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Butte Priority Soils Operable Unit (BPSOU) Unreclaimed Sites - Final Field Sampling Plan (FSP) #3: UR-06, UR-07, UR-20, UR-22, UR-35, and UR-36.

Mike McAnulty

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September 7, 2021

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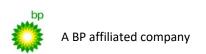
Jonathan Morgan, Esq. DEQ, Legal Counsel P.O. Box 200901 Helena, Montana 59620-0901

RE: Butte Priority Soils Operable Unit (BPSOU) Unreclaimed Sites - Final Field Sampling Plan (FSP) #3: UR-06, UR-07, UR-20, UR-22, UR-35, and UR-36.

Dear Agency Representatives:

The Butte Priority Soils Operable Unit (BPSOU) Unreclaimed Sites Final Field Sampling Plan (FSP) #3: UR-06, UR-07, UR-20, UR-22, UR-35, and UR-36 is provided per the approval letter provided by the Agencies on August 27, 2021.

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 metalsimpacted 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 #3 (FSP Package #3) includes Unreclaimed (UR) Sites UR-06, UR-07, UR-20, UR-22, UR-35, and UR-36. 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 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-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	TBD	TBD
7	UR-01, 02, 03, 04, 15, and 17	TBD	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 #3 at 6 UR Sites located in the northern area of Butte, Montana, southwest of the Berkeley Pit. 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 are made up of 5 sites less than an acre and 1 site that is 1.8 acres. UR-6, UR-7, UR-20, UR-22, and UR-35 are vacant lots that that are near businesses and residential areas with pedestrian traffic.

UR-36 is the south Parrott slope site and contains steep slopes that drain into public roadways approximated at 1.8 acres. Each of the sites 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-06 Capri Motel Parking Lot

Background

Site UR-06 is approximately 0.22 acres and is located at the northwest corner of East Granite and North Arizona Streets, adjacent to Capris Motel – Arctic Dump (BRES No. 100), in uptown Butte (Figure 1). It is on the east end of the uptown business district, in an area of mixed commercial and open space use. Site UR-06 is owned by LXS Hospitality, LLC. A motel is located on the same parcel where UR-06 is located. Parts of site UR-06 are sometimes used for parking and part of it is a driveway into an underground portion of the motel building (perhaps a former parking garage).

The ground surface at Site UR-06 is mostly gravel containing iron staining with very little vegetation. Currently there are engineered beams being stored along the west boundary. Runoff from Site UR-06 generally flows to the south into a storm drain (ID: AB-I-5964) located in the southeast corner outside of the boundary. Site UR-06 is in the Anaconda Road / Butte Brewery drainage basin and sits north of the Belmont Diversion structure. Storm water drainage appears to be directed to the Belmont Diversion structure, which discharges to the Berkeley Pit, and does not impact Silver Bow Creek.

Previous Sample Efforts

Data obtained from the Geocortex web-based database at https://eis2.woodardcurran.com/Html5Viewer/index.html?viewer=BPButte.BPSOU contains the records for the previous soil samples near Site UR-06. The approximate sample locations are included on Figure 1 with results provided in Table 1 below. Some of the results listed, shown in highlighted cells, show exceedances of BPSOU action levels for copper, lead, and zinc. The BPSOU action levels are listed in Tables 1 and 2 of the Atlantic Richfield Company UR Sites QAPP.

Table 1: Previous Sampling Results from BPSOU Soil Sampling (units are milligrams per kilograms)

	Sample Station ID		
COC	BF-010	FSUA-21	
Arsenic	133 J	68	
Cadmium	14	NA	
Copper	1,260	870	
Lead	2,790	740	
Zinc	2,940	4,760	
Sample Date	7/23/87	10/27/95	

Site: UR-07 SW Corner of E Granite St. and Covert St.

Background

Site UR-07 is approximately 0.75 acres and is located at the southwest corner of East Granite and Covert Streets in uptown Butte (Figure 2). It is on the east edge of the uptown area, just west of the Berkeley Pit in an area of mixed residential and commercial use. There are many vacant lots in the area. Site UR-07 itself consists of several vacant parcels. Ownership of Site UR-07 includes Cote Family LLC, Butte-Silver Bow, and Montana Resources. Site UR-07 appears to have moderate vegetation, but the northwest one-third of the site contains a significant bare area that appears to be impacted soil.

Runoff from Site UR-07 generally flows to the south. Site UR-07 is in the Anaconda Road / Butte Brewery drainage basin of BPSOU.

Previous Sample Efforts

Data obtained from the Geocortex web-based database at https://eis2.woodardcurran.com/Html5Viewer/index.html?viewer=BPButte.BPSOU contains the records for the previous soil samples at Site UR-07. The samples were collected in 1995 as part of the Field Survey of Unreclaimed Areas program. The approximate sample locations are included on Figure 2 with results provided in Table 2 below. Some of the results listed, shown in highlighted cells, exceeded BPSOU action levels for arsenic, copper, lead, and zinc. The BPSOU action levels are listed in Tables 1 and 2 of the UR Sites QAPP.

Table 2: Previous Sampling Results from BPSOU Soil Sampling (units are milligrams per kilograms)

	Sample Station ID	
COC	FSUA-26	FSUA-27
Arsenic	312	262
Cadmium	NA	NA
Copper	<mark>1,270</mark>	<mark>1,130</mark>
Lead	<mark>3,560</mark>	<mark>1,130</mark>
Zinc	<mark>1,460</mark>	409
Sample Date	11/16/95	11/16/95

Site: UR-20 Park and Covert Streets (Northwest Corner)

Background

Site UR-20 is approximately 0.74 acres and is located at the northwest corner of East Park and Covert Streets in uptown Butte (Figure 3). It is on the east edge of the uptown area, just west of the Berkeley Pit in an area of mixed residential and commercial use. There are many vacant lots in the area. Site UR-20 is a vacant parcel owned by Daniel and Melody Rice. A small portion of UR-20 along the alley on the north side of the site may be owned by Butte-Silver Bow. Site UR-20 has moderate grass cover with what appears to be impacted soil along the northern boundary. There are multiple bare areas throughout the site.

Runoff from Site UR-20 generally flows to the south. Site UR-20 is in the Anaconda Road/ Butte Brewery drainage basin and sits north of the Belmont Diversion structure.

Previous Sample Efforts

Data obtained from the Geocortex web-based database at https://eis2.woodardcurran.com/Html5Viewer/index.html?viewer=BPButte.BPSOU contains the records for the previous soil sample within Site UR-20 collected in 1995 as part of the Field Survey of Unreclaimed Areas program. The approximate sample locations are included on Figure 3 with results provided in Table 3 below. The BPSOU action levels for human health and storm water screening criteria are listed in Tables 1 and 2 of the UR Sites QAPP. Some of the results listed, shown as highlighted cells, exceeded BPSOU storm water screening criteria for copper and zinc.

Table 3: Previous Sampling Results from BPSOU Soil Sampling (units are milligrams per kilograms)

	Sample Station ID	
COC	FSUA-34	
Arsenic	60	
Cadmium	NA	
Copper	<mark>2,040</mark>	
Lead	174	
Zinc	<mark>1,770</mark>	
Sample Date	11/17/95	

Site: UR-22 N. Arizona and E. Granite St. (Northeast Corner)

Background

Site UR-22 is approximately 0.68 acres and is located at the northeast corner of East Granite and North Arizona Streets in uptown Butte (Figure 4). It is on the east end of the uptown business district, in an area of mixed commercial and open space use. Bordering UR-22 on the east are two residences. Site UR-22 is vacant land. Ownership of Site UR-22 includes Thorton Properties LLC and Butte-Silver Bow. Site UR-22 has established grasses throughout the site with scattered weeds. The southwest corner of the site has a small gulley with iron and manganese staining. There are bare areas located throughout the site that contain Iron staining. There are small piles that appear to be dumped material. The portion of the site belonging to Butte-Silver Bow is an east-west trending unpaved alley that is used by the residences.

The south edge of UR-22 is a retaining wall and the ground surface sits approximately 8 feet above Granite Street. Runoff from Site UR-22 generally flows to the south.

Previous Sample Efforts

Data obtained from the Geocortex web-based database at https://eis2.woodardcurran.com/Html5Viewer/index.html?viewer=BPButte.BPSOU contains the records for the previous soil sample near Site UR-22. The approximate sample location is included on Figure 4 with results provided in Table 4 below. The BPSOU action levels for human health and storm water screening criteria are listed in Tables 1 and 2 of the UR Sites QAPP. Some of the results, shown as highlighted cells below, exceeded BPSOU storm water screening criteria for copper and zinc.

Table 4: Previous Sampling Results from BPSOU Soil Sampling (units are milligrams per kilograms)		
Sample Station ID		
COC	02-03	
Arsenic	84	
Cadmium	7	
Copper	<mark>1,340</mark>	
Lead	993	
Zinc 2,125		
Sample Date 4/19/94		

COC: contaminant of concern.

Site: UR-35 Steward Parking Lot – South of Site

Background

Site UR-35 is approximately 0.12 acres and is located 300 feet northwest of the intersection of North Main and Woolman Streets in uptown Butte (Figure 5). It is an irregular-shaped bare area, part of which is a gravel turn-around area used by local residents. It is essentially an area in the backyard of homes that face North Main Street. Ownership of site UR-35 includes Atlantic Richfield, Butte-Silver Bow, and Edgar Scott. Site UR-35 is vacant; that is, there are no structures within the boundaries of the site. However, the parcel owned by Edgar Scott has a residence and there are other residences close to UR-35. Site UR-35 is poorly vegetated with homogenous soil that is yellow in color mixed with gravel. Due to size and representation, only 3 sample locations are proposed. Storm water runoff from Site UR-35 generally flows to the south. Site UR-35 is in the Buffalo Gulch drainage basin of BPSOU.

Previous Sample Efforts

Data obtained from the Geocortex web-based database at https://eis2.woodardcurran.com/Html5Viewer/index.html?viewer=BPButte.BPSOU contains the records for the previous soil samples near Site UR-35. The samples were collected in 1995 and 1996 as part of the Field Survey of Unreclaimed Areas program. The approximate sample locations are included on Figure 5 with results provided in Table 5 below. The BPSOU action levels for human health and storm water screening criteria are listed in Tables 1 and 2 of the UR Sites QAPP. Some of the results, shown as highlighted cells below, exceeded BPSOU storm water screening criteria for arsenic, lead, and zinc.

Table 5: Previous Sampling Results from BPSOU Soil Sampling (units are milligrams per kilograms)			
,	Sample Station ID		
COC	FSUA-20	FSUA-122	
Arsenic	443	301	
Cadmium	NA	NA	
Copper	908	902	
Lead	<mark>2,070</mark>	<mark>2,860</mark>	
Zinc	<mark>3,900</mark>	<mark>2,740</mark>	
Sample Date	10/27/95	6/20/96	

Site: UR-36 S. Parrot Slope

Background

Site UR-36 is approximately 1.8 acres. It is located along the south side of Anaconda Road, just west of the Berkeley Pit and northeast of the uptown Butte business district (Figure 6). Site UR-36 is crescent shaped and wraps around the flat hilltop where the former Parrot mine is located. The majority of Site UR-36 is owned by Butte-Silver Bow and a minor portion is owned by AFFCO. Site UR-36 is vacant land in a light industrial area. There are a few residences located approximately 450 feet to the south.

The south-facing portion of the site is almost entirely bare and appears to consist of mine waste. The north-facing portion of the site has areas with moderate vegetation but also has very steep bare areas. There is some exposed bedrock in the north portion of UR-36. There is some fencing on the north side; it does not restrict access, but it denotes the AFFCO property boundary. Site UR-36 is in the Anaconda Road/Butte Brewery drainage basin and drains into the South Parrot Channel.

Previous Sample Efforts

Data obtained from the Geocortex web-based database at https://eis2.woodardcurran.com/Html5Viewer/index.html?viewer=BPButte.BPSOU contains the records for the previous soil samples in the vicinity of Site UR-36. Approximate sample locations are included on Figure 6 with results provided in Table 6 below. The BPSOU action levels for human health and storm water screening criteria are listed in Tables 1 and 2 of the UR Sites QAPP. Some of the results, shown as highlighted cells below, exceeded BPSOU storm water screening criteria for arsenic, copper, lead, and zinc.

Table 6: Previous Sampling Results from BPSOU Soil Sampling (units are milligrams per kilograms)				
	Sample Station ID			
COC	WD-087	WD-088	FSUA-145	FSUA-146
Arsenic	101	342	97	334
Cadmium	12	10	NA	NA
Copper	<mark>3,640</mark>	<mark>1,720</mark>	<mark>1,180</mark>	<mark>1,050</mark>
Lead	271	403	<mark>1,040</mark>	744
Zinc	<mark>1,110</mark>	771	<mark>2,610</mark>	731
Sample Date	6/22/87	6/22/87	6/19/96	6/16/96

Unreclaimed Sites QAPP

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 spring of 2021, 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-06 Proposed Sample Locations Figure 2 Unreclaimed Site UR-07 Proposed Sample Locations Figure 3 Unreclaimed Site UR-20 Proposed Sample Locations Figure 4 Unreclaimed Site UR-22 Proposed Sample Locations Figure 5 Unreclaimed Site UR-35 Proposed Sample Locations Figure 6 Unreclaimed Site UR-36 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
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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

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Abigail Peltomaa / BSB - email

Eileen Joyce / BSB – email

Sean Peterson/BSB - email

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Jeremy Grotbo / BSB – email

Josh Vincent / WET - email

Craig Deeney / TREC - email

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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



PROPOSED SOIL SAMPLE LOCATION

A PREVIOUS SOIL SAMPLE LOCATION

UR-06 IS 0.22 ACRES

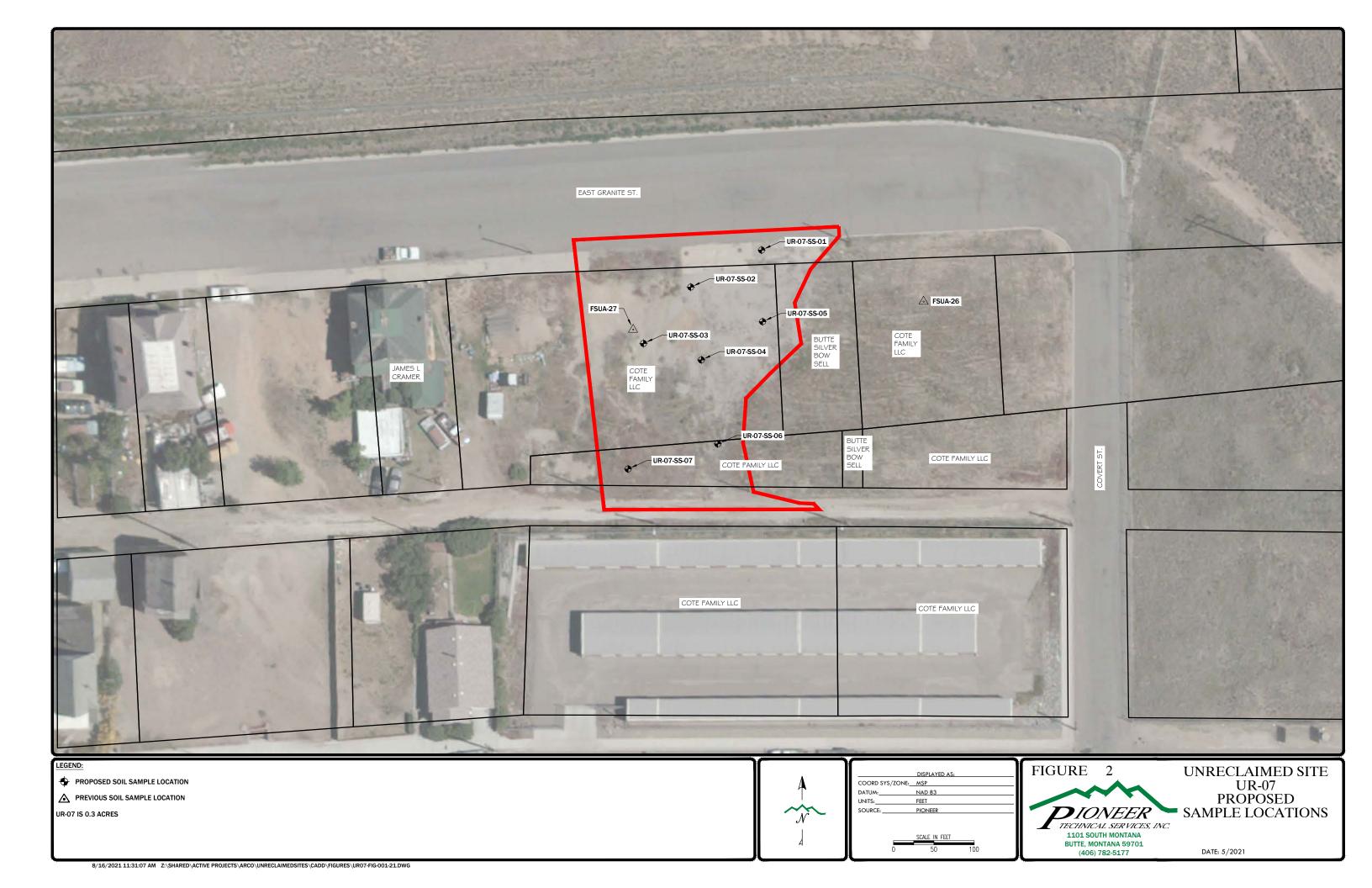


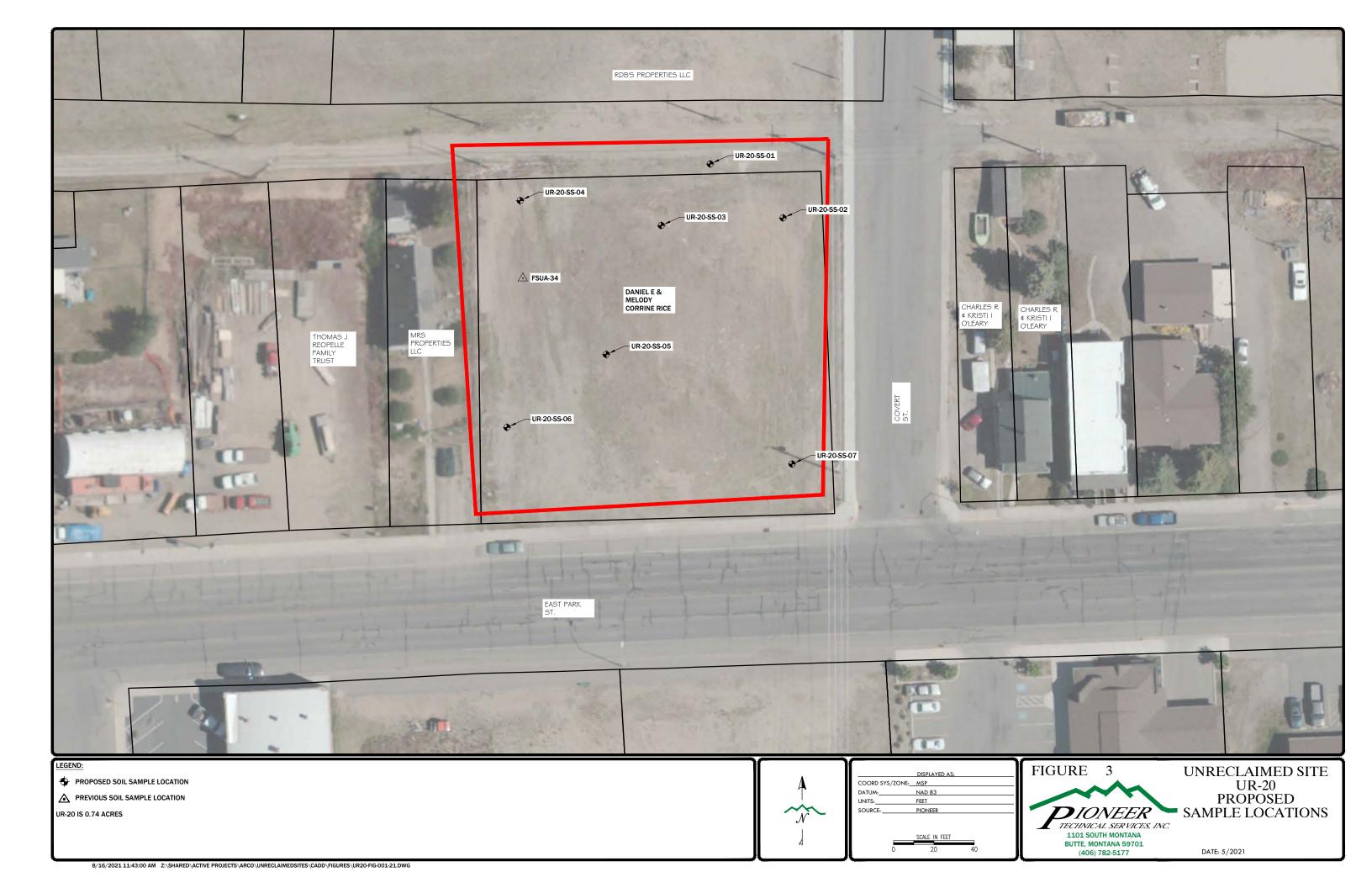


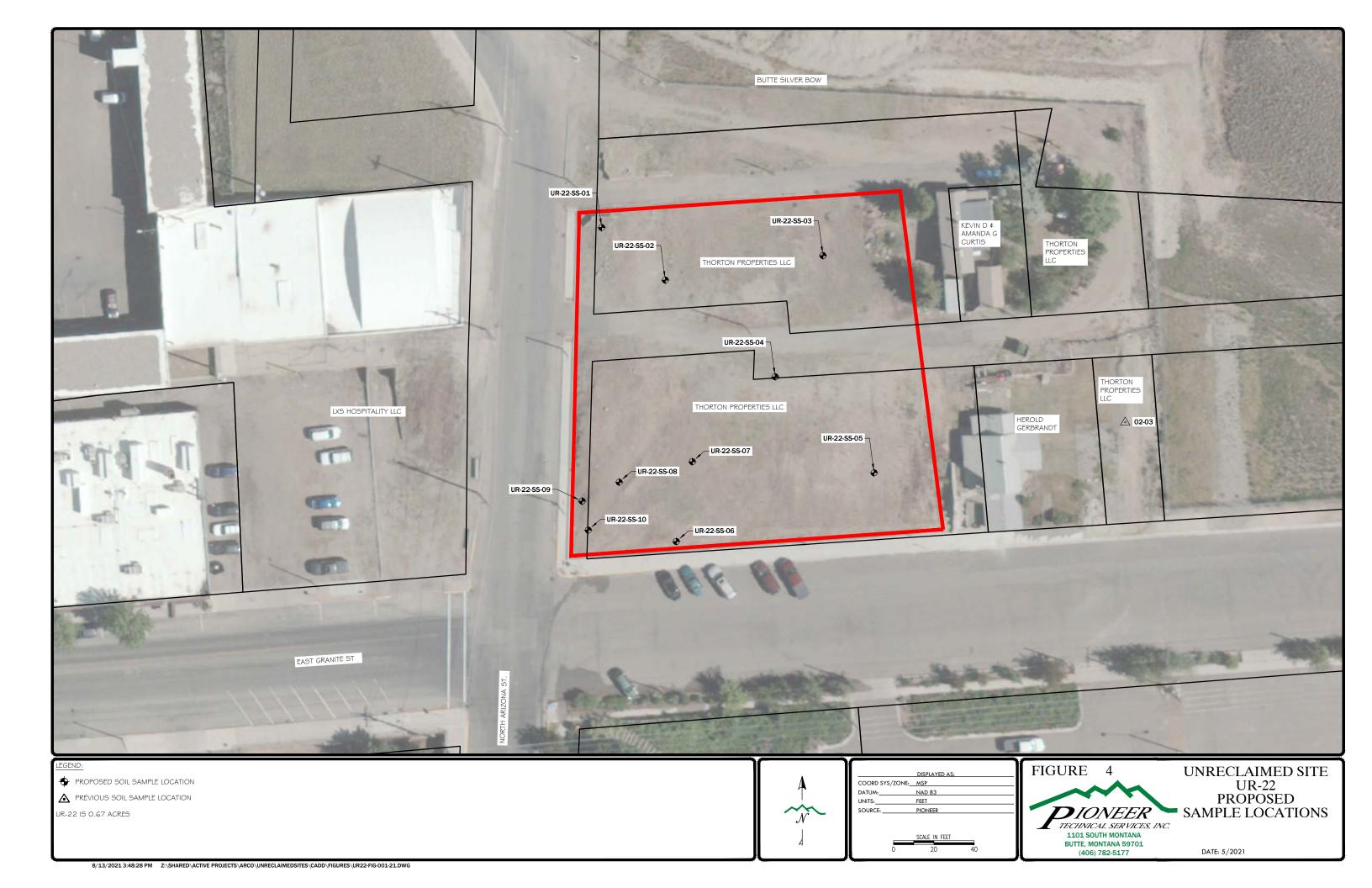


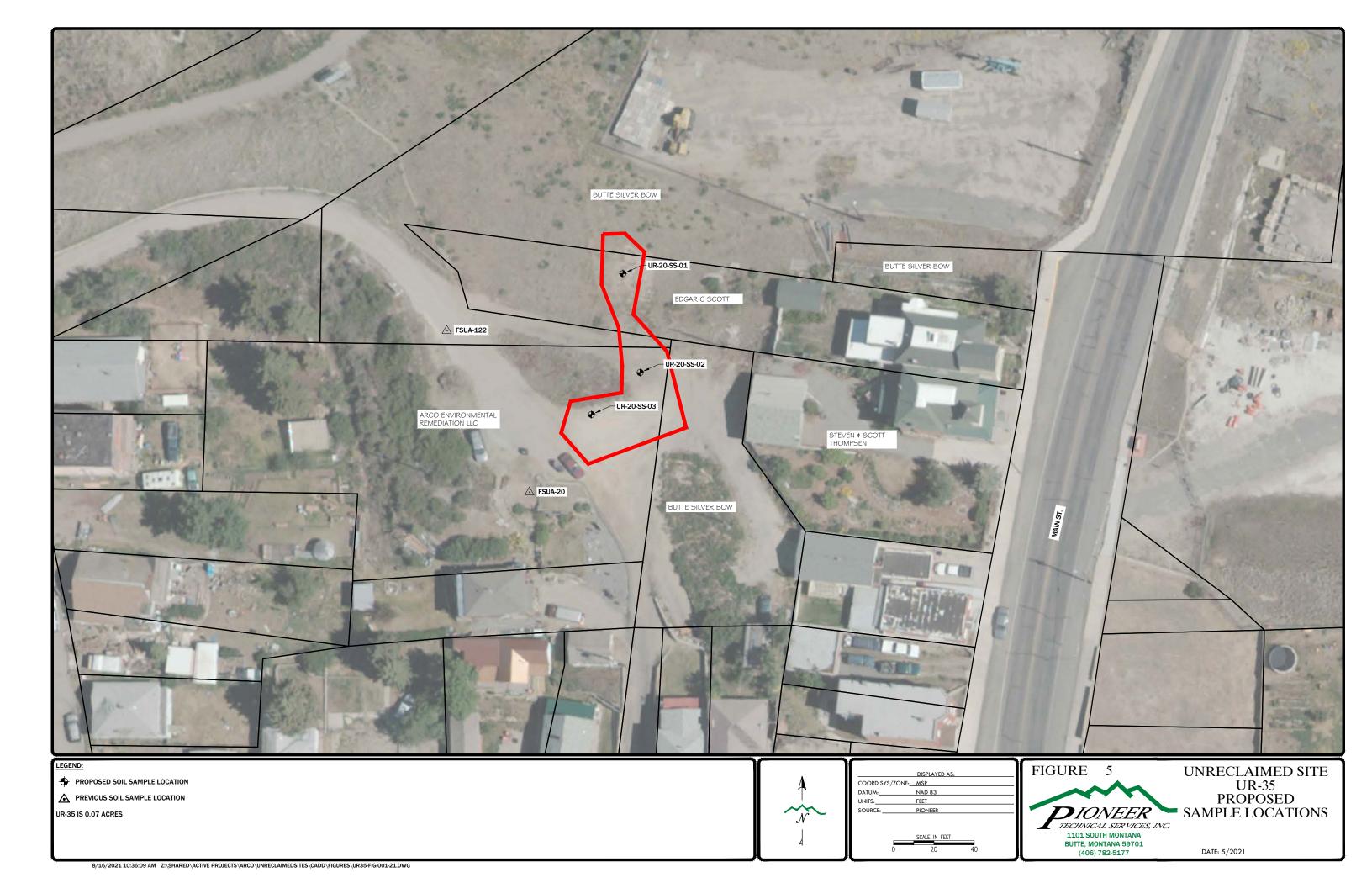
UNRECLAIMED SITE
UR-06
PROPOSED
SAMPLE LOCATIONS

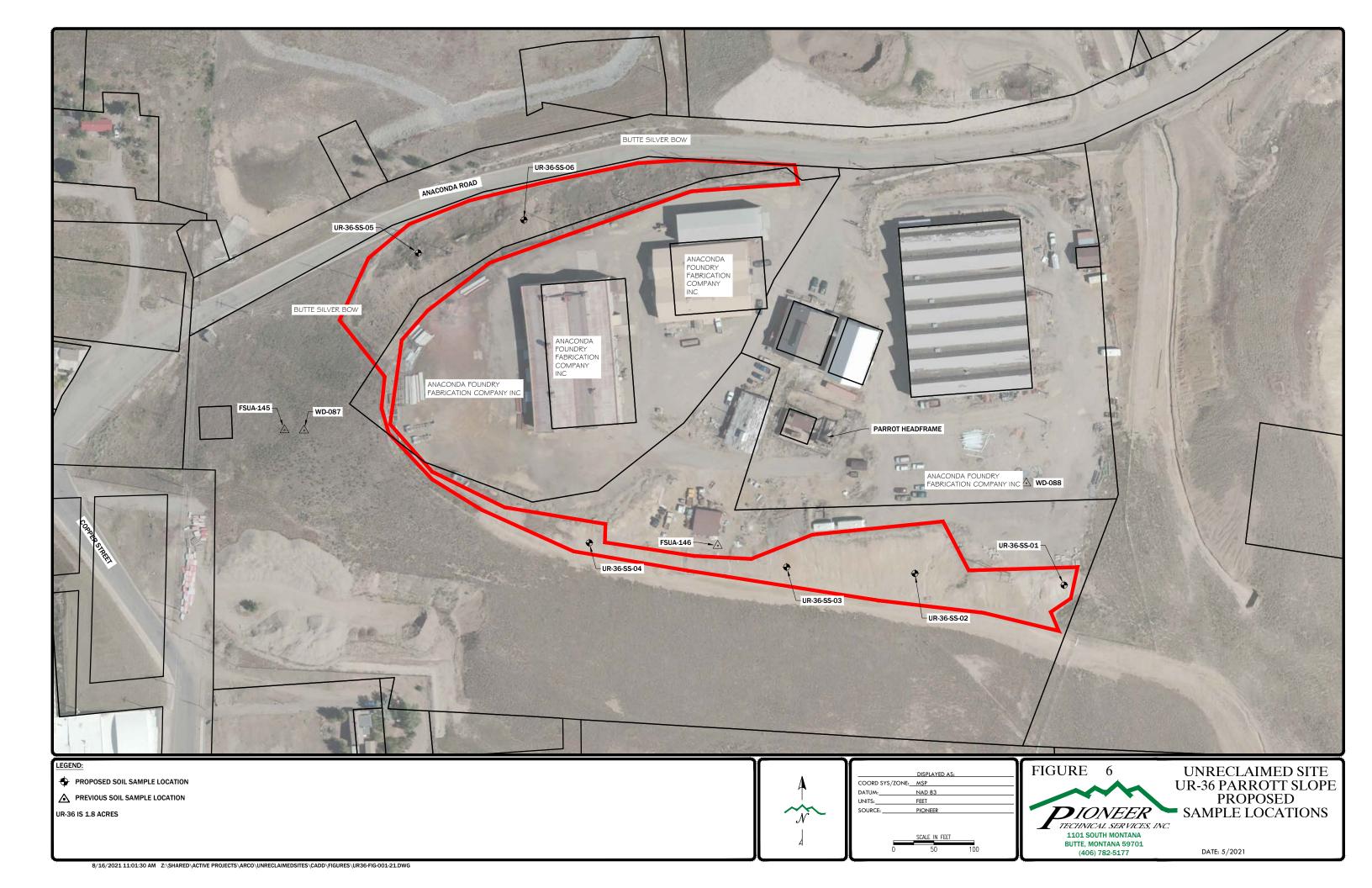
DATE: 5/2021













UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION 8, MONTANA OFFICE

FEDERAL BUILDING, 10 West 15TH Street, Suite 3200 Helena, MT 59626-0096 Phone 866-457-2690 www.epa.gov/region8

Ref: 8MO

August 27, 2021

Mr. Mike McAnulty Liability Manager Atlantic Richfield Company 317 Anaconda Road Butte, Montana 59701

Re: Approval letter for the Butte Priority Soils Operable Unit (BPSOU) Unreclaimed Sites Final Field Sampling Plan (FSP) Submittal #3: Unreclaimed Sites UR-06, UR-07, UR-20, UR-22, UR-35, and UR-36 (dated August 18, 2021)

Dear Mike:

The U. S. Environmental Protection Agency (EPA), in consultation with the Montana Department of Environmental Quality (DEQ), is approving the *Unreclaimed Sites Final Field Sampling Plan (FSP) Submittal #3*. Please distribute this FSP submittal #3 as final.

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

Sincerely,

NIKIA GREENE Digitally signed by NIKIA GREENE Date: 2021.08.27 09:49:01 -06'00'

Nikia Greene

Remedial Project Manager

cc: (email only)

Butte File

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Daryl Reed; DEQ

Jon Morgan; DEQ counsel Carolina Balliew; DEQ

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Chad Anderson; BSBC
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Julia Crain; BSBC

Abby Peltomaa; BSBC
Jeremy Grotbo; BSBC
Anne Walsh: UP

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Mark Engdahl; BNSF

Brooke Kuhl; BNSF counsel

Jeremie Maehr; Kennedy Jenks for BNSF and UP Annika Silverman; Kennedy Jenks for BNSF and UP

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