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**Re: Comments on the Draft Butte Priority Soils Operable Unit (BPSOU) 2022 Groundwater Monitoring Data Summary Report, January 2022 – December 2022 (dated April 10, 2023)**

Nikia Greene

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**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](http://www.epa.gov/region8)

Ref: 8MO

August 2, 2023

Mr. Josh Bryson  
Liability Manager  
Atlantic Richfield Company  
317 Anaconda Road  
Butte, MT 59701

**Re: Comments on the Draft Butte Priority Soils Operable Unit (BPSOU) 2022  
Groundwater Monitoring Data Summary Report, January 2022 – December 2022  
(dated April 10, 2023)**

Dear Josh:

The U.S. Environmental Protection Agency (EPA), in consultation with the Montana Department of Environmental Quality (DEQ), is providing comments on the *Draft Butte Priority Soils Operable Unit (BPSOU) 2021 Groundwater Monitoring Data Summary Report, January 2022 – December 2022 (dated April 10, 2023)*. Please incorporate these comments and submit the final version of the document for EPA and DEQ approval.

**Comments:**

**Specific Comments:**

1. Page iii, Abbreviations and Acronyms: COC is contaminant of concern. Please revise.
2. Page 3, Section 2.1 - Water Quality Monitoring Network, Paragraph 1, last sentence and bullets: Please add a figure to show the 5 monitoring areas of the BPSOU groundwater network. This figure can be the same or similar to Plate 1 (Ground Water Monitoring Wells) of the BPSOU Revised Interim Ground Water Monitoring Plan (USEPA, 2011), which is Appendix E of the BPSOU Unilateral Administrative Order.
3. Page 10, Section 4.3 – Water Quality, 2<sup>nd</sup> bullet: The text states that well FP98-3 was dry during both sampling events in 2022 and thus, it was not sampled in 2022. The text further states that the well is typically dry. The well is useless for groundwater level monitoring and sampling if it is typically dry. The well should be replaced with a deeper well that will not be dry and can be used to measure groundwater elevations and collect groundwater samples.

4. Page 10, Section 4.3 – Fall, 2<sup>nd</sup> bullet: The text states that well BPS11-12A had an obstruction that prevented the lowering of the sampling pump. Was the obstruction investigated and removed? If so, what was it? If not, please investigate and remove the obstruction or replace the well.
5. Page 11, Section 4.3 – Fall, 3<sup>rd</sup> bullet: The text states that well GS-46D had an obstruction that prevented the lowering of the sampling pump to the middle of the water column. Was the obstruction investigated and removed? If so, what was it? If not, please investigate and remove the obstruction, replace the well, or find a method of sampling the well that conforms with the Groundwater QAPP.
6. Figure 1 – BPSOU Data Summary Report Groundwater Monitoring Network: Measured water levels and associated groundwater elevations for Wells AMW-08 and AMW-20 are not included in Table 6 and therefore cannot be verified. Please update Table 6 to include the water levels, groundwater elevations, and date of measurement for these and other wells not monitored under the BPSOU QAPP but presented in the BPSOU DSR.
7. Figure 1 – BPSOU Data Summary Report Groundwater Monitoring Network: The posted groundwater elevation for well AMW-08 (5455.54) is suspect when compared with elevations posted for surrounding wells. The depth to water measurement for AMW-08 is from May 2022 and appears to be approximately 5 feet lower than historical data. Please confirm that this data point is correct and, if necessary, revise accordingly.
8. Figure 1 – BPSOU Data Summary Report Groundwater Monitoring Network: The map legend includes several symbols for wells sampled/monitored under the BMFOU or wells not in the BPSOU network. Groundwater elevations are posted on the figure for several of these wells but the elevations are not tabulated in Table 6 and, therefore, cannot be verified. Please include the data for these wells in Table 6 or elsewhere in the DSR.
9. Figure 1 – BPSOU Data Summary Report Groundwater Monitoring Network: Clarify on the map that the elevations provided are from September 2022. Any elevations not from September 2022 should be flagged and footnoted.

#### **Appendix B - Data Quality Assessment**

1. Section 3.3.2 Blanks: The text indicates; “*Although Limited packages do not contain ICB and CCB results, the project narratives did not indicate any problems with these laboratory calibration samples.*” A majority of the laboratory data packages do not present ICB/CCB information. It is recommended to rephrase or delete the sentence in the text as not enough information is presented in the data package to adequately draw conclusions on ICB/CCB results for data packages that do not provide calibration blank results.
2. Section 3.3.2 Blanks: The text indicates, “*Professional judgement was used in assigning data validation codes in cases that both the FB and MB had detections >1.5x the MDL. This judgement was based on the magnitude of the FB detection compared to the magnitude of the MB detection.*” Please consider adding both data validation codes to the qualified sample results to indicate that qualifiers would be required for both the FB and MB detection to the applicable text, data validation checklists, and tables.
3. Section 5.0 References: The National Functional Guidelines reference date is listed as 2017, please update the date to the most recent date of 2020.

#### **Attachment A: Analytical and Field Data Validation Checklists**

1. For the field blank evaluation, it was noted when an analyte is detected and associated results require qualification because they fall between the MDL and RL, the validator qualified the results as estimated nondetect “UJ.” Per all referenced validation documents, the qualifier should just be nondetect “U.” This process should be followed for field blank review.
2. For the MS/MSD RPD evaluation, the text indicates; “*For MS & MSD results > 5 times the RL, were results of the MSD  $\leq$  20% relative percent difference (RPD)? For MS / MSD results < 5 times the RL, were results of the MSD  $\leq$  the RL?*” Per all referenced validation documents, the RPD criteria is 20% regardless of the sample concentration. This process should be followed for MS/MSD RPD review.
3. SDG 10627460, Dissolved Metals, Section 6, Blanks: The text indicates the blank reported on 10/18/2022 11:52 (QC Batch 844136) was a CCB sample. The sample is an ICB. Please update the text accordingly.
4. SDG 10633105, first page: The collection date listed is 10/26/2022, the collection date reported on the chain of custody and in the laboratory data package is 10/28/2022. Please update the data validation report checklist accordingly.

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

Sincerely,

Nikia Greene  
Remedial Project Manager

Butte File  
Chris Greco / Atlantic Richfield  
Josh Bryson / Atlantic Richfield  
Mike Mc Anulty / Atlantic Richfield  
Loren Burmeister / Atlantic Richfield  
Dave Griffis / Atlantic Richfield  
Jean Martin / Atlantic Richfield  
Irene Montero / Atlantic Richfield  
David A. Gratson / Environmental Standards  
Mave Gasaway / DGS  
Adam Cohen / DGS  
Brianne McClafferty / Holland & Hart  
Daryl Reed / DEQ

Amy Steinmetz / DEQ  
Dave Bowers / DEQ  
Katie Garcin-Forba / DEQ  
Carolina Balliew / DEQ  
Jim Ford / NRDP  
Pat Cunneen / NRDP  
Katherine Hausrath / NRDP  
Ted Duaine / MBMG  
Gary Icopini / MBMG  
Becky Summerville / MR  
John DeJong / UP  
Robert Bylsma / UP  
John Gilmour / Kelley Drye  
Leo Berry / BNSF  
Robert Lowry / BNSF  
Brooke Kuhl / BNSF  
Lauren Knickrehm / BNSF  
Doug Brannan / Kennedy Jenks  
Matthew Mavrinac / RARUS  
Harrison Roughton / RARUS  
Brad Gordon / RARUS  
Mark Neary / BSB  
Eric Hassler / BSB  
Julia Crain / BSB  
Brandon Warner / BSB  
Abigail Peltomaa / BSB  
Eileen Joyce / BSB  
Sean Peterson/BSB  
Josh Vincent / WET  
Scott Bradshaw / W&C  
Emily Stoick / W&C  
Pat Sampson / Pioneer  
Andy Dare / Pioneer  
Karen Helfrich / Pioneer  
Randa Colling / Pioneer  
Scott Sampson / Pioneer  
Ian Magruder/ CTEC  
CTEC of Butte  
Scott Juskiewicz / Montana Tech  
David Shanight / CDM Smith  
Curt Coover / CDM Smith  
Chapin Storrar / CDM Smith  
Erin Agee / EPA  
Will Lindsey / EPA  
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