Summer 7-9-2024

Re: Butte Priority Soils Operable Unit (BPSOU) Final Unreclaimed Sites Field Sampling Plan (FSP) Package #11: UR-49 and UR-50

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July 9, 2024

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Re: Butte Priority Soils Operable Unit (BPSOU) Final Unreclaimed Sites Field Sampling Plan (FSP) Package #11: UR-49 and UR-50

Dear Agency Representatives:

I am writing to you on behalf of Atlantic Richfield Company (Atlantic Richfield) to distribute the Butte Priority Soils Operable Unit (BPSOU) Final Unreclaimed (UR) Sites Field Sampling and Investigation Plan (FSP) for the UR-49 and UR-50 sites, as requested in the Agency approval letter dated May 31, 2024. A link to the Agency approval letter is included in Attachment 1.

As described in Appendix D, Attachment C to the 2020 BPSOU Consent Decree (BPSOU CD) (available at BPSOU Consent Decree), known areas listed as UR solid media sites within the BPSOU and additional sites identified for remedial actions may have been impacted by historical mining. Atlantic Richfield, Butte-Silver Bow (BSB), and the Agencies collaborated to identify the sites described in this FSP, which are in addition to the sites previously listed in the BPSOU CD. The UR sites will be evaluated for risk to human health, contribution of metals-impacted sediments to existing or planned wet weather control features, or contribution to the degradation of surface water quality.

A site evaluation will be performed using the means and methods provided in the Atlantic Richfield Final *2024 UR Sites Quality Assurance Project Plan (QAPP)* (referred to herein as UR Sites QAPP; see Attachment 1) or latest Agency-approved revision. The results from the site evaluations will be used to prepare a site declaration and assist with the determination of site-specific response actions. If required, remedial action will be performed following Agency approval of pertinent site-specific remedial action work plans.

This FSP provides details related to the field evaluation of UR-49 and UR-50. Sampling boundaries and proposed soil sampling stations are shown in the attached figure set (Figure 1 through Figure 2)

Field sampling will be performed to determine whether contaminants listed in Table 1 and Table 2 of the UR QAPP are present, whether the site is contributing metals-impacted sediment to existing or planned wet weather control features, whether historical mining waste at the site is contributing to the degradation of surface water quality, and whether there are previously unidentified conditions contributing to site deficiencies. Historical sampling data provided in this FSP were generated during BPSOU remedial investigation studies. Sampling data were previously stored on the BPSOU Geocortex online database, however data contained within the Geocortex was migrated to the BPSOU OneMap database[1].

The site evaluation is anticipated to be completed in 2024 contingent upon site conditions and access, after which a site summary and declaration will be prepared to present all available data. Agency oversight representatives will be informed of the final schedule prior to initiating field sampling. If required, remedial action will be performed following Agency approval of pertinent site-specific remedial action work plans.

A list of previously approved FSPs is provided in Attachment 2.

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	Approval Letter	Page i
Site Introduction and Appropriate Agency-Approved QAPP Reference	Page 1, Page 2	
Data Quality Objectives		Section 2.5
Site and Sampling Objectives	Figures 1 - 2	Section 3.0
Proposed Schedule for Site Field Work	Page 2	
Site Figure	Figures 1 - 2	
Sampling Procedures and Standard Operating Procedures		Section 3.2 Appendix B
Sample Analysis Methods		Section 3.3

[1] The BPSOU OneMap database is available for those who have login credentials at https://onemap-rm.bpglobal.com/portal/apps/webappviewer/index.html?id=e5e68331289742bab49d56d892cce832.

Site Introduction and Procedure

Sites UR-49 and UR-50 are sites additional to those specified in the BPSOU CD and were identified by Atlantic Richfield, BSB, and the Agencies. The additional sites may have been impacted by historical mining and were determined to be gap areas due to location and lack of data. They have been identified for investigation to determine if remedial action is warranted due to a threat to human health or surface water quality via storm water runoff. Sampling plans and site information for the individual sites are discussed below.

Site Characterization Plan

Per the UR Sites QAPP, the sites will be sampled from three depth intervals [(1) 0 to 2 inches, (2) 2 to 6 inches, and (3) 6 to 12 inches]. Opportunistic samples may be obtained in the field at the discretion of field sampling personnel or Agency oversight representative(s). The field team leader will be responsible for determining the appropriate sampling number and depth of samples as dictated by field conditions.

The individual sites will be sampled following the procedures in the UR Sites QAPP to determine the spatial characterization of waste, extent of transient material, and concentrations which exceed levels listed in Table 1 or Table 2 of the UR Sites QAPP. Results will be used to assist in the determination of the final site declaration and prescribe site remedial improvements (as appropriate).

Sampling Procedure

All soil sampling and characterization activities and procedures will follow the UR Sites QAPP. The UR Sites QAPP also describes the quality assurance/quality control policies and procedures that will be used during sample collection and analyses. Sampling locations were determined by a preliminary field visit, to determine barren (non-vegetative) areas, and satellite imagery. A site evaluation will be conducted immediately prior to field activities to confirm the site sample locations provided on Figure 1 through Figure 2. During sampling and characterization activities, a sedimentation analysis will be completed following the sedimentation analysis data sheet in Attachment 3.

UR-49 – South of Gap Area Mandan Park

Background

Site UR-49 is approximately 0.5 acres located south of Mandan Park in Butte, Montana. This site is bounded on the north by Butte Remediation Evaluation System (BRES) No. 84 – Mandan Park, to the east by the Kelley Catch Basin, to the south by Anaconda Road, and to the west by a private residence. The UR-49 site is mostly vegetated with many barren areas with orange and yellow staining present throughout. Large aggregates are present throughout the site. A chain-link fence is present along the east edge of the site.

Site BRES No. 84 was sampled in 2023 per the Insufficiently Reclaimed (IR) project scope of work[2]. Mandan Park, which adjoins the northwest portion of the reclaimed area of Mandan Park Play Area (BRES No. 84), was sampled in 2023 following the Residential Metals Abatement Program (RMAP) non-residential soil sampling for parks and play areas QAPP[3]. Sample results from both sites are currently undergoing data review.

In 2008, BSB completed a storm water improvement project at the Kelley Mine Yard Entrance storm water site (shown on Figure 1). Components of this project included the area east of 426 North Wyoming Street and west of the Kelley Mine entrance. The area was excavated and sloped to accommodate an asphalt cap and swale to direct storm water run-off to the existing catch basin located at the intersection of Anaconda Road and the alley and to the existing catch basin located at the northwest end of Anaconda Road. An asphalt berm was constructed along the northwest perimeter of this area to prevent sediment from the North Wyoming site from entering the BSB storm drain system.

Previous Sampling Efforts

The BPSOU OneMap database contains the records for previous soil samples collected within the BPSOU. No previous sampling efforts were found on UR-49 – South of Gap Area Mandan Park. The BPSOU soil action levels are listed in Table 1 and Table 2, respectively, in Section 2.5 of the UR Sites QAPP.

Preliminary Field Visit

A preliminary field visit occurred during the development of this sampling plan to qualify current site conditions. Sampling locations were determined by satellite imagery and the preliminary field visit to determine barren (non-vegetative) areas. A site evaluation will be conducted immediately prior to field activities to confirm the site sample locations. Photograph 1 and Photograph 2, taken during the field visit, show the site overview.

[2] Atlantic Richfield Company, 2023. Butte Priority Soils Operable Unit (BPSOU) Final Insufficiently Reclaimed Sites – Field Sampling Plan (FSP) BRES No. 84 – Mandan Park Play Area. Prepared by Pioneer Technical Services, Inc. August 9, 2023.
[3] Butte-Silver Bow and Atlantic Richfield Company, 2023. Final 2023 Residential Metals Abatement Program (RMAP) Quality Assurance Project Plan (QAPP) Annual Update (Non-Residential Parcels). Prepared by Pioneer Technical Services, Inc. June 22, 2023.

Photograph 1. Overview of UR-49

Photograph 2. Disturbed area on southwest portion of site.

The area will be further investigated during site sampling for potential opportunistic sample location(s). Figure 1 illustrates the proposed sample stations for UR-49.

Sampling Procedure

All soil sampling and characterization activities and procedures will follow the UR Sites QAPP. The site will be evaluated following the recreational land use soil action levels for human health and soil

screening criteria for waste identification under the UR Sites QAPP. Samples will be obtained from the sample stations listed below.

Sample Station	Three Depth Intervals (inches)
UR-49-SS01	(1) 0-2, (2) 2-6, (3) 6-12
UR-49-SS02	(1) 0-2, (2) 2-6, (3) 6-12
UR-49-SS03	(1) 0-2, (2) 2-6, (3) 6-12
UR-49-SS04	(1) 0-2, (2) 2-6, (3) 6-12
UR-49-SS05	(1) 0-2, (2) 2-6, (3) 6-12
UR-49-SS06	(1) 0-2, (2) 2-6, (3) 6-12

UR-50 – South of Dexter Mill

Background

Site UR-50 is approximately 0.5 acres located in Butte, Montana. The site is directly south of BRES No. 133 – Dexter Mill and west of South Clark Street. Private residences are located directly south of the property. This site has been proposed as a UR site due to identification of potential exposed waste during the recurring BRES evaluation conducted by BSB at BRES No. 133. The site is located on two properties. One property is privately owned by a third party, requiring an access agreement to be completed prior to sampling. Field sampling and site evaluation of BRES No. 133 will be completed as described in the Final Insufficiently Reclaimed Sites – Field Sampling Plan (FSP) BRES No. 133 – Dexter Mill[4] and is anticipated to be completed in coordination with the sampling described in this FSP.

Previous Sampling Efforts

The BPSOU OneMap database[1] contains the records for previous soil samples collected within the BPSOU. No previous sampling efforts were found on UR-50 – South of Dexter Mill. The BPSOU soil action levels are listed in Table 1 and Table 2, respectively, in Section 2.5 of the UR Sites QAPP.

Preliminary Field Visit

Sampling locations were determined by satellite imagery and a preliminary field visit to determine barren (non-vegetative) areas. A site evaluation will be conducted immediately prior to field activities to confirm the site sample locations. Photograph 3 and Photograph 4, taken during the field visit, show the site overview.

[4] Atlantic Richfield Company, 2022. Butte Priority Soils Operable Unit (BPSOU) Final Insufficiently Reclaimed Sites – Field Sampling Plan (FSP) BRES No. 133 – Dexter Mill. Prepared by Pioneer Technical Services, Inc. August 15, 2022.

Photograph 3. Overview of UR-50 facing west.

Photograph 4. Overview of UR-50 facing east

The area will be further investigated during site sampling for potential opportunistic sample location(s). Figure 2 illustrates the proposed sample stations for UR-50.

Sampling Procedure

All soil sampling and characterization activities and procedures will follow the UR Sites QAPP. The site will be evaluated following the commercial land use soil action levels for human health and soil screening criteria for waste identification under the UR Sites QAPP. Samples will be obtained from the sample stations listed below.

Sample Station	Three Depth Intervals (inches)
UR-50-SS01	(1) 0-2, (2) 2-6, (3) 6-12
UR-50-SS02	(1) 0-2, (2) 2-6, (3) 6-12
UR-50-SS03	(1) 0-2, (2) 2-6, (3) 6-12
UR-50-SS04	(1) 0-2, (2) 2-6, (3) 6-12

Site Summary Report and Declaration

After the site evaluation and data collection activities are complete, a site evaluation summary report will be prepared and submitted to the Agencies for review and approval. The report will include a summary of all available site sampling data and a site declaration specifying any deficient criteria as specified in the BPSOU CD.

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

Sincerely,

Mike McAnulty

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

Attachments:
Figures
Attachment 1 Document Links
Attachment 2 FSP Submittal List
Attachment 3 Field Data Sheets

Cc: Chris Greco / Atlantic Richfield – email
Josh Bryson / Atlantic Richfield – email
Tim Hilmo / 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
Adam Cohen / DGS – email
Lucas Satterlee / DGS – email
Brianne McClafferty / Holland & Hart – email
Carolina Balliew / EPA – email
Emma Rott / EPA – email
David Shanight / CDM - email
Curt Coover / CDM - email
James Freeman / DOJ - email
Amy Steinmetz / DEQ - email
Logan Dudding / DEQ – email
Katie Garcin-Forba / DEQ – email
Doug Martin / NRDP – email
Jim Ford / NRDP - email
Pat Cunneen / NRDP - email
Katherine Hausrath / NRDP - email
Ted Duaime / MBMG - email
Gary Icopini / MBMG - email
Becky Summerville / MR - email
John DeJong / UP - email
Robert Bylsma / UP - email
John Gilmour / Kelley Drye - email
Leo Berry / BNSF - email
Robert Lowry / BNSF - email
Brooke Kuhl / BNSF – email
Lauren Knickrehm / BNSF - email
Doug Brannan / Kennedy Jenks - email
Matthew Mavrinac / RARUS - email
Harrison Roughton / RARUS - email
Brad Gordon / RARUS - email
Mark Neary / BSB - email
Eric Hassler / BSB - email
Brandon Warner / BSB – email
Abigail Peltomaa / BSB - email
Aaron Rains / BSB – email
Sean Peterson/BSB – email
Josh Vincent / WET – email
Kevin Bethke / W&C – email

Scott Bradshaw / W&C – email
Emily Evans / W&C – email
Paddy Stoy / W&C – email
Joe McElroy / Pioneer – email
Mark Meyer / Pioneer – email
Pat Sampson / Pioneer – email
Troy Colvin / Pioneer – email
Karen Helfrich / Pioneer – email
Brad Hollamon / Pioneer – email
Randa Colling / Pioneer – email
Rich Keeland / Aspect – email
Andy White / Aspect – email
Ian Magruder/ CTEC – email
CTEC of Butte – email
Scott Juskiewicz / Montana Tech – email

File: RMO – upload
BPSOU SharePoint - upload

Figures

PROPOSED UR SAMPLE
UNRECLAIMED SITES
INSUFFICIENTLY RECLAIMED AREA
BRES BOUNDARY (PROPOSED ADJUSTMENT)
KELLEY CATCH BASIN
PROPERTY OWNERSHIP
ACCESS PROPERTY OWNERSHIP
STORM WATER LINE
SANITARY SEWER

N

DISPLAYED AS:
PROJECTION/ZONE: MSP
DATUM: NAD 83
UNITS: INT'L FT
SOURCE: PIONEER/BSB/AR/QSI 2020

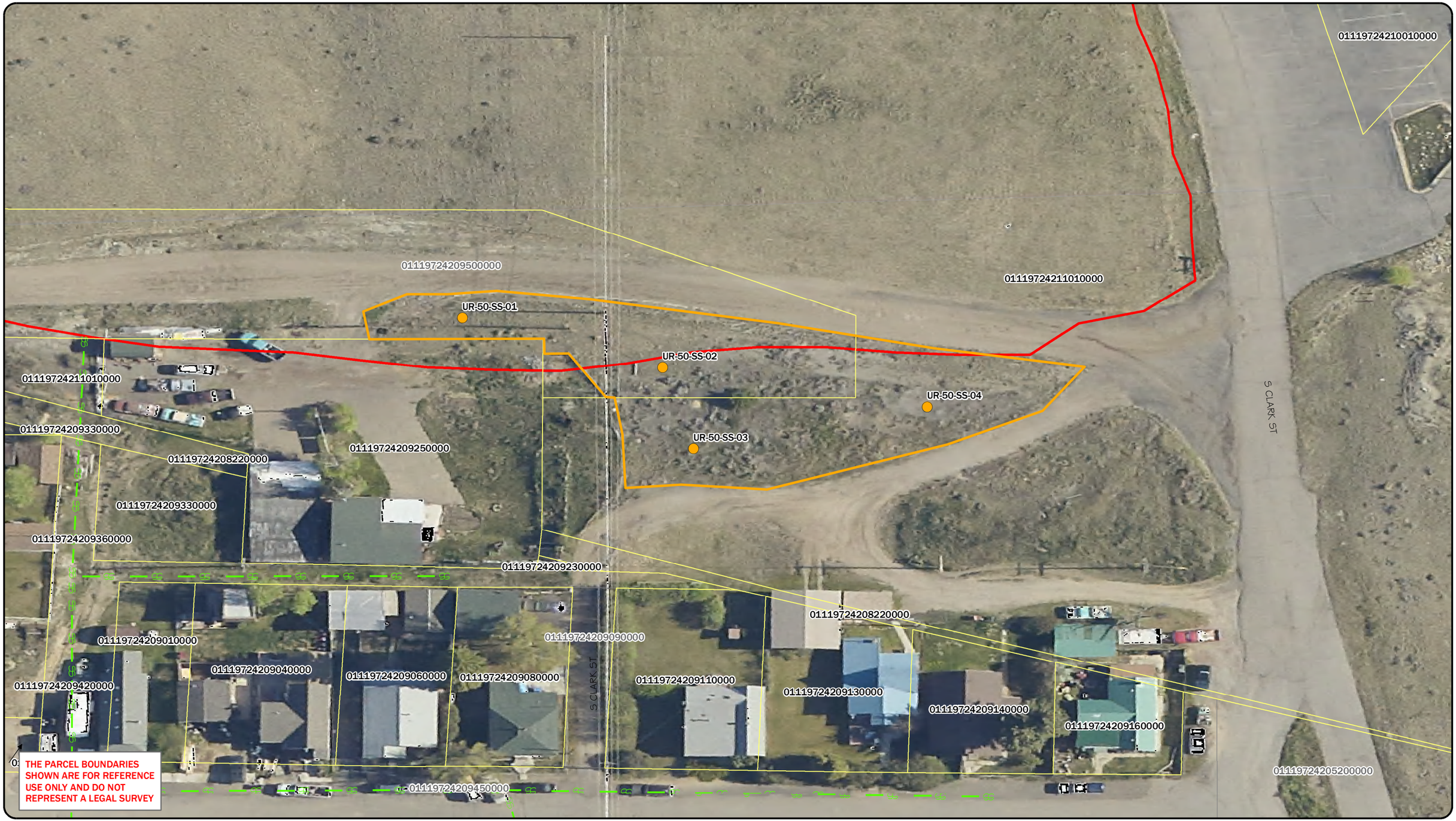
0 30 60 120
Feet

FIGURE 1

PIONEER TECHNICAL SERVICES, INC.
DATE: 4/4/2024

UNRECLAIMED
SITE UR No.49
SOUTH OF GAP
AREA MANDAN PARK

Path: Z:\Shared\Active Projects\ARCO\BPSOU\LandSupport\SolidMedia\Insufficiently_Unreclaimed_UR_IR_Sampling_FSP_UR_Sampling_FSP\Sampling2024_FSP\UR49_Fig_001_24.mxd



PROPOSED UR SAMPLE
UNRECLAIMED SITES
BRES BOUNDARY (ORIGINAL)
PROPERTY OWNERSHIP
ACCESS PROPERTY OWNERSHIP
SANITARY SEWER

N

DISPLAYED AS:
PROJECTION/ZONE: MSP
DATUM: NAD 83
UNITS: INT'L FT
SOURCE: PIONEER/BSB/AR/QSI 2020

0 25 50 100
Feet

FIGURE 2

UNRECLAIMED SITE UR No.50 AREA SOUTH OF DEXTER MILL

PIONEER TECHNICAL SERVICES, INC.
DATE: 4/4/2024

Path: Z:\Shared\Active Projects\ARCO\BPSOU\LandSupport\SolidMedia\Insufficiently_Unreclaimed_UR_IR_Sampling_FSP_UR_Sampling_FSP\Sampling2024_FSP\UR50_Fig_001_24.mxd

Attachment 1
Document Links

Document Links

Unreclaimed Reclaimed Sites QAPP:

https://pioneertechnicalservices.sharepoint.com/:f:/s/submitted/Et_1BMEBLsNEkaqxoNGVhYcBuEQp5yOd59cHuRba79Tt1w[5]

Agency Approval Letter:

https://pioneertechnicalservices.sharepoint.com/:b:/s/submitted/EZm4YWUqvtNNmH7ZuAPEeggBvTHXHprTno0kntv7Hu07AQ[6]

[5] Please note that the link provided is valid for 1 year from the date of this submittal.
[6] Please note that the link provided is valid for 1 year from the date of this submittal.

Attachment 2
FSP Submittal List

FSP Package	Sites Included in FSP Package	Status	Agency Submittal Date	Approval Date	Field Implementation	Sites Sampled 2021	Sites Sampled 2022	Sites Sampled 2023
1	UR-23, 31, 32, and 39	Final	5/19/2021	6/8/2021	6/29/2021	32,39	-	31
2	UR-24, 26, and 40	Final	6/30/2021	8/27/2021	8/31/2021	24, 40	-	-
3	UR-06, 07, 20, 22, 35, and 36	Final	7/3/2021	8/27/2021	8/31/2021	35, 36	06, 07, 20, 22	-
4	UR-16 and 21	Final	8/20/2021	8/30/2021	9/7/2021	-	-	-
5	UR-12, 13, 33, and 38	Final	8/23/2021	8/30/2021	9/8/2021	38, 33	13, 12	-
6	UR-05, 27, 28, 29, 30, and 34	Final	10/14/2021	10/27/2021	11/4/2021	05, 30, 34	27, 28	-
7	UR-01, 02, 03, 04, 15, 17, and 37	Final	10/14/2021	10/27/2021	10/28/2021	01, 03	-	-
8	UR-42	Final	8/18/2023	8/28/2023	10/3/2023	-	-	42
9	UR-43	Final	8/18/2023	8/28/2023	10/4/2023	-	-	43
10	UR-44, UR-45, UR-46, UR-47, and UR-48	Final	7/9/2024	4/12/2024				
11	UR-49 and UR-50	Final	7/9/2024	5/31/2024				

Attachment 3
Field Data Sheets

Site: Date: Personnel:

Are rills present? If yes, describe.

Areas of flow present? Is sediment being deposited? Describe.

Describe any flow patterns from above/on to site.

Describe any flow patters below/off-site.

Identify stormwater infrastructure on/adjacent to the Site. Describe the condition (ie. new construction, heavily sedimented, etc.)

General Site Observations (Presence/type/condition of cap, Vegetation, Soil staining, Structures on Site, etc.)