of 4th St.

#### Background

Site UR-15 is approximately 3.8 acres and is located north of Walkerville and south of Ryan Road. The east end of Site UR-15 is at the southwest intersection of Ryan Road and Fourth Street (Figure 5). The site extends about 1,000 feet to the west of the intersection and is totally on the south side of Ryan Road. The site consists mostly of waste rock dumps that are bare. Beef Straight Creek forms part of the south border of Site UR-15 and also cuts through a portion of it. Ownership of Site UR-15 includes Butte-Silver Bow, Atlantic Richfield Company, and private third-party owners.

Site UR-15 is vacant land that has poor vegetation. The nearest residences are about 600 feet to the north and to the south. Site UR-15 is in the Beef Straight Gulch drainage basin.

#### **Previous Sampling Efforts**

Data obtained from the Geocortex web-based database at

<u>https://eis2.woodardcurran.com/Html5Viewer/index.html?viewer=BPButte.BPSOU</u> contain the records for previous soil samples within or near Site UR-15. The approximate sample locations are shown on Figure 5 with the results listed in Table 4 below. Some of the results listed show exceedances of the BPSOU action levels for lead and zinc (highlighted in yellow). The BPSOU action levels are listed in Tables 1 and 2 of the UR Sites QAPP.

(units are milligrams per kilograms)		
	Sample Station ID	

Table 4: Previous Sampling Results from BPSOU Soil Sampling

	Sample Station ID		
COC	DR-002	FSUA-117	
Arsenic	120 J	27	
Cadmium	4	NA	
Copper	125	217	
Lead	131	<mark>2,680</mark>	
Zinc	386	<mark>2,680</mark>	
Sample Date	7/8/87	6/21/96	

COC: contaminant of concern. NA: not analyzed. J: estimated result.

## Site: UR-17 Upper Missoula Gulch – Surrounding Areas

#### Background

Site UR-17 is approximately 5.0 acres and is located in the upper reaches of the Missoula Gulch drainage on the south side of Walkerville (Figure 6) and consists of two non-contiguous UR areas to be evaluated. The site occupies a south-facing slope between a residential part of Walkerville and the bottom of Missoula Gulch. Ownership of Site UR-17 includes Atlantic Richfield Company, Butte-Silver Bow, and private third parties.

Areas comprising Site UR-17 are vacant land near residential areas with relatively good vegetation throughout the southwest section. There is an access road from 4<sup>th</sup> Street that contains a small gulley and apparent impacted soils. The northeast section of the site has large bare areas with high manganese and iron staining. There are cars on top of the steep slopes that appear to have oil leaks running down the slope. Scrap metal and glass are found through the section with variants of soil colors and erosion. Site UR-17 is in the Missoula Gulch drainage basin.

#### **Previous Sampling Efforts**

Data obtained from the Geocortex web-based database at

<u>https://eis2.woodardcurran.com/Html5Viewer/index.html?viewer=BPButte.BPSOU</u> contain the records for previous soil samples within Site UR-17. The approximate sample locations are shown on Figure 6 with the results listed in Table 5 below. Some of the results listed show exceedances of the BPSOU action levels for lead and zinc (highlighted in yellow). The BPSOU action levels are listed in Tables 1 and 2 of the UR Sites QAPP.

	Sample Station ID		
COC	08-01	038WA05-0	
Arsenic	150	34	
Cadmium	3	6	
Copper	270	106	
Lead	441	<mark>1,025</mark>	
Zinc	461	<mark>1,840</mark>	
Sample Date	4/18/94	11/10/94	

#### Table 5: Previous Sampling Results from BPSOU Soil Sampling (units are milligrams per kilograms)

COC: contaminant of concern.

## **Unreclaimed Sites Quality Assurance Project Plan**

All field work and soil analysis will be completed in accordance with the UR Sites QAPP. The QAPP will be reviewed annually and updated as needed on Agency review and approval. Soil sampling will be conducted at the 6 UR Sites at depth intervals of 6 to 12 inches, 2 to 6 inches, and 0 to 2 inches. Sampling will take place in that order from the deepest interval (6 to 12 inches) to the shallowest interval (0 to 2 inches). Proposed sample locations for each site are shown on Figures 1 through 6.

### **Sampling Procedure**

All sampling procedures are to be followed according to the UR Sites QAPP, which describes the activities necessary to conduct soil sampling and characterization activities on UR Sites within BPSOU. It also describes the quality assurance/quality control policies and procedures to be used during collection and analysis. Implementation of this fieldwork will likely commence in the fall of 2021 and resume in spring 2022, assuming that access has been obtained for all subject parcels.

If you have questions or comments, please do not hesitate to call me at (907) 355-3914.

Sincerely,

Mike Mednulty

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

Attachments:

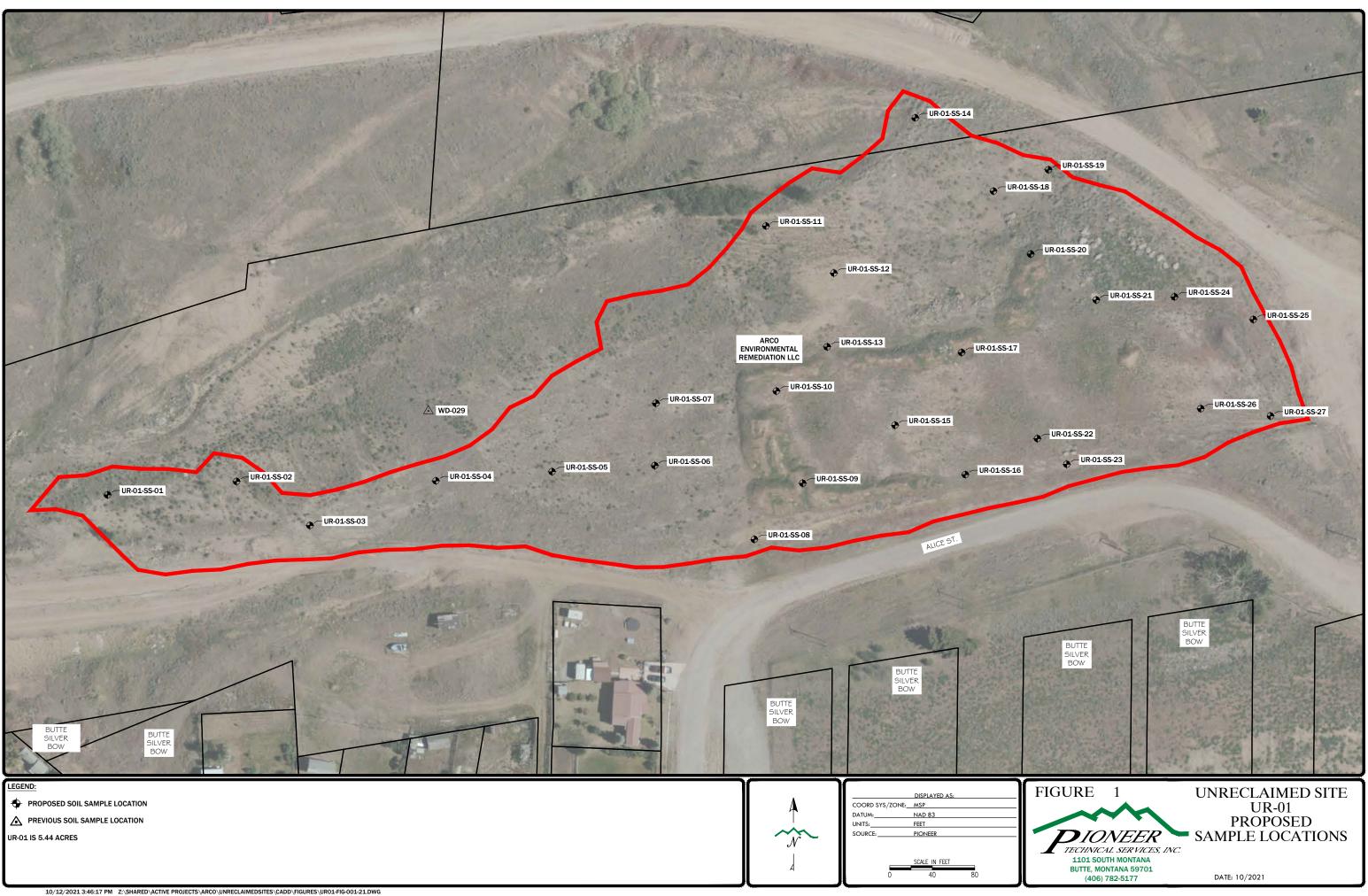
Figure 1 Unreclaimed Site UR-01 Proposed Sample Locations Figure 2 Unreclaimed Site UR-02 Proposed Sample Locations Figure 3 Unreclaimed Site UR-03 Proposed Sample Locations Figure 4 Unreclaimed Site UR-04 Proposed Sample Locations Figure 5 Unreclaimed Site UR-15 Proposed Sample Locations Figure 6 Unreclaimed Site UR-17 Proposed Sample Locations

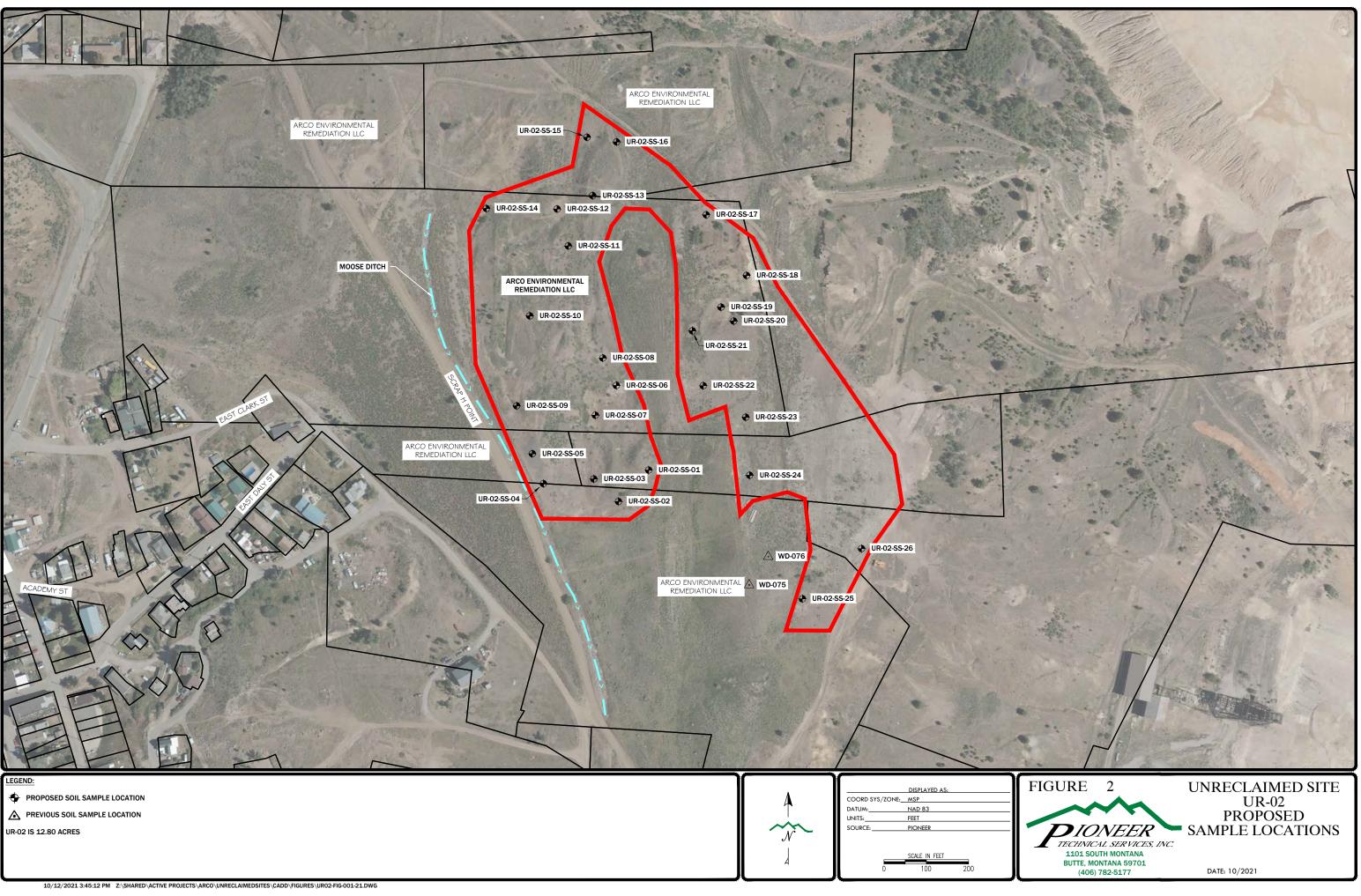
Cc: Patricia Gallery / Atlantic Richfield - email Chris Greco / Atlantic Richfield – email Josh Bryson / Atlantic Richfield - email Mike Mc Anulty / Atlantic Richfield - email Loren Burmeister / Atlantic Richfield – email Dave Griffis / Atlantic Richfield - email Jean Martin / Atlantic Richfield - email

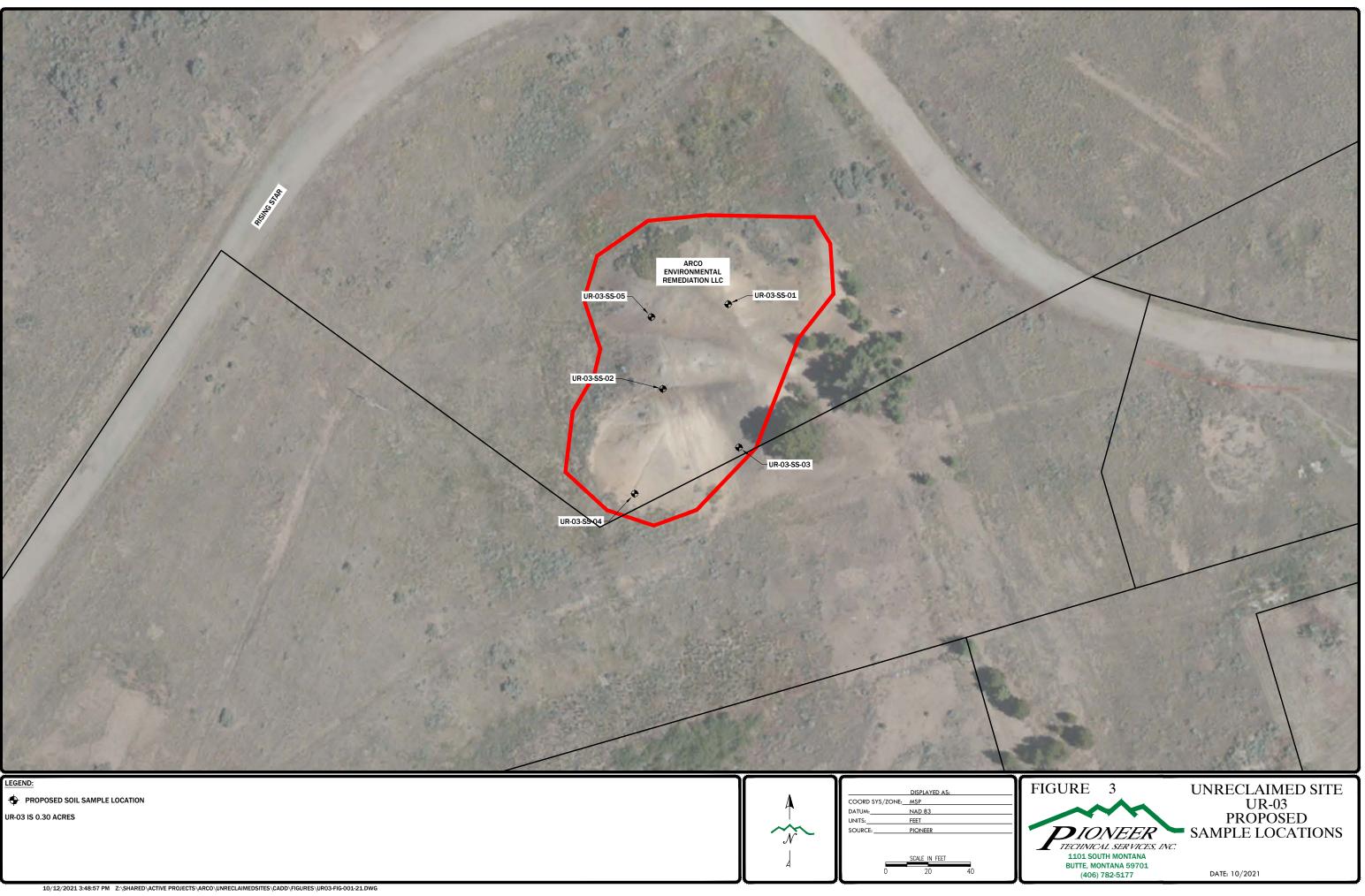
Irene Montero / Atlantic Richfield - email David A. Gratson / Environmental Standards / email Mave Gasaway / DGS - email John Davis / PRR - email Joe Vranka / EPA - email David Shanight / CDM - email Curt Coover / CDM - email James Freeman / DOJ - email John Sither / DOJ - email Jenny Chambers / DEQ - email Dave Bowers / DEQ - email Carolina Balliew / DEQ - email Matthew Dorrington / DEQ - email Jim Ford / NRDP - email Ray Vinkey / NRDP - email Harley Harris / NRDP - email Katherine Hausrath / NRDP - email Meranda Flugge / NRDP - email Ted Duaime / MBMG - email Gary Icopini / MBMG - email Becky Summerville / MR - email Kristen Stevens / UP - email Robert Bylsma / UP - email John Gilmour / Kelley Drye - email Leo Berry / BNSF - email Robert Lowry / BNSF - email Brooke Kuhl / BNSF – email Mark Engdahl / BNSF - email Jeremie Maehr / Kennedy Jenks - email Annika Silverman / Kennedy Jenks - email Matthew Mavrinac / RARUS - email Harrison Roughton / RARUS - email Brad Gordon / RARUS - email Mark Neary / BSB - email Eric Hassler / BSB - email Julia Crain / BSB - email Chad Anderson / BSB - email Brandon Warner / BSB – email Abigail Peltomaa / BSB - email Eileen Joyce / BSB – email Sean Peterson/BSB – email Gordon Hart / BSB – email Jeremy Grotbo / BSB – email Josh Vincent / WET - email Craig Deeney / TREC - email Scott Bradshaw / TREC - email

Brad Archibald / Pioneer - email Pat Sampson / Pioneer - email Mike Borduin / Pioneer - email Joe McElroy / Pioneer - email Andy Dare / Pioneer - email Karen Helfrich / Pioneer - email Leesla Jonart / Pioneer - email Connie Logan/ Pioneer - email Ian Magruder/ CTEC- email CTEC of Butte - email Scott Juskiewicz / Montana Tech - email

File: MiningSharePoint@bp.com - email BPSOU SharePoint - upload







L2/2021 3:48:57 PM	Z:\SHARED\ACTIVE PROJECTS\ARCO\UNRECLAIMEDSITES\CADD\FIGURES\UR03-FIG-001-21.DWG	

