Winter 12-9-2022

Residential Metals Abatement Program – Interior School Soil - Remedial Action Work Plan – Butte High School

Mike McAnulty

Atlantic Richfield Company

317 Anaconda Road
Butte MT 59701

Mike McAnulty
Liability Manager

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December 9, 2022

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Helena, Montana 59620-0901

RE: Residential Metals Abatement Program – Interior School Soil - Remedial Action Work Plan – Butte High School

Agency Representatives:

I am writing to you on behalf of Atlantic Richfield Company to submit the Approved Final 2022 Residential Metals Abatement Program *Remedial Action Work Plan – Butte High School* for indoor soil abatement within a crawlspace.

The plan may be downloaded at the following link:

https://theermgroup-my.sharepoint.com/:f:/g/personal/thomas_beckman_erm_com/Ekwbkt87PVlBpjSkElENiO4B_I2236HBiwlR5Pj4zs_fdA?e=pwgPPC

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

Sincerely,

Mike McAnulty

Mike McAnulty
Liability Manager
Remediation Management Services Company
An Affiliate of **Atlantic Richfield Company**

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

December 8, 2022

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

Re: Approval letter for the Revised Residential Metals Abatement Program (RMAP), Interior School Soils Remedial Action Work Plan (RAWP), Butte High School (dated November 17, 2022)

Dear Mike:

The U. S. Environmental Protection Agency (EPA), in consultation with the Montana Department of Environmental Quality (DEQ), is approving the *Revised Residential Metals Abatement Program (RMAP), Interior School Soils Remedial Action Work Plan (RAWP), Butte High School (dated November 17, 2022),* with the comment below. Please address this comment prior to the final distribution of the RAWP.

Comments

- As discussed during our December 8, 2022 RMAP check in call, please attached the specification/cut sheet for the fire rated ground fabric to the final RAWP.

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

Sincerely,

NIKIA GREENE
Digitally signed by NIKIA GREENE
Date: 2022.12.08 15:53:39 -07'00'

Nikia Greene
Remedial Project Manager

cc: (email only)
Butte File
Daryl Reed; DEQ
Will George; DEQ
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Pat Sampson; Pioneer for AR
Scott Sampson; Pioneer for AR
Scott Bradshaw; TREC
Karen Helfrich; Pioneer for AR
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Charlie Partridge; EPA
Ian Magruder; CTEC (Tech Advisor)
Janice Hogan; CTEC
Marissa Stockton; Rosendale State Director
Kristi Carroll; Montana Tech Library

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Ref: 8MO

October 17, 2022

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

Re: Comment letter for the Butte Priority Soils Operable Unit (BPSOU) Draft Residential Metals Abatement Program (RMAP), Interior School Soils – Remedial Action Work Plan (RAWP), Butte High School (dated October 5, 2022)

Dear Mike:

The U. S. Environmental Protection Agency (EPA), in consultation with the Montana Department of Environmental Quality (DEQ), is providing comments on the *Draft Residential Metals Abatement Program (RMAP), Interior School Soils – Remedial Action Work Plan, Butte High School (dated October 5, 2022)*. Please address these comments and then resubmit a revised version for EPA and DEQ review and approval.

Comments:

- There is no mention of wiping of pipe chases/accumulated dust on horizontal surfaces in contaminated areas. To discourage use of these areas, the EPA suggests placing welded wire screen (or similar), with access points, around the contaminated areas.
- Cleaning of debris prior to removal – Material is going to be removed from an area that has levels above an action level, presumably in contact with the contaminated soil and likely has dust on it as well. How can we be assured material/debris will not spread contaminated dust to areas outside the removal area? Will a containment be set up to move the items through or will they be cleaned? Please include these details in the RAWP.
- Degradation of sealing materials – although not likely to occur for years, the areas (i.e., pipe chases) that will be sealed will need to be inspected/monitored at a set frequency to ensure the control measures continue to remain protective and in place. Please describe the inspection/monitoring frequency and IC program responsible for these activities in the RAWP.
- Photos - #1, #2, #5, and #6 descriptions note "Area 2", this is likely in error and should be changed to Area 1? Please review and correct as necessary.

- The EPA suggests that AR look into using fabric that is fire rated fabric rather than the traditional geotextile for the soil barrier. There are vendors that produce 6-10 mil fire rated fabric that would serve the purpose of the soil cover and not inadvertently create a potential source for a fire.

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

Sincerely,

NIKIA GREENE

Digitally signed by NIKIA GREENE
Date: 2022.10.17 09:26:16 -06'00'

Nikia Greene
Remedial Project Manager

cc: (email only)
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Atlantic Richfield Company

Remedial Action Work Plan

Butte High School

09 December 2022

Project No.: 0643586

The business of sustainability

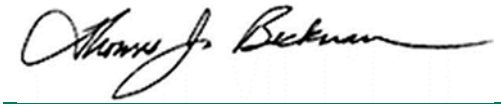
ERM

Signature Page

09 December 2022

Remedial Action Work Plan

Butte High School



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CONTENTS

Tables

Figures

Acronyms and Abbreviations

BPSOU	Butte Priority Soils Operable Unit
ICIAP	Institutional Control Implementation and Assurance Plan
RAWP	Remedial Action Work Plan
USEPA	United States Environmental Protection Agency

1. INTRODUCTION

This Remedial Action Work Plan (RAWP) was developed to outline a portion of the remedial action work resulting from the 2022 Butte Priority Soils Operable Unit (BPSOU) Residential Metals Abatement Program earthen basement and crawlspace area school soil sampling event completed in April 2022. The sampling event was conducted in accordance with the Residential Metals Abatement Program Quality Assurance Project Plan (Non-Residential Parcels– Indoor Dust) (Atlantic Richfield 2022).

2. SCHOOL SOIL REMEDIATION SCOPE

The scope of work covered by this RAWP includes Butte High School, located at 401 South Wyoming Street in Butte, Montana (Table 1 and Figure 1).

Table 1 Butte High School Property Information

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

3. SCHOOL SOIL REMEDIATION SCHEDULE

This scope of work is anticipated to be completed prior to the end of the 2022 calendar year. Coordination work is ongoing with relevant stakeholders. Anticipated deadlines for remedial action are as follows and are contingent on the timing of United States Environmental Protection Agency approvals:

- Planning and access coordination – December 2022
- Remedy implementation – December 2022
- Reporting – January/February 2023

4. REMEDIAL ACTION WORK PLAN

4.1 Butte High School Remedial Action

Remediation at Butte High School will target the crawlspace in Area 1, outlined in Figure 2. Lead was detected in exceedance of the Butte Priority Soils Site-Specific Residential Action Level for indoor soil in the surface soil samples collected from Area 1, prompting the need for remedial action.

The Area 1 crawlspace consists of an approximately 3,200 square-foot rectangular area roughly 320 feet in length and 10 feet in width. This crawlspace has one walk-in door at the north end and two 3-foot by 3-foot crawlspace openings at the south end. The crawlspace contains dirt, dust, and debris (i.e., old school crafting supplies, general refuse) on the ground surface. Steel and cast-iron conduits run through the full extent of Area 1. See Appendix A for photographs of the Area 1 crawlspace.

After remedial action work, school officials will be provided a post construction understanding of the crawlspace access restrictions with the goal of educating the school district regarding future access and use of this space. A Construction Completion Report will be submitted to United States Environmental Protection Agency (USEPA) once all remedial actions have been completed.

4.1.1 Soil and Dust Containment

Containment of soil and dust is necessary due to the lead concentrations detected in exceedance of the Butte Priority Soils Site-Specific Residential Action Levels for indoor soil and dust in the surface soil sample and field duplicate location in the Area 1 crawlspace. This containment is to prevent the migration of soil vapors, particulates, and dust from the crawlspace to the occupied areas of the school.

Refuse and debris in the Area 1 crawlspace will be collected, and accumulated dust will be wiped from horizontal surfaces and pipe chases. Refuse, debris, soil, and wipes from this remedial action work will be placed in sealed waste bags before being transported out of Area 1 for proper disposal.

Gaps between utility conduits and surrounding concrete foundations will be sealed to address the potential preferential pathways for soil particulate migration from the crawlspace to the occupied area of the school in Area 1. Sealing methods may include the use of spray foam insulation, rubber seals adhered in place, and/or grout placement to fill in large gaps.

The floor of the crawlspace will be graded as needed to provide a flat level surface for installation of geotextile fabric. US 380NW nonwoven geotextile fabric will be used within the first approximately 300 to 900 square feet of all three entrances (1,900 square feet in total) to the crawlspace to provide a barrier between the surface soil, receptors, and indoor air (Figure 2). US 380NW geotextile fabric will not allow soil particulates greater than 150 microns to migrate past this barrier while remaining air and water permeable. Once the fabric is placed over surface soil, it will be secured and staked in place on all sides.

4.1.2 Access Controls

Access to the Area 1 crawlspace will be controlled by securing entrances and applying appropriate signage. The access door located at the north end of Area 1 will be securely shut and locked. The two other crawlspace openings will be covered with a lockable access door. Appropriate signage will be applied to the access door and crawlspace openings. Signage will be white, black, and red, with warning label, “DANGER: DO NOT ENTER HAZARDOUS AREA. AUTHORIZED PERSONS ONLY.”

4.2 Materials

US 1104 geotextile fabric will be used in the Area 1 crawlspace. Liner materials are comprised of 100 percent polypropylene staple filaments. Specifications and data for this geotextile fabric are provided in Appendix B. Sealants that may be used to fill utility conduit gaps include expanding spray foam, rubber seals, and/or grout.

4.3 Inspection and Monitoring

The Area 1 crawlspace will be inspected annually by Atlantic Richfield Company and/or Butte-Silver Bow County and will be documented using a standard inspection form (Appendix C). The geotextile liner will be inspected for tears and deterioration. The utility conduits will be inspected for gaps and deterioration of the sealant.

The institutional controls, as described in Section 4.1.2, will be maintained consistent with the requirements of the “Institutional Control Implementation and Assurance Plan (ICIAP) for the BPSOU Site, Appendix E of the BPSOU partial RD/RA and Operation and Maintenance Consent Decree” (Atlantic Richfield 2019). In general, Butte-Silver Bow County has primary responsibility for the implementation, monitoring, and enforcement of most of the institutional controls described in this ICIAP with funding and support from Atlantic Richfield and with oversight and support by the USEPA, in consultation with Montana Department of Environmental Quality Atlantic Richfield also has certain direct responsibilities under the ICIAP.

5. REFERENCES

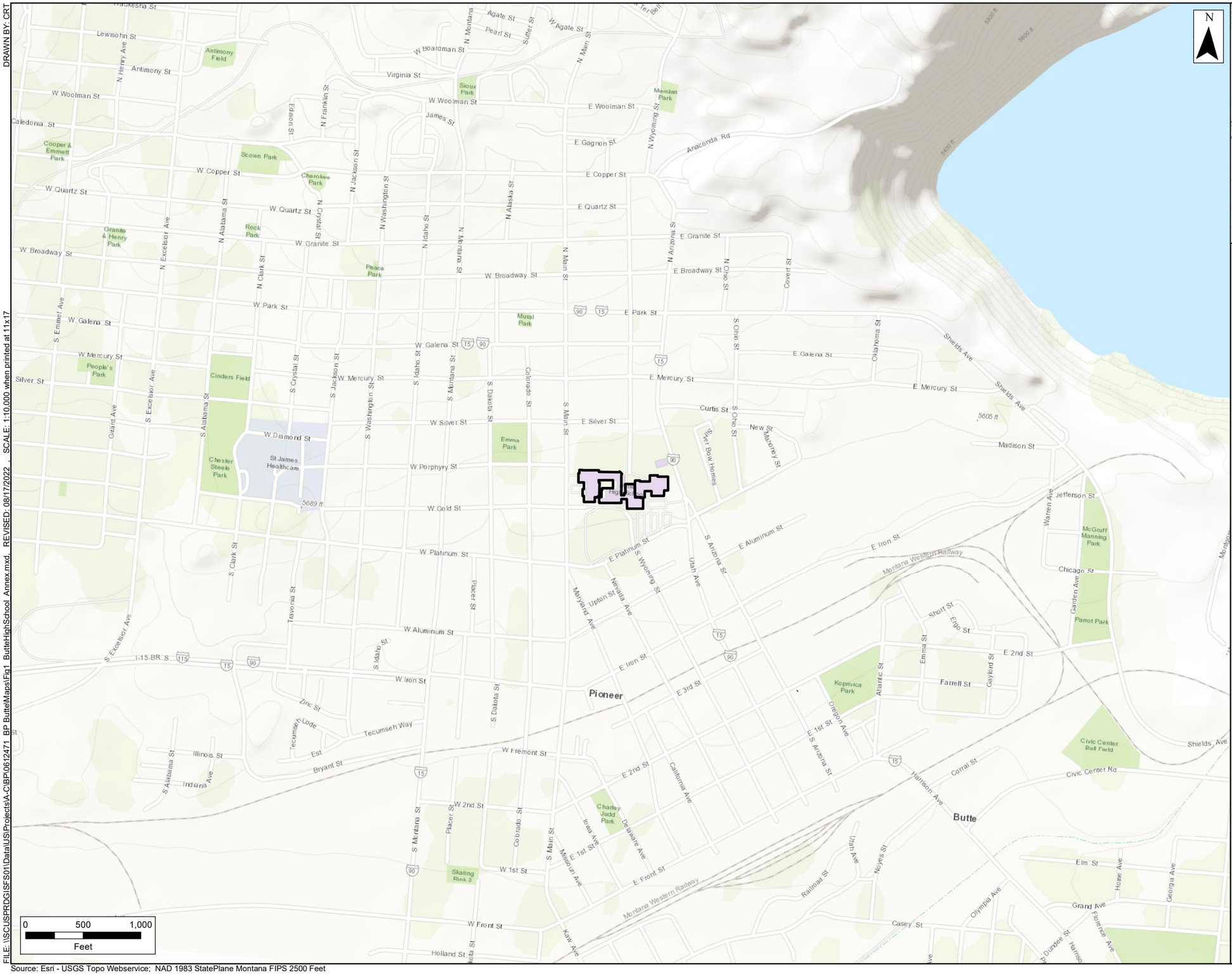
Atlantic Richfield Company. 2019. *Silver Bow Creek/Butte Are NPL Site Butte Priority Soils Operable Unit Final Institutional Controls Implementation and Assurance Pl*an. October 2019.

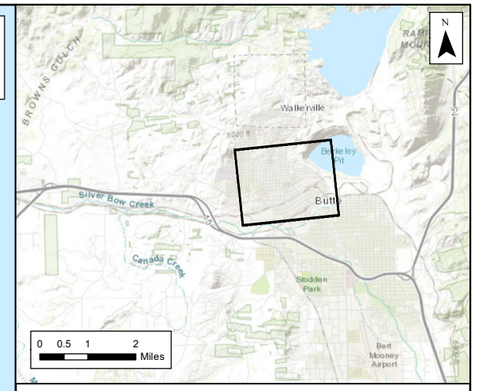
Atlantic Richfield Company. *2022. Residential Metals Abatement Program Quality Assurance Project Plan (Non-Residential Parcels – Indoor Dust)*. February 2022.

FIGURES

DRAWN BY: CRT

FILE: \\SCUSPRDGISFS01\Data\US\Projects\A-C\BP\0612471_BP Butte\Maps\Fig1_ButteHighSchool_Annex.mxd, REVISED: 08/17/2022, SCALE: 1:10,000 when printed at 11x17





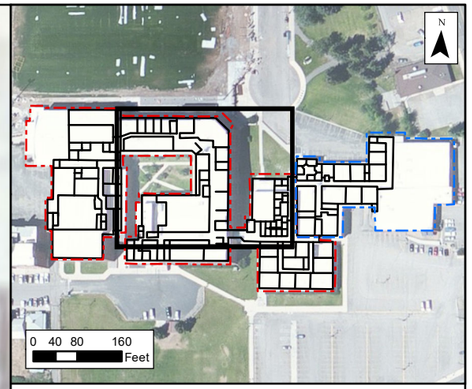
Legend

Site Area

Figure 1
Butte High School Site Location
401 S Wyoming Street
Butte, MT 59701

Environmental Resources Management
www.erm.com

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



Legend

- 2 Point Composite Soil Sampling Point
- Area 1 (3179 sq ft)
- Door
- Crawlspace Entrance
- High School
- Annex
- Approximate Geotextile Fabric Placement

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

Key:
C Classroom
RR Restroom

N

0 10 20
Feet

Figure 2
Butte High School RA Work Area
401 S Wyoming Street
Butte, MT 59701

Environmental Resources Management
www.erm.com
ERM

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

DRAWN BY: CRT
SCALE: 1:300 when printed at 11x17
REVISED: 09/08/2022
FILE: \\SCUSPRDGISFS01\Data\US\Projects\A-C\BP\0612471 BP Butte\Maps\Fig3 ButteHighSchool Annex.mxd

APPENDIX A AREA 1 PHOTOGRAPHIC LOG

PHOTOGRAPHIC LOG

Area 1 - Crawl Space Inspection

Client Name:	**Site Location:**	**Project No.:**
Atlantic Richfield Company	401 S Wyoming Street	0643586

Photo No.	**Date:**
1	05.12.2022

Direction Photo Taken:
South

Description:
North entrance to Area 1 crawlspace.

Photo No.	**Date:**
2	05.12.2022

Direction Photo Taken:
South

Description:
Trash in Area 1 crawlspace near entrance under room C-127.

PHOTOGRAPHIC LOG

Area 1 - Crawl Space Inspection

Client Name:	Site Location:	Project No.:
Atlantic Richfield Company	401 S Wyoming Street	0643586

Photo No.	Date:
3	05.12.2022

Direction Photo Taken:
N/A

Description:
Pipes under room C-118 / restroom

Photo No.	Date:
4	05.12.2022

Direction Photo Taken:
N/A

Description:
Pipes under room C-118 / restroom.

PHOTOGRAPHIC LOG

Area 1 - Crawl Space Inspection

Client Name:	Site Location:	Project No.:
Atlantic Richfield Company	401 S Wyoming Street	0643586

Photo No.	Date:
5	05.12.2022

Direction Photo Taken:
South

Description:
Utility pipe runs in Area 1.

Photo No.	Date:
6	05.12.2022

Direction Photo Taken:
North

Description:
Utility pipe runs in Area 1.

PHOTOGRAPHIC LOG

Area 1 - Crawl Space Inspection

Client Name:	Site Location:	Project No.:
Atlantic Richfield Company	401 S Wyoming Street	0643586

Photo No.	Date:
7	05.12.2022

Direction Photo Taken:
N/A

Description:
Pipes under room M-106.

Photo No.	Date:
8	05.12.2022

Direction Photo Taken:
West

Description:
Pipes heading west towards cafeteria.

APPENDIX B MATERIAL SPECIFICATION SHEETS

US 1104

Woven Geotextile

US 1104 woven geotextile fabric made of 100%polypropylene yarns. 1104 resists ultraviolet and biological deterioration, rotting, naturally encountered basics and acids. Polypropylene is stable within a pH range of 2 to 13. US 1104 meets the following M.A.R.V. values except where noted:

Property	Test Method	English Units			SI Units		
		MARV			MARV		
		MD	CD		MD	CD	
Grab Tensile Strength	ASTM D-4632	435	445	lbs	1936	1980	N
Grab Tensile Elongation	ASTM D-4632	20	20	%	20	20	%
Trapezoid Tear	ASTM D-4533	135	115	lbs	601	512	N
Wide Width Tensile - **Typical Value**	ASTM D-4595	300	270	lbs/in	53	47	kN/m
Wide Width Elongation - **Typical Value**	ASTM D-4595	25	22	%	25	22	%
Puncture	ASTM D-4833	225		lbs	1001		N
Thickness. - **Typical Value**	ASTM D-5199	30		mils	0.76		mm
A.O.S. - **Typical Value**	ASTM D-4751	40		U.S. Sieve	0.425		mm
UV Resistance (1200 hrs)	ASTM D-4355	70		%	70		%
Flammability (**Typical value** based on third party testing)	ASTM E-84	"Class A"			"Class A"		

APPENDIX C INSPECTION FORM

Appendix C - Inspection Form

Date of Inspection: Inspected By: Reviewed By:

Former Joslyn Priest River Site

Location	Feature	Description	Inspected	Notes/Description	Recommendation	
					No Action	Repair
Cover System	Fabric	Does the fabric remain in it's original location?				
		Are there any tears or rips in the fabric? Is any deteriation present?				
		Can any soil be observed through and/or on top of the fabric?				
	Metal Tacks and Rings	Are any metal tacks and rings visible in any areas?				
		If visible, do the metal tacks and rings appear to be secure/fastened to the ground surface?				
Access Point/Signage	Doors and Signage	Are access points secure and locked?				
		Is signage visible and in good condition?				
Utility Conduits	Gap Sealant	Is sealant deteriorating in any way?				
		Does sealant remain effective and fill the entire gap?				

Inspector Signature: Date:

Reviewer Signature: Date: