

TABLE 1
PDC ENERGY INC. - 69175
FORMER MERRITT SEC 9 WELLHEADS
SOIL ANALYTICAL RESULTS SUMMARY TABLE
ORGANIC COMPOUNDS

Sample ID	Date Sampled	Depth	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	1, 2, 4-TMB (mg/kg)	1, 3, 5-TMB (mg/kg)	Naphthalene (mg/kg)	TPH ⁽⁴⁾ (mg/kg)
Residential SSL ^(1,2)			1.2	490	5.8	58	30	27	2	500
Protection of Groundwater SSL ^(1,2,3)			0.0026	0.69	0.78	9.9	0.0081	0.0087	0.0038	500
Merritt 6-66-9-0560BH Wellhead										
WH01-B @ 6'	2/27/2024	6 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
WH01-W @ 4'	2/27/2024	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
WH01-S @ 4'	2/27/2024	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
WH01-E @ 4'	2/27/2024	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
Merritt 6-66-9-0560CH Wellhead - Spill ID #486298										
WH02 @ 6'	2/27/2024	6 ft. bgs	0.0048	0.032	0.026	0.17	0.18	0.052	0.024	2.40
FLR02 @ 4'	2/27/2024	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
COMP01-FL02 @ 4'	2/27/2024	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
WC01 @ 7'	6/7/2024	7 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	0.0059	0.012	<0.0038	<50
SS01 @ 9'	6/7/2024	9 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
SS02 @ 7'	6/7/2024	7 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
SS03 @ 7'	6/7/2024	7 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
SS04 @ 7'	6/7/2024	7 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
SS05 @ 7'	6/7/2024	7 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
Merritt 6-66-9-0659BH Wellhead - Spill ID #486171										
WC01 @ 4'	2/29/2024	4 ft. bgs	3.9	4.9	0.46	21	41	14	0.59	2,090
WH03-B @ 6'	2/28/2024	6 ft. bgs	0.035	0.082	0.026	0.13	0.15	0.049	<0.0038	7.8
WH03-N @ 4'	2/28/2024	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
WH03-W @ 4'	2/28/2024	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
WH03-S @ 4'	2/28/2024	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
WH03-E @ 4'	2/28/2024	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
SS01 @ 9'	3/1/2024	9 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
SS02 @ 6'	3/1/2024	6 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
SS03 @ 6'	3/1/2024	6 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
SS04 @ 6'	3/1/2024	6 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
SS05 @ 6'	3/1/2024	6 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
SS06 @ 10'	6/6/2024	10 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
SS07 @ 4'	6/6/2024	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
SS08 @ 6'	6/6/2024	6 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
SS09 @ 4'	6/6/2024	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
SS10 @ 6'	6/6/2024	6 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
SS11 @ 10'	6/7/2024	10 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
SS12 @ 4'	6/7/2024	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
SS13 @ 6'	6/7/2024	6 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
SS14 @ 10'	6/7/2024	10 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
SS15 @ 10'	6/7/2024	10 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
SS16 @ 4'	6/7/2024	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
SS17 @ 6'	6/7/2024	6 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
SS18 @ 10'	6/7/2024	10 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
SS19 @ 4'	6/7/2024	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
SS20 @ 6'	6/7/2024	6 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
SS21 @ 10'	6/7/2024	10 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
SS22 @ 4'	6/7/2024	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
SS23 @ 6'	6/7/2024	6 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
SS24 @ 10'	6/7/2024	10 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
SS25 @ 10'	6/7/2024	10 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
Merritt 6-66-9-0758CH Wellhead										
WH04 @ 8'	2/28/2024	8 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
FLR04 @ 4'	2/28/2024	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50

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Residential SSL ^(1,2)			1.2	490	5.8	58	30	27	2	500
Protection of Groundwater SSL ^(1,2,3)			0.0026	0.69	0.78	9.9	0.0081	0.0087	0.0038	500
COMP01-FL04 @ 4'	2/28/2024	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
Merritt 6-66-9-0659CH Wellhead - Spill ID #487057										
FLR05 @ 4'	3/13/2024	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	0.019	<0.0038	0.98
COMP01-FL05 @ 4'	3/13/2024	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
Merritt 6-66-9-0758CDH Wellhead										
WH06 @ 8'	2/29/2024	8 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
FLR06 @ 4'	2/29/2024	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
COMP01-FL06 @ 4'	2/29/2024	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
Merritt 6-66-9-0758BH Wellhead										
WH07 @ 8'	2/29/2024	8 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
FLR07 @ 4'	2/29/2024	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
COMP01-FL07 @ 4'	2/29/2024	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
Merritt 6-66-9-0857BH Wellhead										
WH08-B @ 9'	2/29/2024	9 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
WH08-W @ 4'	2/29/2024	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
WH08-S @ 4'	2/29/2024	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
WH08-E @ 4'	2/29/2024	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
Merritt 6-66-9-0857CH Wellhead										
WH09 @ 8'	3/1/2024	8 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
FLR09 @ 4'	3/1/2024	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
COMP01-FL09 @ 4'	3/1/2024	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
Flowline Samples										
FL01-01 @ 4'	3/13/2024	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
FL01-03 @ 4'	3/20/2024	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
FL01-04 @ 4'	3/20/2024	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
FL01-05 @ 6'	3/20/2024	6 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
FL01-06 @ 7'	3/20/2024	7 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
FL01-08 @ 4'	3/20/2024	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
FL02-01 @ 4'	3/13/2024	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
FL02-02 @ 7'	3/21/2024	7 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
FL03-01 @ 4'	3/13/2024	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
FL04-01 @ 4'	3/13/2024	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
FL05-01 @ 4'	3/13/2024	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
FL06-01 @ 4'	3/13/2024	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
FL07-01 @ 4'	3/13/2024	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
FL07-02 @ 4'	3/13/2024	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
FL08-01 @ 4'	3/13/2024	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
FL09-01 @ 4'	3/13/2024	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
Compressor Line Samples										
COMP01-FL01-01 @ 4'	3/13/2024	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
COMP01-FL02-01 @ 4'	3/13/2024	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
COMP01-FL03-01 @ 4'	3/13/2024	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
COMP01-FL04-01 @ 4'	3/13/2024	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
COMP01-FL05-01 @ 4'	3/13/2024	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
COMP01-FL06-01 @ 4'	3/13/2024	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
COMP01-FL07-01 @ 4'	3/13/2024	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
COMP01-FL08-01 @ 4'	3/13/2024	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
COMP01-FL09-01 @ 4'	3/13/2024	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
Gas Line Samples										
GL01-01 @ 7'	3/21/2024	7 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
GL02-01 @ 7'	3/21/2024	7 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50

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Residential SSL ^(1,2)			1.2	490	5.8	58	30	27	2	500
Protection of Groundwater SSL ^(1,2,3)			0.0026	0.69	0.78	9.9	0.0081	0.0087	0.0038	500
GL02-02 @ 4'	3/20/2024	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
Manifold #1 Samples										
MAN01-FL01 @ 3'	3/12/2024	3 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
MAN01-FL02 @ 3'	3/12/2024	3 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
MAN01-FL03 @ 3'	3/12/2024	3 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
MAN01-FL04 @ 3'	3/12/2024	3 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
MAN01-FL05 @ 3'	3/12/2024	3 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
MAN01-FL06 @ 3'	3/12/2024	3 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
MAN01-FL07 @ 3'	3/12/2024	3 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
MAN01-FL08 @ 3'	3/12/2024	3 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
MAN01-DL01 @ 4'	3/13/2024	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
MAN01-DL02 @ 4'	3/13/2024	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
MAN01-DL03 @ 4'	3/13/2024	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
MAN01-DL04 @ 4'	3/13/2024	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
Manifold #2 Samples										
MAN02-DL01 @ 3'	3/12/2024	3 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
MAN02-DL02 @ 3'	3/12/2024	3 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
MAN02-DL03 @ 3'	3/12/2024	3 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
MAN02-DL04 @ 3'	3/12/2024	3 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
MAN02-DL05 @ 3'	3/12/2024	3 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
MAN02-DL06 @ 3'	3/12/2024	3 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
MAN02-DL07 @ 3'	3/12/2024	3 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
MAN02-DL08 @ 3'	3/12/2024	3 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
MAN02-DL09 @ 3'	3/12/2024	3 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
MAN02-FL01 @ 4'	3/13/2024	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
Wellhead Pad Release - Spill ID #487274										
WC03 @ 1'	7/9/2024	1 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	0.0077	<0.0050	<0.0038	510
SS01 @ 1'	7/12/2024	1 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
SS02 @ 1'	7/12/2024	1 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
SS03 @ 1'	7/12/2024	1 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
SS04 @ 1'	7/12/2024	1 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
SS05 @ 1'	7/12/2024	1 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	59
SS06 @ 1'	7/12/2024	1 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
SS07 @ 1'	7/12/2024	1 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	120
SS10 @ 1'	7/12/2024	1 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
SS11 @ 1'	7/12/2024	1 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
SS12 @ 1'	7/12/2024	1 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
SS13 @ 1'	7/12/2024	1 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
SS14 @ 1'	7/12/2024	1 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
SS15 @ 1'	7/12/2024	1 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
SS16 @ 2'	7/12/2024	2 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
SS17 @ 3'	7/12/2024	3 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
SS18 @ 1'	7/12/2024	1 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	83
SS19 @ 2'	7/12/2024	2 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
SS20 @ 2'	7/12/2024	2 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
SS21 @ 1'	7/12/2024	1 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
SS22 @ 1'	7/12/2024	1 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
SS23 @ 1'	7/12/2024	1 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
SS24 @ 1'	7/12/2024	1 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
SS25 @ 1'	7/12/2024	1 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50

TABLE 1
PDC ENERGY INC. - 69175
FORMER MERRITT SEC 9 WELLHEADS
SOIL ANALYTICAL RESULTS SUMMARY TABLE
ORGANIC COMPOUNDS

Sample ID	Date Sampled	Depth	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	1, 2, 4-TMB (mg/kg)	1, 3, 5-TMB (mg/kg)	Naphthalene (mg/kg)	TPH ⁽⁴⁾ (mg/kg)
Residential SSL ^(1,2)			1.2	490	5.8	58	30	27	2	500
Protection of Groundwater SSL ^(1,2,3)			0.0026	0.69	0.78	9.9	0.0081	0.0087	0.0038	500
SS26 @ 1'	7/12/2024	1 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	220
SS27 @ 1'	7/12/2024	1 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
SS28 @ 1'	7/15/2024	1 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	120
SS29 @ 1'	7/15/2024	1 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
SS30 @ 1.5'	7/15/2024	1.5 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
SS31 @ 1.5'	7/15/2024	1.5 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
SS32 @ 1.5'	7/15/2024	1.5 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
SS33 @ 1'	7/16/2024	1 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
SS34 @ 1'	7/17/2024	1 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
SS35 @ 1'	7/17/2024	1 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
SS36 @ 1'	7/17/2024	1 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
SS37 @ 1'	7/17/2024	1 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
SS38 @ 1'	7/17/2024	1 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
SS39 @ 4'	7/17/2024	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
SS40 @ 2'	7/17/2024	2 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
SS41 @ 3'	7/17/2024	3 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
SS42 @ 1'	7/18/2024	1 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
SS43 @ 1'	7/18/2024	1 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
SS44 @ 1'	7/18/2024	1 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
SS45 @ 1'	7/18/2024	1 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
SS46 @ 2'	7/18/2024	2 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
SS49 @ 2.5'	7/18/2024	2.5 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
SS50 @ 2.5'	7/18/2024	2.5 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50

Notes:

- Compounds referenced from the ECMC 2 CCR 404-1, Table 915-1, effective January 15, 2021.
- Soil Screening Levels (SSL) referenced from EPA Regional Screening Levels (EPA RSLs) for Chemical Contaminants at Superfund Sites, effective November 2020.
- SSLs are applicable if a pathway for communication with groundwater is present.
- Value calculated by adding TPH-GRO, TPH-DRO, and TPH-ORO concentrations.

ECMC = Colorado Energy & Carbon Management Commission

(<) = Analytical result is less than the indicated laboratory reporting limit.

TPH-GRO = Total petroleum hydrocarbons - gasoline range organics

TPH-DRO = Total petroleum hydrocarbons - diesel range organics

TPH-ORO = Total petroleum hydrocarbons - oil range organics

mg/kg = Milligrams per kilogram

TMB = Trimethylbenzene

ft. = feet

bgs = Below ground surface

BOLD = Analytical result is in exceedance of applicable standard.

 = Source material characterization sample, excavated and transported off-site

 = Sample material excavated and transported off-site for disposal

TABLE 2
PDC ENERGY INC. - 69175
FORMER MERRITT SEC 9 WELLHEADS
SOIL ANALYTICAL RESULTS SUMMARY TABLE
INORGANIC COMPOUNDS

Sample ID	Date Sampled	Depth	pH (units)	EC (mmhos/cm)	SAR (units)	Boron (mg/L)
Soil Suitability for Reclamation Standard ⁽¹⁾			6-8.3	<4	<6	2
<i>Merritt 6-66-9-0560BH Wellhead</i>						
WH01-B @ 6'	2/27/2024	6 ft. bgs	8.13	0.292	0.625	<2.00
WH01-W @ 4'	2/27/2024	4 ft. bgs	8.10	0.218	0.160	<2.00
WH01-S @ 4'	2/27/2024	4 ft. bgs	8.21	0.425	1.23	<2.00
WH01-E @ 4'	2/27/2024	4 ft. bgs	7.98	0.268	0.168	<2.00
<i>Merritt 6-66-9-0560CH Wellhead - Spill ID #486298</i>						
WH02 @ 6'	2/27/2024	6 ft. bgs	11.4	1.07	2.27	<2.00
FLR02 @ 4'	2/27/2024	4 ft. bgs	8.39	0.135	0.158	<2.00
COMP01-FL02 @ 4'	2/27/2024	4 ft. bgs	8.19	0.209	0.425	<2.00
WC01 @ 7'	6/7/2024	7 ft. bgs	10.6	0.740	2.04	<2.00
SS01 @ 9'	6/7/2024	9 ft. bgs	8.98	NA	NA	NA
SS02 @ 7'	6/7/2024	7 ft. bgs	8.39	NA	NA	NA
SS03 @ 7'	6/7/2024	7 ft. bgs	8.73	NA	NA	NA
SS04 @ 7'	6/7/2024	7 ft. bgs	8.46	NA	NA	NA
SS05 @ 7'	6/7/2024	7 ft. bgs	8.11	NA	NA	NA
SS06 @ 2.5'	6/7/2024	2.5 ft. bgs	8.70	0.212	0.355	<2.00
<i>Merritt 6-66-9-0659BH Wellhead - Spill ID #486171</i>						
WC01 @ 4'	2/29/2024	4 ft. bgs	11.4	1.23	2.05	<2.00
WH03-B @ 6'	2/28/2024	6 ft. bgs	9.93	1.27	6.00	<2.00
WH03-N @ 4'	2/28/2024	4 ft. bgs	8.86	0.387	1.54	<2.00
WH03-W @ 4'	2/28/2024	4 ft. bgs	8.08	0.656	3.03	<2.00
WH03-S @ 4'	2/28/2024	4 ft. bgs	7.81	0.559	3.90	<2.00
WH03-E @ 4'	2/28/2024	4 ft. bgs	8.62	0.139	0.154	<2.00
SS01 @ 9'	3/1/2024	9 ft. bgs	8.63	0.961	4.73	<2.00
SS02 @ 6'	3/1/2024	6 ft. bgs	8.34	0.380	2.47	<2.00
SS03 @ 6'	3/1/2024	6 ft. bgs	8.14	0.250	0.975	<2.00
SS04 @ 6'	3/1/2024	6 ft. bgs	8.09	0.764	1.88	<2.00
SS05 @ 6'	3/1/2024	6 ft. bgs	8.30	0.294	1.61	<2.00
SS06 @ 2.5'	3/1/2024	2.5 ft. bgs	8.12	0.376	1.52	<2.00
SS06 @ 10'	6/6/2024	10 ft. bgs	8.52	NA	NA	NA
SS07 @ 4'	6/6/2024	4 ft. bgs	8.92	NA	NA	NA
SS08 @ 6'	6/6/2024	6 ft. bgs	8.42	NA	NA	NA
SS09 @ 4'	6/6/2024	4 ft. bgs	8.29	NA	NA	NA
SS10 @ 6'	6/6/2024	6 ft. bgs	8.12	NA	NA	NA
SS11 @ 10'	6/7/2024	10 ft. bgs	8.87	NA	NA	NA

TABLE 2
PDC ENERGY INC. - 69175
FORMER MERRITT SEC 9 WELLHEADS
SOIL ANALYTICAL RESULTS SUMMARY TABLE
INORGANIC COMPOUNDS

Sample ID	Date Sampled	Depth	pH (units)	EC (mmhos/cm)	SAR (units)	Boron (mg/L)
Soil Suitability for Reclamation Standard ⁽¹⁾			6-8.3	<4	<6	2
SS12 @ 4'	6/7/2024	4 ft. bgs	8.70	NA	NA	NA
SS13 @ 6'	6/7/2024	6 ft. bgs	8.55	NA	NA	NA
SS14 @ 10'	6/7/2024	10 ft. bgs	8.22	NA	NA	NA
SS15 @ 10'	6/7/2024	10 ft. bgs	8.70	NA	NA	NA
SS16 @ 4'	6/7/2024	4 ft. bgs	8.47	NA	NA	NA
SS17 @ 6'	6/7/2024	6 ft. bgs	8.51	NA	NA	NA
SS18 @ 10'	6/7/2024	10 ft. bgs	8.24	NA	NA	NA
SS19 @ 4'	6/7/2024	4 ft. bgs	8.56	NA	NA	NA
SS20 @ 6'	6/7/2024	6 ft. bgs	8.18	NA	NA	NA
SS21 @ 10'	6/7/2024	10 ft. bgs	7.92	NA	NA	NA
SS22 @ 4'	6/7/2024	4 ft. bgs	8.06	NA	NA	NA
SS23 @ 6'	6/7/2024	6 ft. bgs	8.00	NA	NA	NA
SS24 @ 10'	6/7/2024	10 ft. bgs	7.92	NA	NA	NA
SS25 @ 10'	6/7/2024	10 ft. bgs	8.22	NA	NA	NA
SS26 @ 2.5'	6/7/2024	2.5 ft. bgs	8.53	0.160	0.275	<2.00
<i>Merritt 6-66-9-0758CH Wellhead</i>						
WH04 @ 8'	2/28/2024	8 ft. bgs	8.28	0.236	0.567	<2.00
FLR04 @ 4'	2/28/2024	4 ft. bgs	8.17	0.189	0.167	<2.00
COMP01-FL04 @ 4'	2/28/2024	4 ft. bgs	8.26	0.180	0.215	<2.00
<i>Merritt 6-66-9-0659CH Wellhead - Spill ID #487057</i>						
FLR05 @ 4'	3/13/2024	4 ft. bgs	8.36	0.167	0.300	<2.00
COMP01-FL05 @ 4'	3/13/2024	4 ft. bgs	8.16	0.258	0.242	<2.00
<i>Merritt 6-66-9-0758CDH Wellhead</i>						
WH06 @ 8'	2/29/2024	8 ft. bgs	11.8	1.48	3.29	<2.00
FLR06 @ 4'	2/29/2024	4 ft. bgs	8.68	0.162	0.145	<2.00
COMP01-FL06 @ 4'	2/29/2024	4 ft. bgs	8.51	0.182	0.212	<2.00
<i>Merritt 6-66-9-0758BH Wellhead</i>						
WH07 @ 8'	2/29/2024	8 ft. bgs	8.93	0.428	2.26	<2.00
FLR07 @ 4'	2/29/2024	4 ft. bgs	8.56	0.191	0.0998	<2.00
COMP01-FL07 @ 4'	2/29/2024	4 ft. bgs	8.64	0.168	0.0903	<2.00
<i>Merritt 6-66-9-0857BH Wellhead</i>						
WH08-B @ 9'	2/29/2024	9 ft. bgs	10.4	0.791	2.78	<2.00
WH08-W @ 4'	2/29/2024	4 ft. bgs	8.23	0.164	0.0680	<2.00
WH08-S @ 4'	2/29/2024	4 ft. bgs	8.01	0.794	1.49	<2.00
WH08-E @ 4'	2/29/2024	4 ft. bgs	8.15	0.196	0.101	<2.00

TABLE 2
PDC ENERGY INC. - 69175
FORMER MERRITT SEC 9 WELLHEADS
SOIL ANALYTICAL RESULTS SUMMARY TABLE
INORGANIC COMPOUNDS

Sample ID	Date Sampled	Depth	pH (units)	EC (mmhos/cm)	SAR (units)	Boron (mg/L)
Soil Suitability for Reclamation Standard ⁽¹⁾			6-8.3	<4	<6	2
<i>Merritt 6-66-9-0857CH Wellhead</i>						
WH09 @ 8'	3/1/2024	8 ft. bgs	7.92	2.99	1.55	<2.00
FLR09 @ 4'	3/1/2024	4 ft. bgs	8.26	0.400	0.336	<2.00
COMP01-FL09 @ 4'	3/1/2024	4 ft. bgs	8.56	0.202	0.152	<2.00
<i>Flowline Samples</i>						
FL01-01 @ 4'	3/13/2024	4 ft. bgs	8.26	0.549	1.15	<2.00
FL01-03 @ 4'	3/20/2024	4 ft. bgs	7.85	1.28	1.35	<2.00
FL01-04 @ 4'	3/20/2024	4 ft. bgs	7.92	0.903	1.08	<2.00
FL01-05 @ 6'	3/20/2024	6 ft. bgs	7.70	1.37	1.20	<2.00
FL01-06 @ 7'	3/20/2024	7 ft. bgs	7.72	1.40	1.20	<2.00
FL01-08 @ 4'	3/20/2024	4 ft. bgs	8.24	0.942	1.32	<2.00
FL02-01 @ 4'	3/13/2024	4 ft. bgs	8.27	0.775	1.08	<2.00
FL02-02 @ 7'	3/21/2024	7 ft. bgs	7.77	2.36	1.59	<2.00
FL03-01 @ 4'	3/13/2024	4 ft. bgs	8.43	0.465	0.887	<2.00
FL04-01 @ 4'	3/13/2024	4 ft. bgs	8.15	0.634	0.885	<2.00
FL05-01 @ 4'	3/13/2024	4 ft. bgs	8.21	0.549	0.760	<2.00
FL06-01 @ 4'	3/13/2024	4 ft. bgs	8.45	0.558	1.29	<2.00
FL07-01 @ 4'	3/13/2024	4 ft. bgs	8.25	0.848	1.14	<2.00
FL07-02 @ 4'	3/13/2024	4 ft. bgs	8.37	0.217	0.117	<2.00
FL08-01 @ 4'	3/13/2024	4 ft. bgs	8.23	0.853	1.23	<2.00
FL09-01 @ 4'	3/13/2024	4 ft. bgs	7.82	2.95	0.688	<2.00
<i>Compressor Line Samples</i>						
COMP01-FL01-01 @ 4'	3/13/2024	4 ft. bgs	8.22	0.951	0.897	<2.00
COMP01-FL02-01 @ 4'	3/13/2024	4 ft. bgs	8.15	0.868	0.934	<2.00
COMP01-FL03-01 @ 4'	3/13/2024	4 ft. bgs	8.29	0.498	0.718	<2.00
COMP01-FL04-01 @ 4'	3/13/2024	4 ft. bgs	8.22	0.594	0.771	<2.00
COMP01-FL05-01 @ 4'	3/13/2024	4 ft. bgs	8.20	0.823	1.23	<2.00
COMP01-FL06-01 @ 4'	3/13/2024	4 ft. bgs	8.33	0.568	0.699	<2.00
COMP01-FL07-01 @ 4'	3/13/2024	4 ft. bgs	8.19	0.986	1.27	<2.00
COMP01-FL08-01 @ 4'	3/13/2024	4 ft. bgs	7.67	2.38	0.604	<2.00
COMP01-FL09-01 @ 4'	3/13/2024	4 ft. bgs	7.84	2.99	0.819	<2.00
<i>Gas Line Samples</i>						
GL01-01 @ 7'	3/21/2024	7 ft. bgs	7.47	1.58	1.21	<2.00
GL02-01 @ 7'	3/21/2024	7 ft. bgs	7.47	2.28	1.64	<2.00
GL02-02 @ 4'	3/20/2024	4 ft. bgs	8.11	2.20	0.599	<2.00

TABLE 2
PDC ENERGY INC. - 69175
FORMER MERRITT SEC 9 WELLHEADS
SOIL ANALYTICAL RESULTS SUMMARY TABLE
INORGANIC COMPOUNDS

Sample ID	Date Sampled	Depth	pH (units)	EC (mmhos/cm)	SAR (units)	Boron (mg/L)
Soil Suitability for Reclamation Standard ⁽¹⁾			6-8.3	<4	<6	2
<i>Manifold #1 Samples</i>						
MAN01-FL01 @ 3'	3/12/2024	3 ft. bgs	8.45	0.172	0.0504	<2.00
MAN01-FL02 @ 3'	3/12/2024	3 ft. bgs	8.56	0.160	0.0639	<2.00
MAN01-FL03 @ 3'	3/12/2024	3 ft. bgs	8.39	0.188	0.143	<2.00
MAN01-FL04 @ 3'	3/12/2024	3 ft. bgs	8.44	0.189	0.114	<2.00
MAN01-FL05 @ 3'	3/12/2024	3 ft. bgs	8.56	0.184	0.214	<2.00
MAN01-FL06 @ 3'	3/12/2024	3 ft. bgs	8.42	0.204	0.237	<2.00
MAN01-FL07 @ 3'	3/12/2024	3 ft. bgs	8.47	0.161	0.0349	<2.00
MAN01-FL08 @ 3'	3/12/2024	3 ft. bgs	8.47	0.155	0.0397	<2.00
MAN01-DL01 @ 4'	3/13/2024	4 ft. bgs	8.66	0.174	0.0739	<2.00
MAN01-DL02 @ 4'	3/13/2024	4 ft. bgs	8.31	0.230	0.0999	<2.00
MAN01-DL03 @ 4'	3/13/2024	4 ft. bgs	8.45	0.167	0.0392	<2.00
MAN01-DL04 @ 4'	3/13/2024	4 ft. bgs	8.37	0.157	0.0667	<2.00
<i>Manifold #2 Samples</i>						
MAN02-DL01 @ 3'	3/12/2024	3 ft. bgs	8.65	0.177	0.209	<2.00
MAN02-DL02 @ 3'	3/12/2024	3 ft. bgs	8.67	0.203	0.331	<2.00
MAN02-DL03 @ 3'	3/12/2024	3 ft. bgs	8.53	0.195	0.264	<2.00
MAN02-DL04 @ 3'	3/12/2024	3 ft. bgs	8.45	0.190	0.150	<2.00
MAN02-DL05 @ 3'	3/12/2024	3 ft. bgs	8.46	0.166	0.0925	<2.00
MAN02-DL06 @ 3'	3/12/2024	3 ft. bgs	8.46	0.236	0.400	<2.00
MAN02-DL07 @ 3'	3/12/2024	3 ft. bgs	8.57	0.177	0.193	<2.00
MAN02-DL08 @ 3'	3/12/2024	3 ft. bgs	8.52	0.147	0.0240	<2.00
MAN02-DL09 @ 3'	3/12/2024	3 ft. bgs	8.23	0.205	0.0808	<2.00
MAN02-FL01 @ 4'	3/13/2024	4 ft. bgs	8.58	0.176	0.189	<2.00
<i>Wellhead Pad Release - Spill ID #487274</i>						
WC03 @ 1'	7/9/2024	1 ft. bgs	8.57	0.681	0.379	<2.00
SS01 @ 1'	7/12/2024	1 ft. bgs	8.42	0.482	0.806	<2.00
SS02 @ 1'	7/12/2024	1 ft. bgs	8.12	1.09	1.09	<2.00
SS03 @ 1'	7/12/2024	1 ft. bgs	8.14	1.00	0.966	<2.00
SS04 @ 1'	7/12/2024	1 ft. bgs	8.19	1.06	0.536	<2.00
SS05 @ 1'	7/12/2024	1 ft. bgs	7.97	2.01	2.12	<2.00
SS06 @ 1'	7/12/2024	1 ft. bgs	8.11	1.98	1.67	<2.00
SS07 @ 1'	7/12/2024	1 ft. bgs	8.08	2.07	1.82	<2.00
SS10 @ 1'	7/12/2024	1 ft. bgs	8.54	0.935	1.40	<2.00
SS11 @ 1'	7/12/2024	1 ft. bgs	8.30	2.30	3.08	<2.00

TABLE 2
PDC ENERGY INC. - 69175
FORMER MERRITT SEC 9 WELLHEADS
SOIL ANALYTICAL RESULTS SUMMARY TABLE
INORGANIC COMPOUNDS

Sample ID	Date Sampled	Depth	pH (units)	EC (mmhos/cm)	SAR (units)	Boron (mg/L)
Soil Suitability for Reclamation Standard ⁽¹⁾			6-8.3	<4	<6	2
SS12 @ 1'	7/12/2024	1 ft. bgs	8.29	2.71	1.52	<2.00
SS13 @ 1'	7/12/2024	1 ft. bgs	8.19	0.836	1.57	<2.00
SS14 @ 1'	7/12/2024	1 ft. bgs	8.01	2.68	1.19	<2.00
SS15 @ 1'	7/12/2024	1 ft. bgs	8.27	0.814	1.00	<2.00
SS16 @ 2'	7/12/2024	2 ft. bgs	8.26	0.975	1.48	<2.00
SS17 @ 3'	7/12/2024	3 ft. bgs	8.48	0.549	0.697	<2.00
SS18 @ 1'	7/12/2024	1 ft. bgs	7.90	2.56	2.35	<2.00
SS19 @ 2'	7/12/2024	2 ft. bgs	8.46	0.570	0.834	<2.00
SS20 @ 2'	7/12/2024	2 ft. bgs	8.43	0.573	0.789	<2.00
SS21 @ 1'	7/12/2024	1 ft. bgs	8.56	0.814	1.84	<2.00
SS22 @ 1'	7/12/2024	1 ft. bgs	8.37	0.646	1.07	<2.00
SS23 @ 1'	7/12/2024	1 ft. bgs	8.46	0.609	1.03	<2.00
SS24 @ 1'	7/12/2024	1 ft. bgs	8.23	1.59	2.22	<2.00
SS25 @ 1'	7/12/2024	1 ft. bgs	8.01	2.93	1.01	<2.00
SS26 @ 1'	7/12/2024	1 ft. bgs	8.45	1.03	1.76	<2.00
SS27 @ 1'	7/12/2024	1 ft. bgs	8.23	0.909	1.02	<2.00
SS28 @ 1'	7/15/2024	1 ft. bgs	7.93	3.65	2.44	<2.00
SS29 @ 1'	7/15/2024	1 ft. bgs	7.86	3.50	2.04	<2.00
SS30 @ 1.5'	7/15/2024	1.5 ft. bgs	7.87	1.83	2.09	<2.00
SS31 @ 1.5'	7/15/2024	1.5 ft. bgs	7.91	3.12	1.30	<2.00
SS32 @ 1.5'	7/15/2024	1.5 ft. bgs	7.96	1.61	2.34	<2.00
SS33 @ 1'	7/16/2024	1 ft. bgs	7.67	3.16	0.853	<2.00
SS34 @ 1'	7/17/2024	1 ft. bgs	7.93	3.26	0.740	<2.00
SS35 @ 1'	7/17/2024	1 ft. bgs	7.96	2.68	0.882	<2.00
SS36 @ 1'	7/17/2024	1 ft. bgs	7.55	1.70	1.03	<2.00
SS37 @ 1'	7/17/2024	1 ft. bgs	8.22	0.637	0.634	<2.00
SS38 @ 1'	7/17/2024	1 ft. bgs	8.55	0.189	0.222	<2.00
SS39 @ 4'	7/17/2024	4 ft. bgs	7.76	1.58	0.302	<2.00
SS40 @ 2'	7/17/2024	2 ft. bgs	8.26	0.574	0.959	<2.00
SS41 @ 3'	7/17/2024	3 ft. bgs	7.80	3.54	1.10	<2.00
SS42 @ 1'	7/18/2024	1 ft. bgs	7.95	1.27	2.10	<2.00
SS43 @ 1'	7/18/2024	1 ft. bgs	7.85	0.291	2.25	<2.00
SS44 @ 1'	7/18/2024	1 ft. bgs	8.06	0.574	0.229	<2.00
SS45 @ 1'	7/18/2024	1 ft. bgs	7.78	2.24	3.27	<2.00
SS46 @ 2'	7/18/2024	2 ft. bgs	7.72	3.11	1.28	<2.00

TABLE 2
PDC ENERGY INC. - 69175
FORMER MERRITT SEC 9 WELLHEADS
SOIL ANALYTICAL RESULTS SUMMARY TABLE
INORGANIC COMPOUNDS

Sample ID	Date Sampled	Depth	pH (units)	EC (mmhos/cm)	SAR (units)	Boron (mg/L)
Soil Suitability for Reclamation Standard ⁽¹⁾			6-8.3	<4	<6	2
SS49 @ 2.5'	7/18/2024	2.5 ft. bgs	7.88	1.64	0.565	<2.00
SS50 @ 2.5'	7/18/2024	2.5 ft. bgs	7.72	1.09	1.22	<2.00
<i>Background Samples</i>						
BKG01 @ 4'	3/1/2024	4 ft. bgs	7.89	2.56	7.31	NA
BKG01 @ 6'	3/1/2024	6 ft. bgs	8.28	1.61	2.22	NA
BKG01 @ 8'	3/1/2024	8 ft. bgs	8.09	1.19	1.22	NA
BKG02 @ 4'	4/3/2024	4 ft. bgs	8.12	1.87	3.10	NA
BKG02 @ 6'	4/3/2024	6 ft. bgs	8.19	1.51	2.59	NA
BKG02 @ 8'	4/3/2024	8 ft. bgs	8.20	3.28	3.69	NA
Maximum Background Concentration			8.28	3.28	7.31	-

Notes:

1. Compounds referenced from the ECMC 2 CCR 404-1, Table 915-1, effective January 15, 2021.

ECMC = Colorado Energy & Carbon Management Commission

EC = Electrical conductivity

SAR = Sodium adsorption ratio

mmhos/cm = millimhos per centimeter

mg/L = milligram per liter

(<) = Analytical result is less than the indicated laboratory reporting limit.

ft. = Feet

NA = Constituent not analyzed

bgs = Below ground surface

BOLD = Analytical result is in exceedance of applicable standard.

BOLD = Analytical result is in exceedance of applicable standard, but below background concentration.

 = Source material characterization sample, excavated and transported off-site

 = Sample material excavated and transported off-site for disposal

TABLE 3
PDC ENERGY INC. - 69175
FORMER MERRITT SEC 9 WELLHEADS
SOIL ANALYTICAL RESULTS SUMMARY TABLE
ORGANIC COMPOUNDS - PAHs

Sample ID	Date Sampled	Depth	Acenaphthene (mg/kg)	Anthracene (mg/kg)	Benz(a) (mg/kg)	Benzo(a) (mg/kg)	Benzo(b) (mg/kg)	Benzo(k) (mg/kg)	Chrysene (mg/kg)	A,H (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	1,2,3-CD (mg/kg)	Pyrene (mg/kg)	1-M (mg/kg)	2-M (mg/kg)
Residential SSL ^(1,2)			360	1,800	1.1	0.11	1.1	11	110	0.11	240	240	1.1	180	18	24
Protection of Groundwater SSL ^(1,2,3)			0.55	5.8	0.011	0.24	0.3	2.9	9	0.096	8.9	0.54	0.98	1.3	0.006	0.019
SS13 @ 1'	7/12/2024	1 ft. bgs	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00518	<0.00500	<0.00500
SS14 @ 1'	7/12/2024	1 ft. bgs	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00860	0.0111
SS15 @ 1'	7/12/2024	1 ft. bgs	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SS16 @ 2'	7/12/2024	2 ft. bgs	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SS17 @ 3'	7/12/2024	3 ft. bgs	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SS18 @ 1'	7/12/2024	1 ft. bgs	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00651	<0.00500	0.0125	0.0419	0.0344
SS19 @ 2'	7/12/2024	2 ft. bgs	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SS20 @ 2'	7/12/2024	2 ft. bgs	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SS21 @ 1'	7/12/2024	1 ft. bgs	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0115	0.0202	0.0156
SS22 @ 1'	7/12/2024	1 ft. bgs	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SS23 @ 1'	7/12/2024	1 ft. bgs	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SS24 @ 1'	7/12/2024	1 ft. bgs	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00564	<0.00500	<0.00500
SS25 @ 1'	7/12/2024	1 ft. bgs	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00698	<0.00500	<0.00500
SS26 @ 1'	7/12/2024	1 ft. bgs	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00513	<0.00500	<0.00500	0.00701	<0.00500	0.0219	0.0252	0.0282
SS27 @ 1'	7/12/2024	1 ft. bgs	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00557	<0.00500	<0.00500
SS28 @ 1'	7/15/2024	1 ft. bgs	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00883	0.0154	0.0178
SS29 @ 1'	7/15/2024	1 ft. bgs	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00919	0.00900	0.0125
SS30 @ 1.5'	7/15/2024	1.5 ft. bgs	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SS31 @ 1.5'	7/15/2024	1.5 ft. bgs	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SS32 @ 1.5'	7/15/2024	1.5 ft. bgs	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SS33 @ 1'	7/16/2024	1 ft. bgs	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SS34 @ 1'	7/17/2024	1 ft. bgs	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SS35 @ 1'	7/17/2024	1 ft. bgs	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SS36 @ 1'	7/17/2024	1 ft. bgs	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SS37 @ 1'	7/17/2024	1 ft. bgs	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SS38 @ 1'	7/17/2024	1 ft. bgs	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SS39 @ 4'	7/17/2024	4 ft. bgs	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SS40 @ 2'	7/17/2024	2 ft. bgs	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SS41 @ 3'	7/17/2024	3 ft. bgs	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SS42 @ 1'	7/18/2024	1 ft. bgs	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SS43 @ 1'	7/18/2024	1 ft. bgs	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SS44 @ 1'	7/18/2024	1 ft. bgs	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SS45 @ 1'	7/18/2024	1 ft. bgs	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00525	<0.00500	<0.00500
SS46 @ 2'	7/18/2024	2 ft. bgs	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SS49 @ 2.5'	7/18/2024	2.5 ft. bgs	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SS50 @ 2.5'	7/18/2024	2.5 ft. bgs	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500

Notes:

1. Compounds referenced from the ECMC 2 CCR 404-1, Table 915-1, effective January 15, 2021.

2. Soil Screening Levels (SSL) referenced from EPA Regional Screening Levels (EPA RSLs) for Chemical Contaminants at Superfund Sites, effective November 2020.

3. SSLs are applicable if a pathway for communication with groundwater is present.

4. Reporting limit exceedance the ECMC POG SSL

ECMC = Colorado Energy & Carbon Management Commission

(<) = Analytical result is less than the indicated laboratory reporting limit.

PAHs = Polycyclic aromatic hydrocarbons

Benz(a) = Benzanthracene

Benzo(a) = Benzopyrene

Benzo(b) = Benzofluoranthene

Benzo(k) = Benzofluoranthene

A,H = Dibenzoanthracene

TABLE 3
PDC ENERGY INC. - 69175
FORMER MERRITT SEC 9 WELLHEADS
SOIL ANALYTICAL RESULTS SUMMARY TABLE
ORGANIC COMPOUNDS - PAHs

Sample ID	Date Sampled	Depth	Acenaphthene (mg/kg)	Anthracene (mg/kg)	Benz(a) (mg/kg)	Benzo(a) (mg/kg)	Benzo(b) (mg/kg)	Benzo(k) (mg/kg)	Chrysene (mg/kg)	A,H (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	1,2,3-CD (mg/kg)	Pyrene (mg/kg)	1-M (mg/kg)	2-M (mg/kg)
Residential SSL ^(1,2)			360	1,800	1.1	0.11	1.1	11	110	0.11	240	240	1.1	180	18	24
Protection of Groundwater SSL ^(1,2,3)			0.55	5.8	0.011	0.24	0.3	2.9	9	0.096	8.9	0.54	0.98	1.3	0.006	0.019

1,2,3-CD = Indenopyrene
M = Methylnaphthalene
mg/kg = Milligrams per kilogram
= Source material characterization sample, excavated and transported off-site
= Sample material excavated and transported off-site for disposal
ft. = Feet
in. = Inches
bgs = Below ground surface
BOLD = Analytical result is in exceedance of applicable standard.

Sample ID	Date Sampled	Depth	Arsenic (mg/kg)	Barium (mg/kg)	Cadmium (mg/kg)	Chromium (VI) (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Nickel (mg/kg)	Selenium (mg/kg)	Silver (mg/kg)	Zinc (mg/kg)
Residential SSL ^(1,2)			0.68	15,000	71	0.3	3,100	400	1,500	390	390	23,000
Protection of Groundwater SSL ^(1,2,3)			0.29	82	0.38	0.00067	46	14	26	0.26	0.8	370
Merritt 6-66-9-0560BH Wellhead												
WH01-B @ 6'	2/27/2024	6 ft. bgs	7.05	365	0.275	<0.30 ⁽⁴⁾	6.51	10.0	6.77	0.343	0.0441	33.4
WH01-W @ 4'	2/27/2024	4 ft. bgs	5.07	1,000	0.548	<0.30 ⁽⁴⁾	7.94	8.88	5.98	0.384	0.0405	44.7
WH01-S @ 4'	2/27/2024	4 ft. bgs	6.69	117	0.229	<0.30 ⁽⁴⁾	5.11	7.62	6.15	0.346	0.0362	25.1
WH01-E @ 4'	2/27/2024	4 ft. bgs	6.01	640	0.262	<0.30 ⁽⁴⁾	7.88	7.75	5.84	0.311	0.0353	27.7
Merritt 6-66-9-0560CH Wellhead - Spill ID #486298												
WH02 @ 6'	2/27/2024	6 ft. bgs	4.43	216	0.325	<0.30 ⁽⁴⁾	6.30	9.24	6.89	<0.260	0.0501	249
FLR02 @ 4'	2/27/2024	4 ft. bgs	4.47	164	0.298	<0.30 ⁽⁴⁾	4.71	6.97	4.91	<0.260	0.0301	21.4
COMP01-FL02 @ 4'	2/27/2024	4 ft. bgs	4.85	599	0.890	<0.30 ⁽⁴⁾	6.82	6.90	5.82	<0.260	0.0315	26.0
WC01 @ 7'	6/7/2024	7 ft. bgs	4.94	290	0.232	<0.30 ⁽⁴⁾	9.18	6.70	8.86	<0.260	0.0353	66.5
SS01 @ 9'	6/7/2024	9 ft. bgs	4.60	138	NA	NA	NA	NA	NA	<0.260	NA	NA
SS02 @ 7'	6/7/2024	7 ft. bgs	5.09	226	NA	NA	NA	NA	NA	<0.260	NA	NA
SS03 @ 7'	6/7/2024	7 ft. bgs	4.92	262	NA	NA	NA	NA	NA	<0.260	NA	NA
SS04 @ 7'	6/7/2024	7 ft. bgs	4.60	115	NA	NA	NA	NA	NA	<0.260	NA	NA
SS05 @ 7'	6/7/2024	7 ft. bgs	2.35	75.4	NA	NA	NA	NA	NA	<0.260	NA	NA
Merritt 6-66-9-0659BH Wellhead - Spill ID #486171												
WC01 @ 4'	2/29/2024	4 ft. bgs	6.30	1,760	0.686	<0.30 ⁽⁴⁾	9.68	9.49	8.57	0.735	0.103	1,390
WH03-B @ 6'	2/28/2024	6 ft. bgs	5.21	209	0.337	<0.30 ⁽⁴⁾	6.37	9.43	6.73	<0.260	0.0527	30.9
WH03-N @ 4'	2/28/2024	4 ft. bgs	5.56	104	0.226	<0.30 ⁽⁴⁾	4.75	8.04	6.12	<0.260	0.0477	36.3
WH03-W @ 4'	2/28/2024	4 ft. bgs	6.29	118	0.334	<0.30 ⁽⁴⁾	5.68	9.50	7.05	<0.260	0.0541	37.5
WH03-S @ 4'	2/28/2024	4 ft. bgs	4.36	65.4	<0.200	<0.30 ⁽⁴⁾	4.28	6.86	5.58	<0.260	0.0407	20.1
WH03-E @ 4'	2/28/2024	4 ft. bgs	6.48	115	0.284	<0.30 ⁽⁴⁾	5.26	8.41	6.47	<0.260	0.0478	31.9
SS01 @ 9'	3/1/2024	9 ft. bgs	4.91	110	0.313	<0.30 ⁽⁴⁾	5.95	10.1	7.10	<0.260	0.0625	26.7
SS02 @ 6'	3/1/2024	6 ft. bgs	4.14	78.4	0.219	<0.30 ⁽⁴⁾	4.62	7.58	5.69	<0.260	0.0432	23.8
SS03 @ 6'	3/1/2024	6 ft. bgs	5.00	108	0.292	<0.30 ⁽⁴⁾	5.39	8.71	6.56	<0.260	0.0487	23.8
SS04 @ 6'	3/1/2024	6 ft. bgs	5.31	102	0.254	<0.30 ⁽⁴⁾	4.99	8.19	6.22	<0.260	0.0427	22.6
SS05 @ 6'	3/1/2024	6 ft. bgs	5.90	171	0.325	<0.30 ⁽⁴⁾	5.70	9.58	7.25	<0.260	0.0569	26.8
SS06 @ 10'	6/6/2024	10 ft. bgs	5.34	145	0.362	NA	NA	NA	NA	<0.260	NA	44.7
SS07 @ 4'	6/6/2024	4 ft. bgs	3.49	65.2	0.226	NA	NA	NA	NA	<0.260	NA	39.3
SS08 @ 6'	6/6/2024	6 ft. bgs	4.51	113	0.235	NA	NA	NA	NA	<0.229	NA	42.0
SS09 @ 4'	6/6/2024	4 ft. bgs</										

TABLE 4
PDC ENERGY INC. - 69175
FORMER MERRITT SEC 9 WELLHEADS
SOIL ANALYTICAL RESULTS SUMMARY TABLE
METALS

Sample ID	Date Sampled	Depth	Arsenic (mg/kg)	Barium (mg/kg)	Cadmium (mg/kg)	Chromium (VI) (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Nickel (mg/kg)	Selenium (mg/kg)	Silver (mg/kg)	Zinc (mg/kg)
Residential SSL ^(1,2)			0.68	15,000	71	0.3	3,100	400	1,500	390	390	23,000
Protection of Groundwater SSL ^(1,2,3)			0.29	82	0.38	0.00067	46	14	26	0.26	0.8	370
WH09 @ 8'	3/1/2024	8 ft. bgs	4.07	130	0.448	<0.30 ⁽⁴⁾	5.02	7.08	10.0	<0.260	0.0312	156
FLR09 @ 4'	3/1/2024	4 ft. bgs	4.73	218	0.314	<0.30 ⁽⁴⁾	6.75	8.63	9.64	<0.260	0.0348	32.9
COMP01-FL09 @ 4'	3/1/2024	4 ft. bgs	5.23	263	0.448	<0.30 ⁽⁴⁾	6.27	8.77	9.00	<0.260	0.0267	33.0
Flowline Samples												
FL01-01 @ 4'	3/13/2024	4 ft. bgs	7.60	174	0.202	<0.30 ⁽⁴⁾	7.57	8.62	8.05	<0.260	0.0376	36.6
FL01-03 @ 4'	3/20/2024	4 ft. bgs	4.38	85.3	0.267	<0.30 ⁽⁴⁾	5.50	8.68	6.03	<0.260	0.0466	25.1
FL01-04 @ 4'	3/20/2024	4 ft. bgs	5.27	93.4	0.222	<0.30 ⁽⁴⁾	5.17	8.07	6.27	<0.260	0.0379	23.1
FL01-05 @ 6'	3/20/2024	6 ft. bgs	7.78	84.4	0.309	<0.30 ⁽⁴⁾	5.44	9.85	6.23	<0.260	0.0414	29.0
FL01-06 @ 7'	3/20/2024	7 ft. bgs	3.80	55.8	<0.200	<0.30 ⁽⁴⁾	3.64	5.56	4.30	<0.260	0.0237	18.1
FL01-08 @ 4'	3/20/2024	4 ft. bgs	5.93	98.2	0.271	<0.30 ⁽⁴⁾	5.43	8.88	6.40	<0.260	0.0476	24.9
FL02-01 @ 4'	3/13/2024	4 ft. bgs	4.70	110	<0.200	<0.30 ⁽⁴⁾	6.41	7.01	8.02	<0.260	0.0359	33.1
FL02-02 @ 7'	3/21/2024	7 ft. bgs	4.59	75.8	0.241	<0.30 ⁽⁴⁾	4.37	7.01	<0.400	<0.260	0.0333	20.0
FL03-01 @ 4'	3/13/2024	4 ft. bgs	5.92	168	<0.200	<0.30 ⁽⁴⁾	7.60	8.40	8.49	<0.260	0.0323	37.9
FL04-01 @ 4'	3/13/2024	4 ft. bgs	5.42	302	0.217	<0.30 ⁽⁴⁾	8.20	7.41	9.58	<0.260	0.0376	33.3
FL05-01 @ 4'	3/13/2024	4 ft. bgs	4.81	122	<0.200	<0.30 ⁽⁴⁾	6.99	7.84	9.22	<0.260	0.0369	36.0
FL06-01 @ 4'	3/13/2024	4 ft. bgs	5.43	198	<0.200	<0.30 ⁽⁴⁾	7.83	6.72	8.82	<0.260	0.0300	38.9
FL07-01 @ 4'	3/13/2024	4 ft. bgs	4.05	255	<0.200	<0.30 ⁽⁴⁾	6.62	5.38	7.45	<0.260	0.0272	30.7
FL07-02 @ 4'	3/13/2024	4 ft. bgs	5.97	151	<0.200	<0.30 ⁽⁴⁾	4.87	7.58	5.16	<0.260	0.0337	21.6
FL08-01 @ 4'	3/13/2024	4 ft. bgs	6.45	144	0.205	<0.30 ⁽⁴⁾	8.09	7.50	10.5	<0.260	0.0345	43.1
FL09-01 @ 4'	3/13/2024	4 ft. bgs	4.39	116	0.215	<0.30 ⁽⁴⁾	7.38	6.73	11.8	<0.260	0.0284	42.9
Compressor Line Samples												
COMP01-FL01-01 @ 4'	3/13/2024	4 ft. bgs	7.98	306	<0.200	<0.30 ⁽⁴⁾	6.68	8.40	6.98	<0.260	0.0331	40.6
COMP01-FL02-01 @ 4'	3/13/2024	4 ft. bgs	4.82	123	<0.200	<0.30 ⁽⁴⁾	7.50	7.58	8.73	<0.260	0.0368	36.3
COMP01-FL03-01 @ 4'	3/13/2024	4 ft. bgs	5.55	143	<0.200	<0.30 ⁽⁴⁾	7.68	8.03	8.72	<0.260	0.0361	38.2
COMP01-FL04-01 @ 4'	3/13/2024	4 ft. bgs	4.60	182	<0.200	<0.30 ⁽⁴⁾	7.30	6.66	8.72	<0.260	0.0289	33.4
COMP01-FL05-01 @ 4'	3/13/2024	4 ft. bgs	4.39	462	0.213	<0.30 ⁽⁴⁾	7.82	6.76	7.43	<0.260	0.0294	35.6
COMP01-FL06-01 @ 4'	3/13/2024	4 ft. bgs	4.42	135	0.204	<0.30 ⁽⁴⁾	7.13	6.79	8.94	<0.260	0.0313	34.4
COMP01-FL07-01 @ 4'	3/13/2024	4 ft. bgs	5.27	195	0.204	<0.30 ⁽⁴⁾	8.06	7.65	10.3	<0.260	0.0359	40.9
COMP01-FL08-01 @ 4'	3/13/2024	4 ft. bgs	3.70	497	0.213	<0.30 ⁽⁴⁾	9.36	5.97	9.61	<0.260	0.0324	55.1
COMP01-FL09-01 @ 4'	3/13/2024	4 ft. bgs	3.21	28.4	0.321	<0.30 ⁽⁴⁾	6.95	6.61	22.4	<0.260	<0.0200	70.2
Gas Line Samples												
GL01-01 @ 7'	3/21/2024	7 ft. bgs	3.60	49.1	<0.200	<0.30 ⁽⁴⁾	2.67	4.77	<0.400	<0.260	<0.0200	14.4
GL02-01 @ 7'	3/21/2024	7 ft. bgs	4.07	71.4	<0.200	<0.30 ⁽⁴⁾	3.38	5.68	<0.400	<0.260	0.0241	17.1
GL02-02 @ 4'	3/20/2024	4 ft. bgs	5.73	82.8	0.268	<0.30 ⁽⁴⁾	5.06	8.18	6.22	0.270	0.0366	24.0
Manifold #1 Samples												
MAN01-FL01 @ 3'	3/12/2024	3 ft. bgs	6.67	263	0.261	<0.30 ⁽⁴⁾	7.35	8.46	8.66	<0.260	0.0343	32.3
MAN01-FL02 @ 3'	3/12/2024	3 ft. bgs	6.40	191	<0.200	<0.30 ⁽⁴⁾	7.16	8.13	7.35	<0.260	0.0327	30.9
MAN01-FL03 @ 3'	3/12/2024	3 ft. bgs	8.30	168	<0.200	<0.30 ⁽⁴⁾	6.22	8.71	5.77	<0.260	0.0281	28.0
MAN01-FL04 @ 3'	3/12/2024	3 ft. bgs	6.15	170	0.24	<0.30 ⁽⁴⁾	7.22	8.13	7.79	<0.260	0.0304	31.3
MAN01-FL05 @ 3'	3/12/2024	3 ft. bgs	7.10	662	0.252	<0.30 ⁽⁴⁾	7.49	8.21	7.61	<0.260	0.0307	31.5
MAN01-FL06 @ 3'	3/12/2024	3 ft. bgs	6.26	197	<0.200	<0.30 ⁽⁴⁾	7.65	8.52	8.18	<0.260	0.0335	34.8
MAN01-FL07 @ 3'	3/12/2024	3 ft. bgs	6.69	178	<0.200	<0.30 ⁽⁴⁾	6.89	8.44	7.47	<0.260	0.0276	36.3
MAN01-FL08 @ 3'	3/12/2024	3 ft. bgs	6.69	226	<0.200	<0.30 ⁽⁴⁾	7.04	8.67	7.74	<0.260	0.0295	34.5
MAN01-DL01 @ 4'	3/13/2024	4 ft. bgs	11.6	282	0.214	<0.30 ⁽⁴⁾	8.68	8.22	8.36	<0.260	0.0367	35.5
MAN01-DL02 @ 4'	3/13/2024	4 ft. bgs	7.19	239	<0.200	<0.30 ⁽⁴⁾	6.87	7.94	7.11	<0.260	0.0317	33.1
MAN01-DL03 @ 4'	3/13/2024	4 ft. bgs	6.12	168	<0.200	<0.30 ⁽⁴⁾	4.75	7.52	4.69	<0.260	0.0348	20.9
MAN01-DL04 @ 4'	3/13/2024	4 ft. bgs	5.74	125	<0.200	<0.30 ⁽⁴⁾	5.13	7.62	5.59	<0.260	0.0360	22.6
Manifold #2 Samples												
MAN02-DL01 @ 3'	3/12/2024	3 ft. bgs	6.11	220	<0.200	<0.30 ⁽⁴⁾	7.91	8.24	8.27	<0.260	0.0342	33.8
MAN02-DL02 @ 3'	3/12/2024	3 ft. bgs	5.90	339	<0.200	<0.30 ⁽⁴⁾	6.61	7.66	6.68	<0.260	0.0312	29.1
MAN02-DL03 @ 3'	3/12/2024	3 ft. bgs	6.04	224	<0.200	<0.30 ⁽⁴⁾	7.58	8.23	7.67	<0.260	0.0295	31.9
MAN02-DL04 @ 3'	3/12/2024	3 ft. bgs	6.78	227	<0.200	<0.30 ⁽⁴⁾	7.77	8.56	7.57	<0.260	0.0343	31.1
MAN02-DL05 @ 3'	3/12/2024	3 ft. bgs	6.45	193	0.268	<0.30 ⁽⁴⁾	8.25	8.84	8.63	<0.260	0.0340	35.5
MAN02-DL06 @ 3'	3/12/2024	3 ft. bgs	6.74	182	<0.200	<0.30 ⁽⁴⁾	7.15	7.92	7.85	<0.260	0.0301	33.7
MAN02-DL07 @ 3'	3/12/2024	3 ft. bgs	5.76	214	<0.200	<0.30 ⁽⁴⁾	6.64	7.55	8.06	<0.260	0.0276	31.2
MAN02-DL08 @ 3'	3/12/2024	3 ft. bgs	6.98	292	<0.200	<0.30 ⁽⁴⁾	6.71	10.1	7.20	<0.260	0.0317	31.2
MAN02-DL09 @ 3'	3/12/2024	3 ft. bgs	6.15	194	<0.200	<0.30 ⁽⁴⁾	5.86	10.2	6.39	<0.260	0.0301	32.1
MAN02-FL01 @ 4'	3/13/2024	4 ft. bgs	5.46	237	0.232	<0.30 ⁽⁴⁾	5.68	9.10	6.01	0.262	0.0498	25.5
Wellhead Pad Release - Spill ID #487274												
WC03 @ 1'	7/9/2024	1 ft. bgs	4.91	588	0.273	<0.30 ⁽⁴⁾	7.61	6.54	5.79	0.418	0.0450	20.9
SS01 @ 1'	7/12/2024	1 ft. bgs	1.51	552	<0.200	<0.30 ⁽⁴⁾	4.55	5.94	2.31	<0.260	0.0355	9.89
SS02 @ 1'	7/12/2024	1 ft. bgs	1.45	404	<0.200	<0.30 ⁽⁴⁾	4.32	5.71	2.43	<0.260	0.0286	8.47
SS03 @ 1'	7/12/2024	1 ft. bgs	2.96	355	<0.200	<0.30 ⁽⁴⁾	4.11	6.97	2.54	<0.260	0.0344	8.85
SS04 @ 1'	7/12/2024	1 ft. bgs	3.83	442	<0.200	<0.30 ⁽⁴⁾	4.70	5.99	2.69	<0.260	0.0332	9.04
SS05 @ 1'	7/12/2024	1 ft. bgs	1.50	660	0.390	<0.30 ⁽⁴⁾	6.17	6.18	3.23	0.552	0.0542	11.9
SS06 @ 1'	7/12/2024	1 ft. bgs	1.35	679	0.201	<0.30 ⁽⁴⁾	4.87	4.74	2.49	0.297	0.0351	9.53
SS07 @ 1'	7/12/2024	1 ft. bgs	1.42	673	0.263	<0.30 ⁽⁴⁾	6.38	5.69	2.89	0.464	0.0446	11.2

TABLE 4
PDC ENERGY INC. - 69175
FORMER MERRITT SEC 9 WELLHEADS
SOIL ANALYTICAL RESULTS SUMMARY TABLE
METALS

Sample ID	Date Sampled	Depth	Arsenic (mg/kg)	Barium (mg/kg)	Cadmium (mg/kg)	Chromium (VI) (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Nickel (mg/kg)	Selenium (mg/kg)	Silver (mg/kg)	Zinc (mg/kg)
Residential SSL ^(1,2)			0.68	15,000	71	0.3	3,100	400	1,500	390	390	23,000
Protection of Groundwater SSL ^(1,2,3)			0.29	82	0.38	0.00067	46	14	26	0.26	0.8	370
SS10 @ 1'	7/12/2024	1 ft. bgs	1.21	479	<0.200	<0.30 ⁽⁴⁾	4.95	6.13	2.26	<0.260	0.0323	11.4
SS11 @ 1'	7/12/2024	1 ft. bgs	1.32	440	<0.200	<0.30 ⁽⁴⁾	4.78	9.75	2.29	<0.260	0.0289	9.04
SS12 @ 1'	7/12/2024	1 ft. bgs	1.37	472	<0.200	<0.30 ⁽⁴⁾	4.95	5.85	2.69	<0.260	0.0320	10.2
SS13 @ 1'	7/12/2024	1 ft. bgs	1.22	429	<0.200	<0.30 ⁽⁴⁾	4.83	4.71	2.14	<0.260	0.0268	8.72
SS14 @ 1'	7/12/2024	1 ft. bgs	1.43	573	0.226	<0.30 ⁽⁴⁾	5.73	5.59	2.85	0.316	0.0396	10.8
SS15 @ 1'	7/12/2024	1 ft. bgs	1.55	416	<0.200	<0.30 ⁽⁴⁾	4.36	5.94	2.83	<0.260	0.0338	9.49
SS16 @ 2'	7/12/2024	2 ft. bgs	1.63	504	<0.200	<0.30 ⁽⁴⁾	4.36	5.74	2.86	<0.260	0.0371	8.86
SS17 @ 3'	7/12/2024	3 ft. bgs	1.47	459	<0.200	<0.30 ⁽⁴⁾	4.58	5.71	2.53	<0.260	0.0317	9.71
SS18 @ 1'	7/12/2024	1 ft. bgs	1.43	539	0.231	<0.30 ⁽⁴⁾	5.80	5.62	3.15	0.360	0.0415	11.5
SS19 @ 2'	7/12/2024	2 ft. bgs	1.47	530	<0.200	<0.30 ⁽⁴⁾	4.46	5.28	2.61	<0.260	0.0296	9.35
SS20 @ 2'	7/12/2024	2 ft. bgs	1.39	352	<0.200	<0.30 ⁽⁴⁾	4.31	6.62	2.54	<0.260	0.0303	8.39
SS21 @ 1'	7/12/2024	1 ft. bgs	1.27	442	<0.200	<0.30 ⁽⁴⁾	5.28	5.84	2.32	<0.260	0.0332	10.4
SS22 @ 1'	7/12/2024	1 ft. bgs	1.41	645	<0.200	<0.30 ⁽⁴⁾	4.88	4.88	2.63	<0.260	0.0313	8.47
SS23 @ 1'	7/12/2024	1 ft. bgs	1.40	233	<0.200	<0.30 ⁽⁴⁾	4.37	5.39	2.77	<0.260	0.0304	8.79
SS24 @ 1'	7/12/2024	1 ft. bgs	1.39	652	<0.200	<0.30 ⁽⁴⁾	5.29	6.61	2.74	<0.260	0.0346	13.0
SS25 @ 1'	7/12/2024	1 ft. bgs	2.34	145	<0.180	<0.30 ⁽⁴⁾	3.98	5.73	2.76	<0.234	0.0345	12.0
SS26 @ 1'	7/12/2024	1 ft. bgs	1.35	681	0.253	<0.30 ⁽⁴⁾	5.44	5.34	2.67	0.343	0.0409	9.73
SS27 @ 1'	7/12/2024	1 ft. bgs	1.56	818	<0.200	<0.30 ⁽⁴⁾	4.70	5.44	2.76	<0.260	0.0305	9.42
SS28 @ 1'	7/15/2024	1 ft. bgs	4.45	471	0.251	<0.30 ⁽⁴⁾	5.19	6.21	5.22	0.335	0.0400	22.8
SS29 @ 1'	7/15/2024	1 ft. bgs	4.50	457	0.253	<0.30 ⁽⁴⁾	5.17	6.62	5.21	0.312	0.0451	23.0
SS30 @ 1.5'	7/15/2024	1.5 ft. bgs	4.95	257	<0.200	<0.30 ⁽⁴⁾	3.27	6.37	4.46	<0.260	0.0260	22.7
SS31 @ 1.5'	7/15/2024	1.5 ft. bgs	4.02	128	<0.200	<0.30 ⁽⁴⁾	3.94	6.57	5.66	<0.260	0.0230	25.8
SS32 @ 1.5'	7/15/2024	1.5 ft. bgs	4.80	194	<0.200	<0.30 ⁽⁴⁾	3.83	6.70	5.08	<0.260	0.0246	22.0
SS33 @ 1'	7/16/2024	1 ft. bgs	4.07	71.4	<0.200	<0.30 ⁽⁴⁾	5.65	4.90	5.06	<0.260	0.0314	22.8
SS34 @ 1'	7/17/2024	1 ft. bgs	1.13	19.2	<0.200	<0.30 ⁽⁴⁾	4.41	4.51	7.90	<0.260	0.0200	32.1
SS35 @ 1'	7/17/2024	1 ft. bgs	1.38	26.6	<0.200	<0.30 ⁽⁴⁾	2.77	6.60	3.95	<0.260	0.0210	20.5
SS36 @ 1'	7/17/2024	1 ft. bgs	2.46	210	<0.200	<0.30 ⁽⁴⁾	4.60	5.69	4.29	<0.260	0.0258	22.3
SS37 @ 1'	7/17/2024	1 ft. bgs	2.64	125	<0.200	<0.30 ⁽⁴⁾	4.42	6.99	5.10	<0.260	0.0353	19.3
SS38 @ 1'	7/17/2024	1 ft. bgs	2.96	627	<0.200	<0.30 ⁽⁴⁾	4.59	6.25	5.03	0.260	0.0373	18.6
SS39 @ 4'	7/17/2024	4 ft. bgs	1.43	10.9	<0.200	<0.30 ⁽⁴⁾	2.55	3.60	4.00	<0.260	<0.0200	21.4
SS40 @ 2'	7/17/2024	2 ft. bgs	2.69	297	<0.200	<0.30 ⁽⁴⁾	3.82	6.14	4.91	<0.260	0.0284	18.5
SS41 @ 3'	7/17/2024	3 ft. bgs	1.67	105	<0.200	<0.30 ⁽⁴⁾	4.14	6.08	4.98	0.273	0.0265	25.0
SS42 @ 1'	7/18/2024	1 ft. bgs	6.18	318	<0.179	<0.30 ⁽⁴⁾	4.32	5.66	4.99	<0.232	0.0319	16.5
SS43 @ 1'	7/18/2024	1 ft. bgs	6.29	573	0.233	<0.30 ⁽⁴⁾	4.56	6.71	5.73	<0.260	0.0268	21.2
SS44 @ 1'	7/18/2024	1 ft. bgs	4.17	321	<0.200	<0.30 ⁽⁴⁾	4.10	6.01	5.35	<0.260	0.0233	20.3
SS45 @ 1'	7/18/2024	1 ft. bgs	4.76	384	0.230	<0.30 ⁽⁴⁾	5.03	6.40	5.02	0.268	0.0308	22.9
SS46 @ 2'	7/18/2024	2 ft. bgs	4.49	407	<0.200	<0.30 ⁽⁴⁾	4.03	7.10	4.82	<0.260	0.0245	23.4
SS49 @ 2.5'	7/18/2024	2.5 ft. bgs	3.93	125	<0.200	<0.30 ⁽⁴⁾	3.61	7.02	5.22	<0.260	<0.0200	22.9
SS50 @ 2.5'	7/18/2024	2.5 ft. bgs	5.55	156	<0.200	<0.30 ⁽⁴⁾	4.07	7.44	5.00	<0.260	0.0311	19.5
Background Samples												
BKG01 @ 4'	3/1/2024	4 ft. bgs	5.34	87.5	0.232	<0.30 ⁽⁴⁾	5.34	8.14	6.84	<0.260	0.0364	24.8
BKG01 @ 6'	3/1/2024	6 ft. bgs	3.97	64.4	<0.200	<0.30 ⁽⁴⁾	4.65	6.73	6.25	<0.260	0.0354	21.7
BKG01 @ 8'	3/1/2024	8 ft. bgs	4.50	114	0.360	<0.30 ⁽⁴⁾	7.35	10.3	7.48	<0.260	0.0544	30.6
BKG02 @ 4'	4/3/2024	4 ft. bgs	5.24	97.8	0.246	<0.30 ⁽⁴⁾	4.63	7.78	6.26	<0.260	0.0433	21.8
BKG02 @ 6'	4/3/2024	6 ft. bgs	5.55	93.6	0.238	<0.30 ⁽⁴⁾	5.14	7.74	6.16	<0.260	0.0457	21.3
BKG02 @ 8'	4/3/2024	8 ft. bgs	4.26	79.6	0.233	<0.30 ⁽⁴⁾	4.50	7.13	5.62	<0.260	0.0339	21.1
Mean Background Concentration ⁽⁵⁾			4.81	89.5	0.252	0.30	0.26	0.26	0.255	0.255	0.2550	0.255
Mean Background Concentration ⁽⁵⁾ X 1.25			6.01	112	0.315	0.38	0.32	0.32	0.319	0.319	0.3188	0.319

TABLE 4
PDC ENERGY INC. - 69175
FORMER MERRITT SEC 9 WELLHEADS
SOIL ANALYTICAL RESULTS SUMMARY TABLE
METALS

Sample ID	Date Sampled	Depth	Arsenic (mg/kg)	Barium (mg/kg)	Cadmium (mg/kg)	Chromium (VI) (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Nickel (mg/kg)	Selenium (mg/kg)	Silver (mg/kg)	Zinc (mg/kg)
Residential SSL ^(1,2)			0.68	15,000	71	0.3	3,100	400	1,500	390	390	23,000
Protection of Groundwater SSL ^(1,2,3)			0.29	82	0.38	0.00067	46	14	26	0.26	0.8	370

Notes:

- 1. Compounds referenced from the ECMC 2 CCR 404-1, Table 915-1, effective January 15, 2021.
- 2. Soil Screening Levels (SSL) referenced from EPA Regional Screening Levels (EPA RSLs) for Chemical Contaminants at Superfund Sites, effective November 2020.
- 3. SSLs are applicable if a pathway for communication with groundwater is present.
- 4. Compound falls within COGCC Table 915-1 Footnote 9.
- 5. Non-detect background results accounted for in the mean background concentration by using the reporting limit.

ECMC = Energy & Carbon Management Commission

(<) = Analytical result is less than the indicated laboratory reporting limit.

mg/kg = Milligrams per kilogram

= Source material characterization sample, excavated and transported off-site

= Sample material excavated and transported off-site for disposal

ft. = Feet

bgs = Below ground surface

BOLD = Analytical result is in exceedance of applicable standard.

BOLD = Analytical result is in exceedance of applicable standard, but within 1.25x background concentration.

NA = Constituent not analyzed

TABLE 5
PDC ENERGY, INC. - 69175
FORMER MERRITT SEC 9 WELLHEADS
GROUNDWATER ANALYTICAL RESULTS SUMMARY TABLE
ORGANIC COMPOUNDS

Sample ID	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Naphthalene (µg/L)	1,2,4-TMB (µg/L)	1,3,5-TMB (µg/L)	Depth to Water ⁽²⁾ (ft.)	Groundwater Elevation (ft. AMSL)
ECMC Table 915-1 Groundwater Standard (µg/L) ⁽¹⁾		5	560	700	1,400	140	67	67	-	-
GW01	6/7/2024	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	10	NA

Notes:

- 1. Groundwater standards referenced from ECMC 2 CCR 404-1, Table 915-1, January 15, 2021.
 - 2. Depth to water measurements were measured from ground surface for excavation samples. Monitoring well measurements were collected from top of casing and adjusted using survey data to reflect depth of water from ground surface.
- TMB = Trimethylbenzene
ECMC = Energy & Carbon Management Commission
µg/L = Micrograms per liter
(<) = Analytical result is less than the indicated laboratory reporting limit.
ft. = Feet
AMSL = Above Mean Sea Level

TABLE 6
PDC ENERGY, INC. - 69175
FORMER MERRITT SEC 9 WELLHEADS
GROUNDWATER ANALYTICAL RESULTS SUMMARY TABLE
INORGANIC PARAMETERS

Sample ID	Date Sampled	TDS (unit)	Chloride Ion (mg/L)	Sulfate Ion (mg/L)
ECMC Table 915-1 Groundwater Standard (mg/L) ⁽¹⁾		<1.25 x BCKG	250 or <1.25 x BCKG	250 or <1.25 x BCKG
GW01	6/7/2024	1,800	681	422

Notes:

1. Groundwater standards referenced from ECMC 2 CCR 404-1, Table 915-1, January 15, 2021.

TDS = Total dissolved solids

ECMC = Energy & Carbon Management Commission

BCKG = Background

mg/L = Milligrams per liter

(<) = Analytical result is less than the indicated laboratory reporting limit.

BOLD = Analytical result is in exceedance of applicable standard.

TABLE 7
PDC ENERGY INC. - 69175
FORMER MERRITT SEC 9 WELLHEADS
FIELD DATA SUMMARY TABLE

Sample ID	Date Sampled	Depth	GPS Data ⁽¹⁾ Latitude / Longitude		PDOP Value	VOC Concentration ⁽²⁾ (ppm)
Merritt 6-66-9-0560BH Wellhead						
WH01-B @ 6'	2/27/2024	6 ft. bgs	40.509323	-104.781207	NC	0.7
WH01-N @ 4'	2/27/2024	4 ft. bgs	40.509338	-104.781202	1.0	0.3
WH01-W @ 4'	2/27/2024	4 ft. bgs	40.509322	-104.781224	0.9	0.4
WH01-S @ 4'	2/27/2024	4 ft. bgs	40.509308	-104.781205	0.9	0.6
WH01-E @ 4'	2/27/2024	4 ft. bgs	40.509323	-104.781181	0.9	0.1
WHS01-N @ 0-6"	2/28/2024	0-6 in. bgs	40.509357	-104.781196	1.0	0.3
WHS01-W @ 0-6"	2/28/2024	0-6 in. bgs	40.509321	-104.781253	1.1	0.3
WHS01-S @ 0-6"	2/28/2024	0-6 in. bgs	40.509276	-104.781203	1.1	2.2
Merritt 6-66-9-0560CH Wellhead - Spill ID #486298						
WH02 @ 6'	2/27/2024	6 ft. bgs	40.509316	-104.781133	NC	9.2
FLR02 @ 4'	2/27/2024	4 ft. bgs	40.509315	-104.781164	0.7	0.4
COMP01-FL02 @ 4'	2/27/2024	4 ft. bgs	40.509317	-104.781120	0.7	0.1
WHS02-N @ 0-6"	2/28/2024	0-6 in. bgs	40.509358	-104.781136	1.0	0.2
WHS02-S @ 0-6"	2/28/2024	0-6 in. bgs	40.509274	-104.781151	1.1	0.3
WHS02-E @ 0-6"	2/28/2024	0-6 in. bgs	40.509323	-104.781087	0.9	0.1
WC01 @ 7'	6/7/2024	7 ft. bgs	40.509311	-104.781137	NC	99.4
SS01 @ 9'	6/7/2024	9 ft. bgs	40.509311	-104.781137	NC	4.5
SS02 @ 7'	6/7/2024	7 ft. bgs	40.509346	-104.781138	0.8	2.4
SS03 @ 7'	6/7/2024	7 ft. bgs	40.509318	-104.781119	NC	2.6
SS04 @ 7'	6/7/2024	7 ft. bgs	40.509326	-104.781161	0.8	3.4
SS05 @ 7'	6/7/2024	7 ft. bgs	40.509295	-104.781134	0.8	1.5
SS06 @ 2.5'	6/7/2024	2.5 ft. bgs	40.509295	-104.781134	0.8	5.1
Merritt 6-66-9-0659BH Wellhead - Spill ID #486171						
WC01 @ 4'	2/29/2024	4 ft. bgs	40.509323	-104.781019	NC	143
WH03-B @ 6'	2/28/2024	6 ft. bgs	40.509316	-104.781023	NC	3.1
WH03-N @ 4'	2/28/2024	4 ft. bgs	40.509336	-104.781028	0.9	17.0
WH03-W @ 4'	2/28/2024	4 ft. bgs	40.509318	-104.781053	0.9	41.7
WH03-S @ 4'	2/28/2024	4 ft. bgs	40.509299	-104.781033	0.9	4.5
WH03-E @ 4'	2/28/2024	4 ft. bgs	40.509316	-104.781010	0.9	23.1
SS01 @ 9'	3/1/2024	9 ft. bgs	40.509316	-104.781020	NC	0.7
SS02 @ 6'	3/1/2024	6 ft. bgs	40.509339	-104.781029	0.7	0.8
SS03 @ 6'	3/1/2024	6 ft. bgs	40.509319	-104.781062	0.7	0.6
SS04 @ 6'	3/1/2024	6 ft. bgs	40.509300	-104.781036	0.8	1.1
SS05 @ 6'	3/1/2024	6 ft. bgs	40.509320	-104.781008	0.8	2.3
SS06 @ 2.5'	3/1/2024	2. 5 ft. bgs	40.509298	-104.781030	0.8	0.8
SS06 @ 10'	6/6/2024	10 ft. bgs	40.509308	-104.781026	NC	12.4
SS07 @ 4'	6/6/2024	4 ft. bgs	40.509339	-104.781031	1.0	0.8
SS08 @ 6'	6/6/2024	6 ft. bgs	40.509339	-104.781031	1.0	3.3
SS09 @ 4'	6/6/2024	4 ft. bgs	40.509318	-104.781058	0.9	22.3
SS10 @ 6'	6/6/2024	6 ft. bgs	40.509318	-104.781058	0.9	12.1
SS11 @ 10'	6/7/2024	10 ft. bgs	40.509339	-104.781031	1.0	6.1

TABLE 7
PDC ENERGY INC. - 69175
FORMER MERRITT SEC 9 WELLHEADS
FIELD DATA SUMMARY TABLE

Sample ID	Date Sampled	Depth	GPS Data ⁽¹⁾ Latitude / Longitude		PDOP Value	VOC Concentration ⁽²⁾ (ppm)
SS12 @ 4'	6/7/2024	4 ft. bgs	40.509340	-104.780994	0.9	2.8
SS13 @ 6'	6/7/2024	6 ft. bgs	40.509340	-104.780994	0.9	1.8
SS14 @ 10'	6/7/2024	10 ft. bgs	40.509340	-104.780994	0.9	3.7
SS15 @ 10'	6/7/2024	10 ft. bgs	40.509308	-104.780986	NC	1.6
SS16 @ 4'	6/7/2024	4 ft. bgs	40.509319	-104.780953	0.8	1.1
SS17 @ 6'	6/7/2024	6 ft. bgs	40.509319	-104.780953	0.8	0.9
SS18 @ 10'	6/7/2024	10 ft. bgs	40.509319	-104.780953	0.8	2.6
SS19 @ 4'	6/7/2024	4 ft. bgs	40.509297	-104.781035	0.9	22.1
SS20 @ 6'	6/7/2024	6 ft. bgs	40.509297	-104.781035	0.9	2.8
SS21 @ 10'	6/7/2024	10 ft. bgs	40.509297	-104.781035	0.9	1.6
SS22 @ 4'	6/7/2024	4 ft. bgs	40.509295	-104.780978	0.9	1.2
SS23 @ 6'	6/7/2024	6 ft. bgs	40.509295	-104.780978	0.9	1.5
SS24 @ 10'	6/7/2024	10 ft. bgs	40.509295	-104.780978	0.9	1.5
SS25 @ 10'	6/7/2024	10 ft. bgs	40.509318	-104.781058	0.9	2.5
SS26 @ 2.5'	6/7/2024	2.5 ft. bgs	40.509296	-104.780994	0.8	2.4
GW01	6/7/2024	10 ft. bgs	40.509306	-104.781027	NC	NA
<i>Merritt 6-66-9-0758CH Wellhead</i>						
WH04 @ 8'	2/28/2024	8 ft. bgs	40.509325	-104.780705	NC	0.6
FLR04 @ 4'	2/28/2024	4 ft. bgs	40.509325	-104.780721	0.8	0.5
COMP01-FL04 @ 4'	2/28/2024	4 ft. bgs	40.509327	-104.780681	0.8	0.3
WHS04-N @ 0-6"	2/28/2024	0-6 in. bgs	40.509361	-104.780699	1.0	0.0
WHS04-W @ 0-6"	2/28/2024	0-6 in. bgs	40.509327	-104.780757	1.0	0.1
WHS04-S @ 0-6"	2/28/2024	0-6 in. bgs	40.509290	-104.780686	1.0	0.1
<i>Merritt 6-66-9-0758CH Wellhead</i>						
FLR05 @ 4'	3/13/2024	4 ft. bgs	40.509319	-104.780991	0.9	39.0
COMP01-FL05 @ 4'	3/13/2024	4 ft. bgs	40.509317	-104.780950	0.9	0.0
<i>Merritt 6-66-9-0758CDH Wellhead</i>						
WH06 @ 8'	2/29/2024	8 ft. bgs	40.509325	-104.780633	NC	0.9
FLR06 @ 4'	2/29/2024	4 ft. bgs	40.509324	-104.780659	0.7	0.8
COMP01-FL06 @ 4'	2/29/2024	4 ft. bgs	40.509326	-104.780617	0.8	1.0
WHS06-N @ 0-6"	2/29/2024	0-6 in. bgs	40.509364	-104.780642	0.7	0.7
WHS06-S @ 0-6"	2/29/2024	0-6 in. bgs	40.509287	-104.780628	0.7	1.0
<i>Merritt 6-66-9-0758BH Wellhead</i>						
WH07 @ 8'	2/29/2024	8 ft. bgs	40.509323	-104.780588	NC	1.0
FLR07 @ 4'	2/29/2024	4 ft. bgs	40.509323	-104.780603	0.8	0.7
COMP01-FL07 @ 4'	2/29/2024	4 ft. bgs	40.509327	-104.780560	0.7	1.1
WHS07-N @ 0-6"	2/29/2024	0-6 in. bgs	40.509360	-104.780588	0.8	0.4
WHS07-S @ 0-6"	2/29/2024	0-6 in. bgs	40.509285	-104.780569	0.7	0.1
<i>Merritt 6-66-9-0857BH Wellhead</i>						
WH08-B @ 9'	2/29/2024	9 ft. bgs	40.509325	-104.780542	1.2	1.0
WH08-N @ 4'	2/29/2024	4 ft. bgs	40.509332	-104.780532	1.0	1.0
WH08-W @ 4'	2/29/2024	4 ft. bgs	40.509325	-104.780553	0.9	1.5

TABLE 7
PDC ENERGY INC. - 69175
FORMER MERRITT SEC 9 WELLHEADS
FIELD DATA SUMMARY TABLE

Sample ID	Date Sampled	Depth	GPS Data ⁽¹⁾ Latitude / Longitude		PDOP Value	VOC Concentration ⁽²⁾ (ppm)
WH08-S @ 4'	2/29/2024	4 ft. bgs	40.509303	-104.780536	0.9	1.6
WH08-E @ 4'	2/29/2024	4 ft. bgs	40.509325	-104.780514	0.9	0.7
WHS08-N @ 0-6"	2/29/2024	0-6 in. bgs	40.509362	-104.780533	1.0	0.0
WHS08-S @ 0-6"	2/29/2024	0-6 in. bgs	40.509288	-104.780526	0.9	0.4
<i>Merritt 6-66-9-0857CH Wellhead</i>						
WH09 @ 8'	3/1/2024	8 ft. bgs	40.509325	-104.780481	NC	0.4
FLR09 @ 4'	3/1/2024	4 ft. bgs	40.509325	-104.780498	0.8	0.4
COMP01-FL09 @ 4'	3/1/2024	4 ft. bgs	40.509326	-104.780454	0.9	0.1
WHS09-N @ 0-6"	3/1/2024	0-6 in. bgs	40.509366	-104.780477	1.0	3.7
WHS09-S @ 0-6"	3/1/2024	0-6 in. bgs	40.509291	-104.780467	1.0	0.5
WHS09-E @ 0-6"	3/1/2024	0-6 in. bgs	40.509330	-104.780427	1.0	1.4
<i>Flowline Samples</i>						
FL01-01 @ 4'	3/13/2024	4 ft. bgs	40.509158	-104.781218	0.8	0.0
FL01-02 @ 4'	3/20/2024	4 ft. bgs	40.508700	-104.781811	NC	0.1
FL01-03 @ 4'	3/20/2024	4 ft. bgs	40.508673	-104.782415	NC	0.1
FL01-04 @ 4'	3/20/2024	4 ft. bgs	40.508590	-104.783224	1.0	0.4
FL01-05 @ 6'	3/20/2024	6 ft. bgs	40.508489	-104.783611	1.0	0.0
FL01-06 @ 7'	3/20/2024	7 ft. bgs	40.508416	-104.783884	NC	0.0
FL01-07 @ 4'	3/20/2024	4 ft. bgs	40.508214	-104.784375	NC	0.0
FL01-08 @ 4'	3/20/2024	4 ft. bgs	40.508039	-104.784901	0.9	0.0
FL02-01 @ 4'	3/13/2024	4 ft. bgs	40.509160	-104.781171	0.8	0.1
FL02-02 @ 7'	3/21/2024	7 ft. bgs	40.508426	-104.783881	0.8	0.0
FL03-01 @ 4'	3/13/2024	4 ft. bgs	40.509159	-104.781046	0.8	0.0
FL04-01 @ 4'	3/13/2024	4 ft. bgs	40.509243	-104.780677	0.9	0.2
FL05-01 @ 4'	3/13/2024	4 ft. bgs	40.509159	-104.781004	0.8	0.0
FL06-01 @ 4'	3/13/2024	4 ft. bgs	40.509245	-104.780631	0.8	0.0
FL07-01 @ 4'	3/13/2024	4 ft. bgs	40.509259	-104.780579	0.8	0.0
FL07-02 @ 4'	3/13/2024	4 ft. bgs	40.509159	-104.781329	0.9	0.0
FL08-01 @ 4'	3/13/2024	4 ft. bgs	40.509260	-104.780537	0.8	0.0
FL09-01 @ 4'	3/13/2024	4 ft. bgs	40.509263	-104.780497	0.8	0.0
<i>Compressor Line Samples</i>						
COMP01-FL01-01 @ 4'	3/13/2024	4 ft. bgs	40.509179	-104.781174	0.8	0.0
COMP01-FL02-01 @ 4'	3/13/2024	4 ft. bgs	40.509177	-104.781113	0.9	0.0
COMP01-FL03-01 @ 4'	3/13/2024	4 ft. bgs	40.509173	-104.781011	0.8	0.0
COMP01-FL04-01 @ 4'	3/13/2024	4 ft. bgs	40.509261	-104.780659	0.9	0.0
COMP01-FL05-01 @ 4'	3/13/2024	4 ft. bgs	40.509169	-104.780964	0.8	0.0
COMP01-FL06-01 @ 4'	3/13/2024	4 ft. bgs	40.509274	-104.780594	0.8	0.0
COMP01-FL07-01 @ 4'	3/13/2024	4 ft. bgs	40.509274	-104.780547	0.8	0.0
COMP01-FL08-01 @ 4'	3/13/2024	4 ft. bgs	40.509273	-104.780507	0.8	0.7
COMP01-FL09-01 @ 4'	3/13/2024	4 ft. bgs	40.509270	-104.780447	0.8	0.0
<i>Gas Line Samples</i>						
GL01-01 @ 7'	3/21/2024	7 ft. bgs	40.508445	-104.783880	0.8	0.0

TABLE 7
PDC ENERGY INC. - 69175
FORMER MERRITT SEC 9 WELLHEADS
FIELD DATA SUMMARY TABLE

Sample ID	Date Sampled	Depth	GPS Data ⁽¹⁾ Latitude / Longitude		PDOP Value	VOC Concentration ⁽²⁾ (ppm)
GL02-01 @ 7'	3/21/2024	7 ft. bgs	40.508459	-104.783879	1.0	0.1
GL02-02 @ 4'	3/20/2024	4 ft. bgs	40.508141	-104.784895	NC	0.0
<i>Manifold #1 Samples</i>						
MAN01-FL01 @ 3'	3/12/2024	3 ft. bgs	40.509159	-104.781413	0.8	0.0
MAN01-FL02 @ 3'	3/12/2024	3 ft. bgs	40.509158	-104.781406	0.8	0.0
MAN01-FL03 @ 3'	3/12/2024	3 ft. bgs	40.509159	-104.781397	0.8	0.0
MAN01-FL04 @ 3'	3/12/2024	3 ft. bgs	40.509158	-104.781391	0.8	0.0
MAN01-FL05 @ 3'	3/12/2024	3 ft. bgs	40.509159	-104.781384	0.8	0.0
MAN01-FL06 @ 3'	3/12/2024	3 ft. bgs	40.509157	-104.781377	0.8	0.0
MAN01-FL07 @ 3'	3/12/2024	3 ft. bgs	40.509157	-104.781370	0.8	0.0
MAN01-FL08 @ 3'	3/12/2024	3 ft. bgs	40.509158	-104.781362	0.8	0.0
MAN01-DL01 @ 4'	3/13/2024	4 ft. bgs	40.509144	-104.781429	NC	0.0
MAN01-DL02 @ 4'	3/13/2024	4 ft. bgs	40.509144	-104.781428	0.8	0.0
MAN01-DL03 @ 4'	3/13/2024	4 ft. bgs	40.509142	-104.781344	0.8	0.0
MAN01-DL04 @ 4'	3/13/2024	4 ft. bgs	40.509140	-104.781340	0.9	0.0
<i>Manifold #2 Samples</i>						
MAN02-DL01 @ 3'	3/12/2024	3 ft. bgs	40.509181	-104.781415	0.7	0.0
MAN02-DL02 @ 3'	3/12/2024	3 ft. bgs	40.509178	-104.781408	0.7	0.1
MAN02-DL03 @ 3'	3/12/2024	3 ft. bgs	40.509178	-104.781400	0.7	0.0
MAN02-DL04 @ 3'	3/12/2024	3 ft. bgs	40.509178	-104.781394	0.7	0.0
MAN02-DL05 @ 3'	3/12/2024	3 ft. bgs	40.509178	-104.781386	0.7	0.1
MAN02-DL06 @ 3'	3/12/2024	3 ft. bgs	40.509176	-104.781379	0.7	0.0
MAN02-DL07 @ 3'	3/12/2024	3 ft. bgs	40.509178	-104.781372	0.7	0.0
MAN02-DL08 @ 3'	3/12/2024	3 ft. bgs	40.509178	-104.781359	0.7	0.1
MAN02-DL09 @ 3'	3/12/2024	3 ft. bgs	40.509178	-104.781353	0.7	0.1
MAN02-FL01 @ 4'	3/13/2024	4 ft. bgs	40.509196	-104.781429	0.8	0.0
<i>Wellhead Pad Release - Spill ID #487274</i>						
WC03 @ 1'	7/9/2024	1 ft. bgs	40.509166	-104.780696	0.8	178
GS01 @ 2'	7/10/2024	2 ft. bgs	40.509163	-104.780622	0.9	82.4
SS01 @ 1'	7/12/2024	1 ft. bgs	40.509118	-104.780888	0.8	0.3
SS02 @ 1'	7/12/2024	1 ft. bgs	40.509121	-104.780829	0.9	0.4
SS03 @ 1'	7/12/2024	1 ft. bgs	40.509120	-104.780760	0.9	0.8
SS04 @ 1'	7/12/2024	1 ft. bgs	40.509123	-104.780689	0.9	1.8
SS05 @ 1'	7/12/2024	1 ft. bgs	40.509123	-104.780627	0.8	5.2
SS06 @ 1'	7/12/2024	1 ft. bgs	40.509083	-104.780620	0.9	6.0
SS07 @ 1'	7/12/2024	1 ft. bgs	40.509087	-104.780554	0.8	10.7
SS08 @ 1'	7/12/2024	1 ft. bgs	40.509128	-104.780548	0.8	44.2
SS09 @ 1'	7/12/2024	1 ft. bgs	40.509190	-104.780612	1.0	48.5
SS10 @ 1'	7/12/2024	1 ft. bgs	40.509192	-104.780684	1.0	3.7
SS11 @ 1'	7/12/2024	1 ft. bgs	40.509189	-104.780753	0.9	3.7
SS12 @ 1'	7/12/2024	1 ft. bgs	40.509181	-104.780818	0.9	1.9
SS13 @ 1'	7/12/2024	1 ft. bgs	40.509169	-104.780883	1.0	1.0

TABLE 7
PDC ENERGY INC. - 69175
FORMER MERRITT SEC 9 WELLHEADS
FIELD DATA SUMMARY TABLE

Sample ID	Date Sampled	Depth	GPS Data ⁽¹⁾ Latitude / Longitude		PDOP Value	VOC Concentration ⁽²⁾ (ppm)
SS14 @ 1'	7/12/2024	1 ft. bgs	40.509106	-104.780539	1.0	0.6
SS15 @ 1'	7/12/2024	1 ft. bgs	40.509155	-104.780544	1.0	0.6
SS16 @ 2'	7/12/2024	2 ft. bgs	40.509155	-104.780664	0.9	1.0
SS17 @ 3'	7/12/2024	3 ft. bgs	40.509153	-104.780797	1.0	0.5
SS18 @ 1'	7/12/2024	1 ft. bgs	40.509103	-104.780580	0.8	6.7
SS19 @ 2'	7/12/2024	2 ft. bgs	40.509157	-104.780579	0.8	4.3
SS20 @ 2'	7/12/2024	2 ft. bgs	40.509165	-104.780696	0.8	1.8
SS21 @ 1'	7/12/2024	1 ft. bgs	40.509190	-104.780624	0.8	10.0
SS22 @ 1'	7/12/2024	1 ft. bgs	40.509240	-104.780625	0.8	5.7
SS23 @ 1'	7/12/2024	1 ft. bgs	40.509249	-104.780556	0.8	7.2
SS24 @ 1'	7/12/2024	1 ft. bgs	40.509224	-104.780485	0.8	8.5
SS25 @ 1'	7/12/2024	1 ft. bgs	40.509171	-104.780469	0.9	7.6
SS26 @ 1'	7/12/2024	1 ft. bgs	40.509149	-104.780508	0.8	5.2
SS27 @ 1'	7/12/2024	1 ft. bgs	40.509196	-104.780532	0.8	6.4
SS28 @ 1'	7/15/2024	1 ft. bgs	40.509125	-104.780500	0.9	8.4
SS29 @ 1'	7/15/2024	1 ft. bgs	40.509089	-104.780501	0.9	8.7
SS30 @ 1.5'	7/15/2024	1.5 ft. bgs	40.509096	-104.780534	0.9	8.5
SS31 @ 1.5'	7/15/2024	1.5 ft. bgs	40.509115	-104.780534	0.9	9.2
SS32 @ 1.5'	7/15/2024	1.5 ft. bgs	40.509110	-104.780583	0.9	5.9
SS33 @ 1'	7/16/2024	1 ft. bgs	40.509138	-104.780469	0.9	6.4
SS34 @ 1'	7/17/2024	1 ft. bgs	40.509162	-104.780429	NC	1.5
SS35 @ 1'	7/17/2024	1 ft. bgs	40.509110	-104.780437	NC	1.4
SS36 @ 1'	7/17/2024	1 ft. bgs	40.509070	-104.780476	1.0	1.2
SS37 @ 1'	7/17/2024	1 ft. bgs	40.509062	-104.780540	1.1	2.7
SS38 @ 1'	7/17/2024	1 ft. bgs	40.509060	-104.780600	1.1	2.8
SS39 @ 4'	7/17/2024	4 ft. bgs	40.509149	-104.780505	0.9	2.1
SS40 @ 2'	7/17/2024	2 ft. bgs	40.509113	-104.780605	0.8	2.2
SS41 @ 3'	7/17/2024	3 ft. bgs	40.509102	-104.780500	0.8	2.8
SS42 @ 1'	7/18/2024	1 ft. bgs	40.509200	-104.780646	1.0	2.9
SS43 @ 1'	7/18/2024	1 ft. bgs	40.509103	-104.780632	1.1	1.8
SS44 @ 1'	7/18/2024	1 ft. bgs	40.509069	-104.780610	1.0	1.9
SS45 @ 1'	7/18/2024	1 ft. bgs	40.509189	-104.780466	1.0	4.2
SS46 @ 2'	7/18/2024	2 ft. bgs	40.509081	-104.780540	1.0	4.0
SS47 @ 1.5'	7/18/2024	1.5 ft. bgs	40.509083	-104.780583	1.0	10.4
SS48 @ 2.5'	7/18/2024	2.5 ft. bgs	40.509188	-104.780642	0.9	5.6
SS49 @ 2.5'	7/18/2024	2.5 ft. bgs	40.509088	-104.780602	0.7	0.4
SS50 @ 2.5'	7/18/2024	2.5 ft. bgs	40.509201	-104.780636	1.0	0.1
WC02 @ 8' ⁽³⁾	2/29/2024	8 ft. bgs	40.509325	-104.780542	1.2	339
<i>Background Samples</i>						
BKG01 @ 4'	3/1/2024	4 ft. bgs	40.509450	-104.781119	0.9	0.7
BKG01 @ 6'	3/1/2024	6 ft. bgs	40.509450	-104.781119	0.9	1.0
BKG01 @ 8'	3/1/2024	8 ft. bgs	40.509450	-104.781119	0.9	0.0

TABLE 7
PDC ENERGY INC. - 69175
FORMER MERRITT SEC 9 WELLHEADS
FIELD DATA SUMMARY TABLE

Sample ID	Date Sampled	Depth	GPS Data ⁽¹⁾ Latitude / Longitude		PDOP Value	VOC Concentration ⁽²⁾ (ppm)
BKG02 @ 4'	4/3/2024	4 ft. bgs	40.509488	-104.780704	0.8	0.5
BKG02 @ 6'	4/3/2024	6 ft. bgs	40.509488	-104.780704	0.8	0.4
BKG02 @ 8'	4/3/2024	8 ft. bgs	40.509488	-104.780704	0.8	0.4

Notes:

1. Global Positioning System (GPS) data is provided in decimal degrees using North American Datum 1983 (NAD83) UTM Zone 13 North.

2. Volatile organic compound (VOC) concentrations are measured in the field using a photoionization detector (PID).

3. Soil analytical indicated non-reportable criteria and soil sample was not analyzed.

PDOP = Position Dilution of Precision

ppm = Parts per million

ft. = Feet

in. = Inches

bgs = Below ground surface

NC = Data not collected

= Source material characterization sample - sample material excavated and transported off site

= Sample material excavated and transported off-site for disposal

ATTACHMENT A

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

March 18, 2024

Karen Olson

Tasman Geosciences

6855 W. 119th Ave.

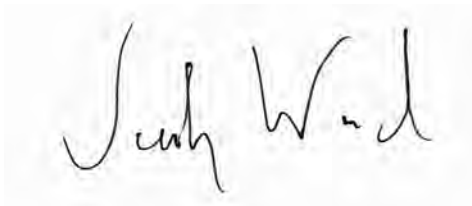
Broomfield, CO 80020

RE: PDC - Merritt Combined Wellheads

Work Order #2402477

Enclosed are the results of analyses for samples received by Summit Scientific on 02/27/24 17:33. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Jacob Wood". The signature is written in a cursive, flowing style.

Jacob Wood For Paul Shrewsbury

President



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/18/24 12:42

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
WH01-B@6'	2402477-01	Soil	02/27/24 14:35	02/27/24 17:33
WH01-W@4'	2402477-03	Soil	02/27/24 14:45	02/27/24 17:33
WH01-S@4'	2402477-04	Soil	02/27/24 14:50	02/27/24 17:33
WH01-E@4'	2402477-05	Soil	02/27/24 14:55	02/27/24 17:33

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client: PDC		PDC / Tasman		Send Data To:		Send Invoice To:	
Address: 6855 W 119th Ave		Project Manager: Karen Olson		Company: PDC Energy		Project Name/Location:	
City/State/Zip: Broomfield / CO / 80220		E-Mail: karen.olson@chevron.com		Project Name: Merritt Combined Wellheads		AFE#:	
Phone: 303-487-1228		Project Number:		PO/Billing Codes:		Contact: Karen Olson	
Sampler Name: Jordan Hestmark							

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested							Special Instructions	
					HCl	HNO3	None	Other _____	Water	Soil	Air-Canister #	Other _____	BTEXN - 8260B	TPH - (C6 - C36)	1,2,4 & 1,3,5 - TMB	Boron - HWS	pH, EC, SAR	PAHs - 915	Metals - 915	TDS, SO4, Cl	On hold
1	WH01-R @ 6'	2/27/24	1435	2			X			X			X	X	X	X	X	X			
2	WH01-N @ 4'		1440										X	X	X	X	X	X	X	X	
3	WH01-W @ 4'		1445										X	X	X	X	X	X	X	X	
4	WH01-S @ 4'		1450										X	X	X	X	X	X	X	X	
5	WH01-E @ 4'		1455										X	X	X	X	X	X	X	X	
6																					
7																					
8																					
9																					
10																					
11																					
12																					
13																					
14																					
15																					

Relinquished by: Jordan Hestmark	Date/Time: 2/27/24 1644	Received by: Tasman Lockbox	Date/Time: 2/27/24 1644	TAT Business Days	Field DO	Notes: - BTEXN, TPH, & TMBs on same day - All other constituents on 48 hr turn
Relinquished by: Tasman Lockbox	Date/Time: 2/27/24 1733	Received by: [Signature]	Date/Time: 2/27/24 1733	Same Day	Field EC	
				1 Day	Field ORP	
				2 Days	Field pH	
				3 Days	Field Temp.	
				Standard	Field Turb.	
Temperature Upon Receipt: 8.1		Corrected Temperature: 8		IR gun #: 1	HNO3 lot #:	

S₂

Sample Receipt Checklist

S2 Work Order# 2402477Client: PortraimanClient Project ID: Merritt Combined wellheadsShipped Via: H.D./P.U./FedEx/UPS/USPS/Other

Airbill #:

☐	☒	☐	☐	☐

Matrix (Check all that apply)

Air

☐

Soil/Solid

☐

Water

☐

Other

☐

Temp (°C)

8.1

Thermometer #

1

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	☒	☐	☐	
If custody seals are present, are they intact? ⁽¹⁾	☒	☐	☐	<u>OUTSIDE</u>
Are samples due within 48 hours present?	☒	☐	☐	<u>Same day</u>
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe ²⁺), Hexavalent Chromium (Cr ⁶⁺ , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	☐	☒	☐	
Is a chain-of-custody (COC) form present and filled out Completely? ⁽¹⁾	☒	☐	☐	
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	☒	☐	☐	
Were all samples received intact? ⁽¹⁾	☒	☐	☐	
Was adequate sample volume provided? ⁽¹⁾	☒	☐	☐	
Does the COC agree with the number and type of sample bottles received? ⁽¹⁾	☒	☐	☐	
Do the sample IDs on the bottle labels match the COC? ⁽¹⁾	☒	☐	☐	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	☐	☐	☒	
Are samples preserved that require preservation (excluding cooling)? ⁽¹⁾ Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	☐	☐	☒	
If samples are acid preserved for metals, is the pH ≤ 2? ⁽¹⁾ Record the pH in Comments.	☐	☐	☒	
If dissolved metals are requested, were samples field filtered?	☐	☐	☒	

Additional Comments (if any):

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.
AS
Custodian Printed Name

2/27/24
Date/Time



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/18/24 12:42

WH01-B@6'
2402477-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/27/24 14:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.0020	mg/kg	1	BHB0859	02/27/24	02/28/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **02/27/24 14:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4	0.0317	79.3 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0397	99.2 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0406	101 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/27/24 14:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (DRO)	ND	50	mg/kg	1	BHB0862	02/27/24	02/28/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/27/24 14:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: o-Terphenyl	12.4	99.1 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/18/24 12:42

WH01-B@6'
2402477-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **02/27/24 14:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHB0881	02/28/24	03/01/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **02/27/24 14:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0229	68.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0170	51.0 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/27/24 14:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHC0265	03/11/24	03/13/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/27/24 14:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/18/24 12:42

WH01-B@6'
2402477-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	7.05	0.200	mg/kg dry	1	BHC0031	03/04/24	03/05/24	EPA 6020B
Barium	365	0.400	"	"	"	"	"	"
Cadmium	0.275	0.200	"	"	"	"	"	"
Copper	6.51	0.400	"	"	"	"	"	"
Lead	10.0	0.200	"	"	"	"	"	"
Nickel	6.77	0.400	"	"	"	"	"	"
Silver	0.0441	0.0200	"	"	"	"	"	"
Zinc	33.4	0.400	"	"	"	"	"	"
Selenium	0.343	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/27/24 14:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0462	03/15/24	03/15/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **02/27/24 14:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	46.4	0.0500	mg/L dry	1	BHC0057	03/04/24	03/06/24	EPA 6020B	
Magnesium	6.33	0.0500	"	"	"	"	"	"	
Sodium	17.1	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **02/27/24 14:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.625	0.00100	units	1	BHC0180	03/07/24	03/07/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/27/24 14:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/18/24 12:42

WH01-B@6'
2402477-01 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	73.4	%	1	BHC0126	03/06/24	03/08/24	Calculation

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/27/24 14:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.292	0.0100	mmhos/cm	1	BHC0059	03/04/24	03/06/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/27/24 14:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.13		pH Units	1	BHC0058	03/04/24	03/06/24	EPA 9045D	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/18/24 12:42

WH01-W@4'
2402477-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/27/24 14:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHB0859	02/27/24	02/28/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **02/27/24 14:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0322	80.6 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0397	99.3 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0411	103 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/27/24 14:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHB0862	02/27/24	02/28/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/27/24 14:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	10.3	82.5 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/18/24 12:42

WH01-W@4'
2402477-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **02/27/24 14:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHB0881	02/28/24	03/01/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **02/27/24 14:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0201	60.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0154	46.1 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/27/24 14:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHC0265	03/11/24	03/13/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/27/24 14:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/18/24 12:42

WH01-W@4'
2402477-03 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	5.07	0.200	mg/kg dry	1	BHC0031	03/04/24	03/05/24	EPA 6020B
Barium	1000	0.400	"	"	"	"	"	"
Cadmium	0.548	0.200	"	"	"	"	"	"
Copper	7.94	0.400	"	"	"	"	"	"
Lead	8.88	0.200	"	"	"	"	"	"
Nickel	5.98	0.400	"	"	"	"	"	"
Silver	0.0405	0.0200	"	"	"	"	"	"
Zinc	44.7	0.400	"	"	"	"	"	"
Selenium	0.384	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/27/24 14:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0462	03/15/24	03/15/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **02/27/24 14:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	57.0	0.0500	mg/L dry	1	BHC0057	03/04/24	03/06/24	EPA 6020B	
Magnesium	5.40	0.0500	"	"	"	"	"	"	
Sodium	4.72	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **02/27/24 14:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.160	0.00100	units	1	BHC0180	03/07/24	03/07/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/27/24 14:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/18/24 12:42

WH01-W@4'
2402477-03 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	81.9	%	1	BHC0126	03/06/24	03/08/24	Calculation

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/27/24 14:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.218	0.0100	mmhos/cm	1	BHC0059	03/04/24	03/06/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/27/24 14:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.10		pH Units	1	BHC0058	03/04/24	03/06/24	EPA 9045D	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/18/24 12:42

WH01-S@4'
2402477-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/27/24 14:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHB0859	02/27/24	02/28/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **02/27/24 14:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0328	81.9 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0399	99.7 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0397	99.2 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/27/24 14:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHB0862	02/27/24	02/28/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/27/24 14:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	11.7	93.3 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/18/24 12:42

WH01-S@4'
2402477-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **02/27/24 14:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHB0881	02/28/24	03/01/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **02/27/24 14:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0225	67.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0183	54.9 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/27/24 14:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHC0265	03/11/24	03/13/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/27/24 14:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/18/24 12:42

WH01-S@4'
2402477-04 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	6.69	0.200	mg/kg dry	1	BHC0031	03/04/24	03/05/24	EPA 6020B
Barium	117	0.400	"	"	"	"	"	"
Cadmium	0.229	0.200	"	"	"	"	"	"
Copper	5.11	0.400	"	"	"	"	"	"
Lead	7.62	0.200	"	"	"	"	"	"
Nickel	6.15	0.400	"	"	"	"	"	"
Silver	0.0362	0.0200	"	"	"	"	"	"
Zinc	25.1	0.400	"	"	"	"	"	"
Selenium	0.346	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/27/24 14:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0462	03/15/24	03/15/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **02/27/24 14:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	132	0.0500	mg/L dry	1	BHC0057	03/04/24	03/06/24	EPA 6020B	
Magnesium	7.44	0.0500	"	"	"	"	"	"	
Sodium	53.6	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **02/27/24 14:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.23	0.00100	units	1	BHC0180	03/07/24	03/07/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/27/24 14:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/18/24 12:42

WH01-S@4'
2402477-04 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	82.9	%	1	BHC0126	03/06/24	03/08/24	Calculation

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/27/24 14:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.425	0.0100	mmhos/cm	1	BHC0059	03/04/24	03/06/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/27/24 14:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.21		pH Units	1	BHC0058	03/04/24	03/06/24	EPA 9045D	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/18/24 12:42

WH01-E@4'
2402477-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/27/24 14:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHB0859	02/27/24	02/28/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **02/27/24 14:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0275	68.8 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0412	103 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0391	97.6 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/27/24 14:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHB0862	02/27/24	02/28/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/27/24 14:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	11.6	92.4 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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6855 W. 119th Ave.
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Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/18/24 12:42

WH01-E@4'
2402477-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **02/27/24 14:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHB0881	02/28/24	03/01/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **02/27/24 14:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0184	55.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0139	41.8 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/27/24 14:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHC0265	03/11/24	03/13/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/27/24 14:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/18/24 12:42

WH01-E@4'
2402477-05 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	6.01	0.200	mg/kg dry	1	BHC0031	03/04/24	03/05/24	EPA 6020B
Barium	640	0.400	"	"	"	"	"	"
Cadmium	0.262	0.200	"	"	"	"	"	"
Copper	7.88	0.400	"	"	"	"	"	"
Lead	7.75	0.200	"	"	"	"	"	"
Nickel	5.84	0.400	"	"	"	"	"	"
Silver	0.0353	0.0200	"	"	"	"	"	"
Zinc	27.7	0.400	"	"	"	"	"	"
Selenium	0.311	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/27/24 14:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0462	03/15/24	03/15/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **02/27/24 14:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	40.8	0.0500	mg/L dry	1	BHC0057	03/04/24	03/06/24	EPA 6020B	
Magnesium	4.11	0.0500	"	"	"	"	"	"	
Sodium	4.20	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **02/27/24 14:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.168	0.00100	units	1	BHC0180	03/07/24	03/07/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/27/24 14:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/18/24 12:42

WH01-E@4'
2402477-05 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	83.8	%	1	BHC0126	03/06/24	03/08/24	Calculation

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/27/24 14:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.268	0.0100	mmhos/cm	1	BHC0059	03/04/24	03/06/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/27/24 14:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.98		pH Units	1	BHC0058	03/04/24	03/06/24	EPA 9045D	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/18/24 12:42

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHB0859 - EPA 5030 Soil MS

Blank (BHB0859-BLK1)

Prepared: 02/27/24 Analyzed: 02/28/24

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0345		"	0.0400		86.2	50-150			
Surrogate: Toluene-d8	0.0431		"	0.0400		108	50-150			
Surrogate: 4-Bromofluorobenzene	0.0416		"	0.0400		104	50-150			

LCS (BHB0859-BS1)

Prepared: 02/27/24 Analyzed: 02/28/24

Benzene	0.0910	0.0020	mg/kg	0.100		91.0	70-130			
Toluene	0.0913	0.0050	"	0.100		91.3	70-130			
Ethylbenzene	0.0901	0.0050	"	0.100		90.1	70-130			
m,p-Xylene	0.171	0.010	"	0.200		85.7	70-130			
o-Xylene	0.0860	0.0050	"	0.100		86.0	70-130			
1,2,4-Trimethylbenzene	0.0846	0.0050	"	0.100		84.6	70-130			
1,3,5-Trimethylbenzene	0.0806	0.0050	"	0.100		80.6	70-130			
Naphthalene	0.101	0.0038	"	0.100		101	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0326		"	0.0400		81.4	50-150			
Surrogate: Toluene-d8	0.0402		"	0.0400		101	50-150			
Surrogate: 4-Bromofluorobenzene	0.0390		"	0.0400		97.6	50-150			

Matrix Spike (BHB0859-MS1)

Source: 2402467-01

Prepared: 02/27/24 Analyzed: 02/28/24

Benzene	0.0851	0.0020	mg/kg	0.100	ND	85.1	70-130			
Toluene	0.0852	0.0050	"	0.100	ND	85.2	70-130			
Ethylbenzene	0.0832	0.0050	"	0.100	ND	83.2	70-130			
m,p-Xylene	0.158	0.010	"	0.200	ND	79.1	70-130			
o-Xylene	0.0801	0.0050	"	0.100	ND	80.1	70-130			
1,2,4-Trimethylbenzene	0.0777	0.0050	"	0.100	ND	77.7	70-130			
1,3,5-Trimethylbenzene	0.0748	0.0050	"	0.100	ND	74.8	70-130			
Naphthalene	0.0946	0.0038	"	0.100	ND	94.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0334		"	0.0400		83.5	50-150			
Surrogate: Toluene-d8	0.0405		"	0.0400		101	50-150			
Surrogate: 4-Bromofluorobenzene	0.0398		"	0.0400		99.4	50-150			

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Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/18/24 12:42

Volatile Organic Compounds by EPA Method 8260B - Quality Control
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Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHB0859 - EPA 5030 Soil MS

Matrix Spike Dup (BHB0859-MSD1)		Source: 2402467-01			Prepared: 02/27/24 Analyzed: 02/28/24					
Benzene	0.0833	0.0020	mg/kg	0.100	ND	83.3	70-130	2.21	30	
Toluene	0.0838	0.0050	"	0.100	ND	83.8	70-130	1.63	30	
Ethylbenzene	0.0819	0.0050	"	0.100	ND	81.9	70-130	1.60	30	
m,p-Xylene	0.156	0.010	"	0.200	ND	77.9	70-130	1.51	30	
o-Xylene	0.0797	0.0050	"	0.100	ND	79.7	70-130	0.526	30	
1,2,4-Trimethylbenzene	0.0779	0.0050	"	0.100	ND	77.9	70-130	0.347	30	
1,3,5-Trimethylbenzene	0.0743	0.0050	"	0.100	ND	74.3	70-130	0.724	30	
Naphthalene	0.0901	0.0038	"	0.100	ND	90.1	70-130	4.94	30	
Surrogate: 1,2-Dichloroethane-d4	0.0327		"	0.0400		81.7	50-150			
Surrogate: Toluene-d8	0.0406		"	0.0400		101	50-150			
Surrogate: 4-Bromofluorobenzene	0.0404		"	0.0400		101	50-150			

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Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/18/24 12:42

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHB0862 - EPA 3550A

Blank (BHB0862-BLK1)

Prepared: 02/27/24 Analyzed: 02/28/24

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: o-Terphenyl	10.6		"	12.5		85.1	30-150			

LCS (BHB0862-BS1)

Prepared: 02/27/24 Analyzed: 02/28/24

C10-C28 (DRO)	509	50	mg/kg	500		102	70-130			
Surrogate: o-Terphenyl	10.1		"	12.5		81.1	30-150			

Matrix Spike (BHB0862-MS1)

Source: 2402467-01

Prepared: 02/27/24 Analyzed: 02/28/24

C10-C28 (DRO)	506	50	mg/kg	500	17.1	97.9	70-130			
Surrogate: o-Terphenyl	15.8		"	12.5		126	30-150			

Matrix Spike Dup (BHB0862-MSD1)

Source: 2402467-01

Prepared: 02/27/24 Analyzed: 02/28/24

C10-C28 (DRO)	500	50	mg/kg	500	17.1	96.6	70-130	1.23	20	
Surrogate: o-Terphenyl	16.3		"	12.5		130	30-150			

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Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/18/24 12:42

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHB0881 - EPA 5030 Soil MS

Blank (BHB0881-BLK1)

Prepared: 02/28/24 Analyzed: 02/29/24

Acenaphthene	ND	0.00500	mg/kg
Anthracene	ND	0.00500	"
Benzo (a) anthracene	ND	0.00500	"
Benzo (a) pyrene	ND	0.00500	"
Benzo (b) fluoranthene	ND	0.00500	"
Benzo (k) fluoranthene	ND	0.00500	"
Chrysene	ND	0.00500	"
Dibenz (a,h) anthracene	ND	0.00500	"
Fluoranthene	ND	0.00500	"
Fluorene	ND	0.00500	"
Indeno (1,2,3-cd) pyrene	ND	0.00500	"
Pyrene	ND	0.00500	"
1-Methylnaphthalene	ND	0.00500	"
2-Methylnaphthalene	ND	0.00500	"

Surrogate: 2-Methylnaphthalene-d10	0.0333	"	0.0333	99.9	40-150
Surrogate: Fluoranthene-d10	0.0280	"	0.0333	84.0	40-150

LCS (BHB0881-BS1)

Prepared: 02/28/24 Analyzed: 02/29/24

Acenaphthene	0.0377	0.00500	mg/kg	0.0333	113	31-137
Anthracene	0.0389	0.00500	"	0.0333	117	30-120
Benzo (a) anthracene	0.0372	0.00500	"	0.0333	112	30-120
Benzo (a) pyrene	0.0375	0.00500	"	0.0333	113	30-120
Benzo (b) fluoranthene	0.0394	0.00500	"	0.0333	118	30-120
Benzo (k) fluoranthene	0.0371	0.00500	"	0.0333	111	30-120
Chrysene	0.0370	0.00500	"	0.0333	111	30-120
Dibenz (a,h) anthracene	0.0387	0.00500	"	0.0333	116	30-120
Fluoranthene	0.0399	0.00500	"	0.0333	120	30-120
Fluorene	0.0382	0.00500	"	0.0333	115	30-120
Indeno (1,2,3-cd) pyrene	0.0378	0.00500	"	0.0333	113	30-120
Pyrene	0.0370	0.00500	"	0.0333	111	35-142
1-Methylnaphthalene	0.0416	0.00500	"	0.0333	125	35-142
2-Methylnaphthalene	0.0433	0.00500	"	0.0333	130	35-142

Surrogate: 2-Methylnaphthalene-d10	0.0236	"	0.0333	70.8	40-150
Surrogate: Fluoranthene-d10	0.0274	"	0.0333	82.2	40-150

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/18/24 12:42

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Reporting			Spike		Source		%REC		RPD	
	Result	Limit	Units	Level		Result	%REC	Limits	RPD	Limit	Notes

Batch BHB0881 - EPA 5030 Soil MS

Matrix Spike (BHB0881-MS1)

Source: 2402471-01

Prepared: 02/28/24 Analyzed: 03/01/24

Acenaphthene	0.0278	0.00500	mg/kg	0.0333	ND	83.4	31-137				
Anthracene	0.0290	0.00500	"	0.0333	ND	86.9	30-120				
Benzo (a) anthracene	0.0273	0.00500	"	0.0333	ND	81.8	30-120				
Benzo (a) pyrene	0.0300	0.00500	"	0.0333	ND	90.0	30-120				
Benzo (b) fluoranthene	0.0286	0.00500	"	0.0333	ND	85.8	30-120				
Benzo (k) fluoranthene	0.0276	0.00500	"	0.0333	ND	82.8	30-120				
Chrysene	0.0272	0.00500	"	0.0333	ND	81.5	30-120				
Dibenz (a,h) anthracene	0.0274	0.00500	"	0.0333	ND	82.3	30-120				
Fluoranthene	0.0288	0.00500	"	0.0333	ND	86.3	30-120				
Fluorene	0.0286	0.00500	"	0.0333	ND	85.8	30-120				
Indeno (1,2,3-cd) pyrene	0.0298	0.00500	"	0.0333	ND	89.4	30-120				
Pyrene	0.0271	0.00500	"	0.0333	ND	81.2	35-142				
1-Methylnaphthalene	0.0283	0.00500	"	0.0333	ND	84.9	15-130				
2-Methylnaphthalene	0.0292	0.00500	"	0.0333	ND	87.5	15-130				
Surrogate: 2-Methylnaphthalene-d10	0.0172		"	0.0333		51.7	40-150				
Surrogate: Fluoranthene-d10	0.0191		"	0.0333		57.2	40-150				

Matrix Spike Dup (BHB0881-MSD1)

Source: 2402471-01

Prepared: 02/28/24 Analyzed: 03/01/24

Acenaphthene	0.0273	0.00500	mg/kg	0.0333	ND	81.9	31-137	1.77	30		
Anthracene	0.0287	0.00500	"	0.0333	ND	86.0	30-120	0.961	30		
Benzo (a) anthracene	0.0267	0.00500	"	0.0333	ND	80.2	30-120	2.05	30		
Benzo (a) pyrene	0.0286	0.00500	"	0.0333	ND	85.8	30-120	4.88	30		
Benzo (b) fluoranthene	0.0276	0.00500	"	0.0333	ND	82.7	30-120	3.70	30		
Benzo (k) fluoranthene	0.0270	0.00500	"	0.0333	ND	81.1	30-120	2.07	30		
Chrysene	0.0272	0.00500	"	0.0333	ND	81.7	30-120	0.255	30		
Dibenz (a,h) anthracene	0.0259	0.00500	"	0.0333	ND	77.6	30-120	5.92	30		
Fluoranthene	0.0284	0.00500	"	0.0333	ND	85.3	30-120	1.16	30		
Fluorene	0.0276	0.00500	"	0.0333	ND	82.9	30-120	3.35	30		
Indeno (1,2,3-cd) pyrene	0.0282	0.00500	"	0.0333	ND	84.7	30-120	5.36	30		
Pyrene	0.0274	0.00500	"	0.0333	ND	82.1	35-142	1.11	30		
1-Methylnaphthalene	0.0296	0.00500	"	0.0333	ND	88.7	15-130	4.45	50		
2-Methylnaphthalene	0.0288	0.00500	"	0.0333	ND	86.4	15-130	1.21	50		
Surrogate: 2-Methylnaphthalene-d10	0.0175		"	0.0333		52.5	40-150				
Surrogate: Fluoranthene-d10	0.0187		"	0.0333		56.0	40-150				

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/18/24 12:42

Total Metals by EPA 6020B Hot Water Soluble Extraction - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0265 - EPA 3050B

Blank (BHC0265-BLK1)

Prepared: 03/11/24 Analyzed: 03/13/24

Boron ND 2.00 mg/L

LCS (BHC0265-BS1)

Prepared: 03/11/24 Analyzed: 03/13/24

Boron 5.97 2.00 mg/L 5.00 119 80-120

Duplicate (BHC0265-DUP1)

Source: 2402396-01

Prepared: 03/11/24 Analyzed: 03/13/24

Boron 0.0650 2.00 mg/L ND 200 20 QR-01

Matrix Spike (BHC0265-MS1)

Source: 2402396-01

Prepared: 03/11/24 Analyzed: 03/13/24

Boron 5.76 2.00 mg/L 5.00 ND 115 75-125

Matrix Spike Dup (BHC0265-MSD1)

Source: 2402396-01

Prepared: 03/11/24 Analyzed: 03/13/24

Boron 5.90 2.00 mg/L 5.00 ND 118 75-125 2.39 25

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Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/18/24 12:42

Total Metals by EPA 6020B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0031 - EPA 3050B

Blank (BHC0031-BLK1)

Prepared & Analyzed: 03/04/24

Arsenic	ND	0.200	mg/kg wet
Barium	ND	0.400	"
Cadmium	ND	0.200	"
Copper	ND	0.400	"
Lead	ND	0.200	"
Nickel	ND	0.400	"
Silver	ND	0.0200	"
Zinc	ND	0.400	"
Selenium	ND	0.260	"

LCS (BHC0031-BS1)

Prepared: 03/04/24 Analyzed: 03/05/24

Arsenic	41.4	0.200	mg/kg wet	40.0	104	80-120
Barium	42.4	0.400	"	40.0	106	80-120
Cadmium	2.04	0.200	"	2.00	102	80-120
Copper	42.7	0.400	"	40.0	107	80-120
Lead	20.1	0.200	"	20.0	101	80-120
Nickel	42.0	0.400	"	40.0	105	80-120
Silver	1.99	0.0200	"	2.00	99.4	80-120
Zinc	41.6	0.400	"	40.0	104	80-120
Selenium	4.75	0.260	"	4.00	119	80-120

Duplicate (BHC0031-DUP1)

Source: 2402089-04RE1

Prepared: 03/04/24 Analyzed: 03/05/24

Arsenic	2.21	0.200	mg/kg wet	2.09	5.60	20	QR-04
Barium	339	0.400	"	224	40.8	20	
Cadmium	0.158	0.200	"	0.148	6.54	20	
Copper	7.09	0.400	"	5.86	19.0	20	
Lead	8.11	0.200	"	7.37	9.62	20	
Nickel	5.50	0.400	"	5.18	5.91	20	
Silver	0.0244	0.0200	"	0.0248	1.63	20	
Zinc	17.9	0.400	"	17.3	3.48	20	
Selenium	ND	0.260	"	ND		20	

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Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/18/24 12:42

Total Metals by EPA 6020B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0031 - EPA 3050B

Matrix Spike (BHC0031-MS1)

Source: 2402089-04RE1

Prepared: 03/04/24 Analyzed: 03/05/24

Arsenic	45.2	0.200	mg/kg wet	40.0	2.09	108	75-125			
Barium	224	0.400	"	40.0	224	0.141	75-125			QM-05
Cadmium	2.22	0.200	"	2.00	0.148	104	75-125			
Copper	27.6	0.400	"	40.0	5.86	54.2	75-125			QM-05
Lead	27.9	0.200	"	20.0	7.37	103	75-125			
Nickel	27.0	0.400	"	40.0	5.18	54.5	75-125			QM-05
Silver	2.01	0.0200	"	2.00	0.0248	99.2	75-125			
Zinc	38.7	0.400	"	40.0	17.3	53.6	75-125			QM-05
Selenium	7.21	0.260	"	4.00	ND	180	75-125			QM-05

Matrix Spike Dup (BHC0031-MSD1)

Source: 2402089-04RE1

Prepared: 03/04/24 Analyzed: 03/05/24

Arsenic	44.6	0.200	mg/kg wet	40.0	2.09	106	75-125	1.38	25	
Barium	222	0.400	"	40.0	224	NR	75-125	0.818	25	QM-05
Cadmium	2.25	0.200	"	2.00	0.148	105	75-125	1.27	25	
Copper	27.4	0.400	"	40.0	5.86	53.7	75-125	0.733	25	QM-05
Lead	27.9	0.200	"	20.0	7.37	103	75-125	0.130	25	
Nickel	26.8	0.400	"	40.0	5.18	54.1	75-125	0.703	25	QM-05
Silver	2.01	0.0200	"	2.00	0.0248	99.3	75-125	0.179	25	
Zinc	38.6	0.400	"	40.0	17.3	53.1	75-125	0.463	25	QM-05
Selenium	7.22	0.260	"	4.00	ND	181	75-125	0.139	25	QM-05

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Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/18/24 12:42

Hexavalent Chromium by EPA Method 7196 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0462 - 3060A Mod

Blank (BHC0462-BLK1)

Prepared & Analyzed: 03/15/24

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BHC0462-BS1)

Prepared & Analyzed: 03/15/24

Chromium, Hexavalent 24.4 0.30 mg/kg wet 25.0 97.6 80-120

Duplicate (BHC0462-DUP1)

Source: 2402423-01

Prepared & Analyzed: 03/15/24

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BHC0462-MS1)

Source: 2402423-01

Prepared & Analyzed: 03/15/24

Chromium, Hexavalent 26.4 0.30 mg/kg dry 26.8 ND 98.4 75-125

Matrix Spike Dup (BHC0462-MSD1)

Source: 2402423-01

Prepared & Analyzed: 03/15/24

Chromium, Hexavalent 26.4 0.30 mg/kg dry 26.8 ND 98.4 75-125 0.00 20

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/18/24 12:42

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0057 - General Preparation

Blank (BHC0057-BLK1)

Prepared: 03/04/24 Analyzed: 03/06/24

Calcium	ND	0.0500	mg/L wet
Magnesium	ND	0.0500	"
Sodium	ND	0.0500	"

LCS (BHC0057-BS1)

Prepared: 03/04/24 Analyzed: 03/06/24

Calcium	5.43	0.0500	mg/L wet	5.00	109	70-130
Magnesium	5.22	0.0500	"	5.00	104	70-130
Sodium	5.36	0.0500	"	5.00	107	70-130

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/18/24 12:42

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control

Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD	
		Limit	Units		Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0126 - General Preparation

Duplicate (BHC0126-DUP1)

Source: 2402407-01

Prepared: 03/06/24 Analyzed: 03/08/24

% Solids	93.1	%	93.3	0.186	20

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/18/24 12:42

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD	
		Limit	Units		Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0059 - General Preparation

Blank (BHC0059-BLK1)

Prepared: 03/04/24 Analyzed: 03/06/24

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BHC0059-BS1)

Prepared: 03/04/24 Analyzed: 03/06/24

Specific Conductance (EC) 0.156 0.0100 mmhos/cm 0.150 104 95-105

Duplicate (BHC0059-DUP1)

Source: 2402381-01

Prepared: 03/04/24 Analyzed: 03/06/24

Specific Conductance (EC) 1.08 0.0100 mmhos/cm 1.11 2.65 20

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/18/24 12:42

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source Result	%REC		RPD		Notes
		Limit	Units			%REC	Limits	RPD	Limit	

Batch BHC0058 - General Preparation

LCS (BHC0058-BS1)

Prepared: 03/04/24 Analyzed: 03/06/24

pH	9.06	pH Units	9.18	98.7	95-105

Duplicate (BHC0058-DUP1)

Source: 2402381-01

Prepared: 03/04/24 Analyzed: 03/06/24

pH	7.62	pH Units	7.62	0.00	20

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/18/24 12:42

Notes and Definitions

QR-04	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QR-01	Analyses are not controlled on RPD values from sample concentrations less than 10 times the reporting limit. QC batch accepted based on LCS and/or LCSD QC results.
QM-05	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The associated LCS and/or LCSD were within acceptance limits, therefore the data are considered valid.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

March 19, 2024

Karen Olson

Tasman Geosciences

6855 W. 119th Ave.

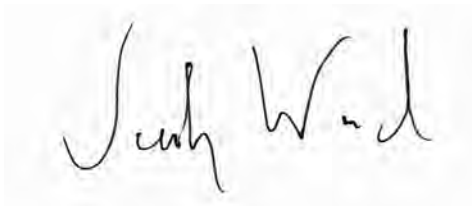
Broomfield, CO 80020

RE: PDC - Merritt Combined Wellheads

Work Order #2402488

Enclosed are the results of analyses for samples received by Summit Scientific on 02/27/24 17:33. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Jacob Wood". The signature is written in a cursive, flowing style.

Jacob Wood For Paul Shrewsbury

President



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/19/24 15:13

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
WH02@6'	2402488-01	Soil	02/27/24 13:35	02/27/24 17:33
FLR02@4'	2402488-02	Soil	02/27/24 13:40	02/27/24 17:33
COMP01-FL02@4'	2402488-03	Soil	02/27/24 13:45	02/27/24 17:33

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client: PDC PDC / Tasman				Send Data To:				Send Invoice To:			
Address: 6855 W 119th Ave				Project Manager: Karen Olson				Company: PDC Energy			
City/State/Zip: Broomfield / CO / 80220				E-Mail: karen.olson@chevron.com				Project Name/Location:			
Phone: 303-487-1228				Project Name: Merritt Combined Wellheads				AFE#:			
Sampler Name: Jordan Hestmark				Project Number:				PO/Billing Codes:			
Contact: Karen Olson											

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix		Air-Canister #	Other	Analysis Requested								Special Instructions
					HCl	HNO3	None	Other	Water	Soil			BTEXN - 8260B	TPH - (C6 - C36)	1,2,4 & 1,3,5 - TMB	Boron - HWS	pH, EC, SAR	PAHs - 915	Metals - 915	TDS, SO4, Cl	
1	WHOZ @ 6'	2/27/24	1335	2			X			X			X	X	X	X	X	X			
2	FLROZ @ 4'	1	1340	1			1			1			1	1	1	1	1	1			
3	COMP01-FLROZ @ 4'	1	1345	1			1			1			1	1	1	1	1	1			
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					
13																					
14																					
15																					

Relinquished by: Jordan Hestmark	Date/Time: 2/27/24 1644	Received by: Tasman Lockbox	Date/Time: 2/27/24 1644	TAT Business Days	Field DO	Notes:
Relinquished by: Tasman Lockbox	Date/Time: 2/27/24 1733	Received by: [Signature]	Date/Time: 2/27/24 1733	Same Day	Field EC	
Relinquished by:	Date/Time:	Received by:	Date/Time:	1 Day	Field ORP	
				2 Days	Field pH	
				3 Days	Field Temp.	
Temperature Upon Receipt: 8.1	Corrected Temperature: 8	IR gun #: 1	HNO3 lot #:	Standard	X	Field Turb.

S₂

Sample Receipt Checklist

S2 Work Order# 2402488Client: ProctormanClient Project ID: Merritt Combined wellheadsShipped Via: H.D./P.U./FedEx/UPS/USPS/Other ☐

Airbill #: _____

☐	☒	☐	☐	☐

Matrix (Check all that apply)

Air

☐

Soil/Solid

☐

Water

☐

Other

☐

Temp (°C)

Thermometer #

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	☒	☐	☐	on ice
If custody seals are present, are they intact? ⁽¹⁾	☒	☐	☐	
Are samples due within 48 hours present?	☐	☒	☐	
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe ²⁺), Hexavalent Chromium (Cr ⁶⁺ , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	☐	☒	☐	
Is a chain-of-custody (COC) form present and filled out Completely? ⁽¹⁾	☒	☐	☐	
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	☒	☐	☐	
Were all samples received intact? ⁽¹⁾	☒	☐	☐	
Was adequate sample volume provided? ⁽¹⁾	☒	☐	☐	
Does the COC agree with the number and type of sample bottles received? ⁽¹⁾	☒	☐	☐	
Do the sample IDs on the bottle labels match the COC? ⁽¹⁾	☒	☐	☐	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	☐	☐	☒	"
Are samples preserved that require preservation (excluding cooling)? ⁽¹⁾ Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	☐	☐	☒	
If samples are acid preserved for metals, is the pH ≤ 2? ⁽¹⁾ Record the pH in Comments.	☐	☐	☒	
If dissolved metals are requested, were samples field filtered?	☐	☐	☒	
Additional Comments (if any):				

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.
AS
 Custodian Printed Name

2/27/24
 Date/Time



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/19/24 15:13

WH02@6'
2402488-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/27/24 13:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	0.0048	0.0020		mg/kg	1	BHB0891	02/28/24	02/29/24	EPA 8260B	
Toluene	0.032	0.0050		"	"	"	"	"	"	
Ethylbenzene	0.026	0.0050		"	"	"	"	"	"	
Xylenes (total)	0.17	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	0.18	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	0.052	0.0050		"	"	"	"	"	"	
Naphthalene	0.024	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	2.4	0.50		"	"	"	"	"	"	

Date Sampled: **02/27/24 13:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0334	83.4 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0399	99.8 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0367	91.8 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/27/24 13:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHB0893	02/28/24	02/29/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **02/27/24 13:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	10.0	80.2 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads
Project Number: [none]
Project Manager: Karen Olson

Reported:
03/19/24 15:13

WH02@6'
2402488-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **02/27/24 13:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHB0885	02/28/24	03/02/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	0.0145	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	0.0941	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	0.114	0.00500	"	"	"	"	"	"	

Date Sampled: **02/27/24 13:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0210	62.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0183	54.8 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/27/24 13:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHC0398	03/13/24	03/18/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/27/24 13:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/19/24 15:13

WH02@6'
2402488-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	4.43	0.200	mg/kg dry	1	BHC0250	03/09/24	03/15/24	EPA 6020B
Barium	216	0.400	"	"	"	"	"	"
Cadmium	0.325	0.200	"	"	"	"	"	"
Copper	6.30	0.400	"	"	"	"	"	"
Lead	9.24	0.200	"	"	"	"	"	"
Nickel	6.89	0.400	"	"	"	"	"	"
Silver	0.0501	0.0200	"	"	"	"	"	"
Zinc	249	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/27/24 13:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0470	03/15/24	03/18/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **02/27/24 13:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	655	0.0500	mg/L dry	1	BHC0243	03/08/24	03/14/24	EPA 6020B	
Magnesium	102	0.0500	"	"	"	"	"	"	
Sodium	237	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **02/27/24 13:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.27	0.00100	units	1	BHC0489	03/15/24	03/15/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/27/24 13:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/19/24 15:13

WH02@6'
2402488-01 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	76.7	%	1	BHC0271	03/11/24	03/12/24	Calculation

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/27/24 13:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.07	0.0100	mmhos/cm	1	BHC0244	03/08/24	03/13/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/27/24 13:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	11.4		pH Units	1	BHC0245	03/08/24	03/13/24	EPA 9045D	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/19/24 15:13

FLR02@4'
2402488-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/27/24 13:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHB0891	02/28/24	02/29/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **02/27/24 13:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0346	86.6 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0376	94.0 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0375	93.7 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/27/24 13:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHB0893	02/28/24	03/01/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/27/24 13:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	12.2	97.6 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/19/24 15:13

FLR02@4'
2402488-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **02/27/24 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHB0885	02/28/24	03/02/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **02/27/24 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0181	54.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0142	42.6 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/27/24 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHC0398	03/13/24	03/18/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/27/24 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/19/24 15:13

FLR02@4'
2402488-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	4.47	0.200	mg/kg dry	1	BHC0250	03/09/24	03/15/24	EPA 6020B
Barium	164	0.400	"	"	"	"	"	"
Cadmium	0.298	0.200	"	"	"	"	"	"
Copper	4.71	0.400	"	"	"	"	"	"
Lead	6.97	0.200	"	"	"	"	"	"
Nickel	4.91	0.400	"	"	"	"	"	"
Silver	0.0301	0.0200	"	"	"	"	"	"
Zinc	21.4	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/27/24 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0470	03/15/24	03/18/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **02/27/24 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	38.8	0.0500	mg/L dry	1	BHC0243	03/08/24	03/14/24	EPA 6020B	
Magnesium	3.38	0.0500	"	"	"	"	"	"	
Sodium	3.82	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **02/27/24 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.158	0.00100	units	1	BHC0489	03/15/24	03/15/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/27/24 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/19/24 15:13

FLR02@4'
2402488-02 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	94.4	%	1	BHC0271	03/11/24	03/12/24	Calculation

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/27/24 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.135	0.0100	mmhos/cm	1	BHC0244	03/08/24	03/13/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/27/24 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.39		pH Units	1	BHC0245	03/08/24	03/13/24	EPA 9045D	

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Project: PDC - Merritt Combined Wellheads
Project Number: [none]
Project Manager: Karen Olson

Reported:
03/19/24 15:13

COMP01-FL02@4'
2402488-03 (Soil)

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Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/27/24 13:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHB0891	02/28/24	02/29/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **02/27/24 13:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0359	89.7 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0379	94.6 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0394	98.4 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/27/24 13:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHB0893	02/28/24	03/01/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/27/24 13:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	11.4	91.4 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Project Number: [none]
Project Manager: Karen Olson

Reported:
03/19/24 15:13

COMP01-FL02@4'
2402488-03 (Soil)

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PAH by EPA Method 8270D SIM

Date Sampled: **02/27/24 13:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHB0885	02/28/24	03/02/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **02/27/24 13:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0207	62.2 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0166	49.8 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/27/24 13:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHC0398	03/13/24	03/18/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/27/24 13:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

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Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/19/24 15:13

COMP01-FL02@4'
2402488-03 (Soil)

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Total Metals by EPA 6020B

Arsenic	4.85	0.200	mg/kg dry	1	BHC0250	03/09/24	03/15/24	EPA 6020B
Barium	599	0.400	"	"	"	"	"	"
Cadmium	0.890	0.200	"	"	"	"	"	"
Copper	6.82	0.400	"	"	"	"	"	"
Lead	6.90	0.200	"	"	"	"	"	"
Nickel	5.82	0.400	"	"	"	"	"	"
Silver	0.0315	0.0200	"	"	"	"	"	"
Zinc	26.0	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/27/24 13:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0470	03/15/24	03/18/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **02/27/24 13:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	61.2	0.0500	mg/L dry	1	BHC0243	03/08/24	03/14/24	EPA 6020B	
Magnesium	4.51	0.0500	"	"	"	"	"	"	
Sodium	12.8	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **02/27/24 13:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.425	0.00100	units	1	BHC0489	03/15/24	03/15/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/27/24 13:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/19/24 15:13

COMP01-FL02@4'
2402488-03 (Soil)

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Physical Parameters by APHA/ASTM/EPA Methods

% Solids	87.6	%	1	BHC0271	03/11/24	03/12/24	Calculation

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/27/24 13:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.209	0.0100	mmhos/cm	1	BHC0244	03/08/24	03/13/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/27/24 13:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.19		pH Units	1	BHC0245	03/08/24	03/13/24	EPA 9045D	

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Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/19/24 15:13

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHB0891 - EPA 5030 Soil MS

Blank (BHB0891-BLK1)

Prepared & Analyzed: 02/28/24

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0380		"	0.0400		95.1	50-150			
Surrogate: Toluene-d8	0.0367		"	0.0400		91.7	50-150			
Surrogate: 4-Bromofluorobenzene	0.0383		"	0.0400		95.8	50-150			

LCS (BHB0891-BS1)

Prepared & Analyzed: 02/28/24

Benzene	0.0965	0.0020	mg/kg	0.100		96.5	70-130			
Toluene	0.106	0.0050	"	0.100		106	70-130			
Ethylbenzene	0.108	0.0050	"	0.100		108	70-130			
m,p-Xylene	0.216	0.010	"	0.200		108	70-130			
o-Xylene	0.105	0.0050	"	0.100		105	70-130			
1,2,4-Trimethylbenzene	0.101	0.0050	"	0.100		101	70-130			
1,3,5-Trimethylbenzene	0.103	0.0050	"	0.100		103	70-130			
Naphthalene	0.100	0.0038	"	0.100		100	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0358		"	0.0400		89.6	50-150			
Surrogate: Toluene-d8	0.0369		"	0.0400		92.2	50-150			
Surrogate: 4-Bromofluorobenzene	0.0375		"	0.0400		93.8	50-150			

Matrix Spike (BHB0891-MS1)

Source: 2402471-01

Prepared & Analyzed: 02/28/24

Benzene	0.0916	0.0020	mg/kg	0.100	ND	91.6	70-130			
Toluene	0.101	0.0050	"	0.100	ND	101	70-130			
Ethylbenzene	0.103	0.0050	"	0.100	ND	103	70-130			
m,p-Xylene	0.206	0.010	"	0.200	ND	103	70-130			
o-Xylene	0.0991	0.0050	"	0.100	ND	99.1	70-130			
1,2,4-Trimethylbenzene	0.0931	0.0050	"	0.100	ND	93.1	70-130			
1,3,5-Trimethylbenzene	0.0960	0.0050	"	0.100	ND	96.0	70-130			
Naphthalene	0.0986	0.0038	"	0.100	ND	98.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0372		"	0.0400		92.9	50-150			
Surrogate: Toluene-d8	0.0368		"	0.0400		92.1	50-150			
Surrogate: 4-Bromofluorobenzene	0.0376		"	0.0400		93.9	50-150			

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Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/19/24 15:13

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHB0891 - EPA 5030 Soil MS

Matrix Spike Dup (BHB0891-MSD1)

Source: 2402471-01

Prepared & Analyzed: 02/28/24

Benzene	0.0943	0.0020	mg/kg	0.100	ND	94.3	70-130	2.90	30	
Toluene	0.102	0.0050	"	0.100	ND	102	70-130	1.22	30	
Ethylbenzene	0.100	0.0050	"	0.100	ND	100	70-130	2.36	30	
m,p-Xylene	0.204	0.010	"	0.200	ND	102	70-130	1.08	30	
o-Xylene	0.0975	0.0050	"	0.100	ND	97.5	70-130	1.68	30	
1,2,4-Trimethylbenzene	0.0911	0.0050	"	0.100	ND	91.1	70-130	2.12	30	
1,3,5-Trimethylbenzene	0.0947	0.0050	"	0.100	ND	94.7	70-130	1.42	30	
Naphthalene	0.0951	0.0038	"	0.100	ND	95.1	70-130	3.59	30	
Surrogate: 1,2-Dichloroethane-d4	0.0392		"	0.0400		98.1	50-150			
Surrogate: Toluene-d8	0.0372		"	0.0400		93.1	50-150			
Surrogate: 4-Bromofluorobenzene	0.0389		"	0.0400		97.4	50-150			

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Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/19/24 15:13

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHB0893 - EPA 3550A

Blank (BHB0893-BLK1)

Prepared: 02/28/24 Analyzed: 02/29/24

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: o-Terphenyl	16.1		"	12.5		129	30-150			

LCS (BHB0893-BS1)

Prepared: 02/28/24 Analyzed: 02/29/24

C10-C28 (DRO)	587	50	mg/kg	500		117	70-130			
Surrogate: o-Terphenyl	15.6		"	12.5		124	30-150			

Matrix Spike (BHB0893-MS1)

Source: 2402471-01

Prepared: 02/28/24 Analyzed: 02/29/24

C10-C28 (DRO)	574	50	mg/kg	500	22.7	110	70-130			
Surrogate: o-Terphenyl	15.0		"	12.5		120	30-150			

Matrix Spike Dup (BHB0893-MSD1)

Source: 2402471-01

Prepared: 02/28/24 Analyzed: 02/29/24

C10-C28 (DRO)	679	50	mg/kg	500	22.7	131	70-130	16.8	20	QM-07
Surrogate: o-Terphenyl	16.0		"	12.5		128	30-150			

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Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/19/24 15:13

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Reporting				Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHB0885 - EPA 5030 Soil MS

Blank (BHB0885-BLK1)

Prepared: 02/28/24 Analyzed: 03/01/24

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
Surrogate: 2-Methylnaphthalene-d10	0.0378		"	0.0333		113	40-150			
Surrogate: Fluoranthene-d10	0.0304		"	0.0333		91.3	40-150			

LCS (BHB0885-BS1)

Prepared: 02/28/24 Analyzed: 03/01/24

Acenaphthene	0.0360	0.00500	mg/kg	0.0333	108	31-137
Anthracene	0.0372	0.00500	"	0.0333	112	30-120
Benzo (a) anthracene	0.0338	0.00500	"	0.0333	102	30-120
Benzo (a) pyrene	0.0386	0.00500	"	0.0333	116	30-120
Benzo (b) fluoranthene	0.0371	0.00500	"	0.0333	111	30-120
Benzo (k) fluoranthene	0.0382	0.00500	"	0.0333	115	30-120
Chrysene	0.0397	0.00500	"	0.0333	119	30-120
Dibenz (a,h) anthracene	0.0313	0.00500	"	0.0333	93.9	30-120
Fluoranthene	0.0372	0.00500	"	0.0333	112	30-120
Fluorene	0.0359	0.00500	"	0.0333	108	30-120
Indeno (1,2,3-cd) pyrene	0.0318	0.00500	"	0.0333	95.4	30-120
Pyrene	0.0359	0.00500	"	0.0333	108	35-142
1-Methylnaphthalene	0.0373	0.00500	"	0.0333	112	35-142
2-Methylnaphthalene	0.0181	0.00500	"	0.0333	54.4	35-142
Surrogate: 2-Methylnaphthalene-d10	0.0254		"	0.0333	76.2	40-150
Surrogate: Fluoranthene-d10	0.0297		"	0.0333	89.2	40-150

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Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/19/24 15:13

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Reporting			Spike		Source		%REC		RPD	
	Result	Limit	Units	Level		Result	%REC	Limits	RPD	Limit	Notes

Batch BHB0885 - EPA 5030 Soil MS

Matrix Spike (BHB0885-MS1)

Source: 2402483-01

Prepared: 02/28/24 Analyzed: 03/01/24

Acenaphthene	0.0283	0.00500	mg/kg	0.0333	ND	84.8	31-137		
Anthracene	0.0288	0.00500	"	0.0333	ND	86.3	30-120		
Benzo (a) anthracene	0.0259	0.00500	"	0.0333	ND	77.7	30-120		
Benzo (a) pyrene	0.0275	0.00500	"	0.0333	ND	82.6	30-120		
Benzo (b) fluoranthene	0.0261	0.00500	"	0.0333	ND	78.2	30-120		
Benzo (k) fluoranthene	0.0296	0.00500	"	0.0333	ND	88.8	30-120		
Chrysene	0.0293	0.00500	"	0.0333	ND	88.0	30-120		
Dibenz (a,h) anthracene	0.0220	0.00500	"	0.0333	ND	66.0	30-120		
Fluoranthene	0.0307	0.00500	"	0.0333	ND	92.2	30-120		
Fluorene	0.0296	0.00500	"	0.0333	ND	88.9	30-120		
Indeno (1,2,3-cd) pyrene	0.0225	0.00500	"	0.0333	ND	67.4	30-120		
Pyrene	0.0290	0.00500	"	0.0333	ND	87.1	35-142		
1-Methylnaphthalene	0.0325	0.00500	"	0.0333	ND	97.5	15-130		
2-Methylnaphthalene	0.0355	0.00500	"	0.0333	ND	107	15-130		
Surrogate: 2-Methylnaphthalene-d10	0.0205		"	0.0333		61.6	40-150		
Surrogate: Fluoranthene-d10	0.0206		"	0.0333		61.9	40-150		

Matrix Spike Dup (BHB0885-MSD1)

Source: 2402483-01

Prepared: 02/28/24 Analyzed: 03/01/24

Acenaphthene	0.0290	0.00500	mg/kg	0.0333	ND	87.1	31-137	2.58	30
Anthracene	0.0301	0.00500	"	0.0333	ND	90.4	30-120	4.66	30
Benzo (a) anthracene	0.0257	0.00500	"	0.0333	ND	77.1	30-120	0.764	30
Benzo (a) pyrene	0.0276	0.00500	"	0.0333	ND	82.8	30-120	0.168	30
Benzo (b) fluoranthene	0.0259	0.00500	"	0.0333	ND	77.6	30-120	0.714	30
Benzo (k) fluoranthene	0.0294	0.00500	"	0.0333	ND	88.3	30-120	0.565	30
Chrysene	0.0290	0.00500	"	0.0333	ND	86.9	30-120	1.25	30
Dibenz (a,h) anthracene	0.0222	0.00500	"	0.0333	ND	66.5	30-120	0.819	30
Fluoranthene	0.0303	0.00500	"	0.0333	ND	90.8	30-120	1.58	30
Fluorene	0.0291	0.00500	"	0.0333	ND	87.2	30-120	1.95	30
Indeno (1,2,3-cd) pyrene	0.0225	0.00500	"	0.0333	ND	67.5	30-120	0.0816	30
Pyrene	0.0291	0.00500	"	0.0333	ND	87.4	35-142	0.360	30
1-Methylnaphthalene	0.0310	0.00500	"	0.0333	ND	93.1	15-130	4.56	50
2-Methylnaphthalene	0.0326	0.00500	"	0.0333	ND	97.9	15-130	8.51	50
Surrogate: 2-Methylnaphthalene-d10	0.0195		"	0.0333		58.6	40-150		
Surrogate: Fluoranthene-d10	0.0207		"	0.0333		62.1	40-150		

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/19/24 15:13

Total Metals by EPA 6020B Hot Water Soluble Extraction - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0398 - EPA 3050B

Blank (BHC0398-BLK1)

Prepared: 03/13/24 Analyzed: 03/18/24

Boron ND 2.00 mg/L

LCS (BHC0398-BS1)

Prepared: 03/13/24 Analyzed: 03/18/24

Boron 6.94 2.00 mg/L 5.00 139 80-120 QLCS-01

Duplicate (BHC0398-DUP1)

Source: 2402349-01

Prepared: 03/13/24 Analyzed: 03/18/24

Boron 0.131 2.00 mg/L 0.153 15.6 20

Matrix Spike (BHC0398-MS1)

Source: 2402349-01

Prepared: 03/13/24 Analyzed: 03/18/24

Boron 7.11 2.00 mg/L 5.00 0.153 139 75-125 QLCS-01

Matrix Spike Dup (BHC0398-MSD1)

Source: 2402349-01

Prepared: 03/13/24 Analyzed: 03/18/24

Boron 6.77 2.00 mg/L 5.00 0.153 132 75-125 4.79 25 QLCS-01

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/19/24 15:13

Total Metals by EPA 6020B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0250 - EPA 3050B

Blank (BHC0250-BLK1)

Prepared: 03/09/24 Analyzed: 03/15/24

Arsenic	ND	0.200	mg/kg wet
Barium	ND	0.400	"
Cadmium	ND	0.200	"
Copper	ND	0.400	"
Lead	ND	0.200	"
Nickel	ND	0.400	"
Silver	ND	0.0200	"
Zinc	ND	0.400	"
Selenium	ND	0.260	"

LCS (BHC0250-BS1)

Prepared: 03/09/24 Analyzed: 03/15/24

Arsenic	42.0	0.200	mg/kg wet	40.0	105	80-120
Barium	42.1	0.400	"	40.0	105	80-120
Cadmium	2.13	0.200	"	2.00	106	80-120
Copper	45.4	0.400	"	40.0	114	80-120
Lead	21.3	0.200	"	20.0	106	80-120
Nickel	44.7	0.400	"	40.0	112	80-120
Silver	2.14	0.0200	"	2.00	107	80-120
Zinc	45.0	0.400	"	40.0	112	80-120
Selenium	4.45	0.260	"	4.00	111	80-120

Duplicate (BHC0250-DUP1)

Source: 2402472-01

Prepared: 03/09/24 Analyzed: 03/15/24

Arsenic	3.93	0.200	mg/kg dry	3.17	21.3	20	QR-04
Barium	56.4	0.400	"	49.7	12.8	20	
Cadmium	0.150	0.200	"	0.136	9.94	20	
Copper	5.09	0.400	"	4.34	15.7	20	
Lead	5.22	0.200	"	4.28	19.8	20	
Nickel	4.27	0.400	"	3.91	8.77	20	
Silver	0.0172	0.0200	"	0.0126	31.0	20	QR-04
Zinc	14.9	0.400	"	13.7	8.19	20	
Selenium	ND	0.260	"	ND		20	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/19/24 15:13

Total Metals by EPA 6020B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0250 - EPA 3050B

Matrix Spike (BHC0250-MS1)

Source: 2402472-01

Prepared: 03/09/24 Analyzed: 03/15/24

Arsenic	47.0	0.200	mg/kg dry	41.9	3.17	105	75-125			
Barium	84.1	0.400	"	41.9	49.7	82.2	75-125			
Cadmium	2.32	0.200	"	2.10	0.136	104	75-125			
Copper	35.2	0.400	"	41.9	4.34	73.6	75-125			QM-07
Lead	25.8	0.200	"	21.0	4.28	102	75-125			
Nickel	34.4	0.400	"	41.9	3.91	72.7	75-125			QM-07
Silver	2.13	0.0200	"	2.10	0.0126	101	75-125			
Zinc	44.2	0.400	"	41.9	13.7	72.8	75-125			QM-07
Selenium	4.59	0.260	"	4.19	ND	110	75-125			

Matrix Spike Dup (BHC0250-MSD1)

Source: 2402472-01

Prepared: 03/09/24 Analyzed: 03/15/24

Arsenic	46.7	0.200	mg/kg dry	41.9	3.17	104	75-125	0.510	25	
Barium	84.0	0.400	"	41.9	49.7	82.0	75-125	0.122	25	
Cadmium	2.35	0.200	"	2.10	0.136	106	75-125	0.987	25	
Copper	35.0	0.400	"	41.9	4.34	73.2	75-125	0.461	25	QM-07
Lead	25.8	0.200	"	21.0	4.28	103	75-125	0.361	25	
Nickel	34.0	0.400	"	41.9	3.91	71.9	75-125	0.926	25	QM-07
Silver	2.13	0.0200	"	2.10	0.0126	101	75-125	0.118	25	
Zinc	43.9	0.400	"	41.9	13.7	72.0	75-125	0.817	25	QM-07
Selenium	4.42	0.260	"	4.19	ND	106	75-125	3.73	25	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/19/24 15:13

Hexavalent Chromium by EPA Method 7196 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0470 - 3060A Mod

Blank (BHC0470-BLK1)

Prepared: 03/15/24 Analyzed: 03/18/24

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BHC0470-BS1)

Prepared: 03/15/24 Analyzed: 03/18/24

Chromium, Hexavalent 23.8 0.30 mg/kg wet 25.0 95.2 80-120

Duplicate (BHC0470-DUP1)

Source: 2402473-01

Prepared: 03/15/24 Analyzed: 03/18/24

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BHC0470-MS1)

Source: 2402473-01

Prepared: 03/15/24 Analyzed: 03/18/24

Chromium, Hexavalent 27.8 0.30 mg/kg dry 28.3 ND 98.4 75-125

Matrix Spike Dup (BHC0470-MSD1)

Source: 2402473-01

Prepared: 03/15/24 Analyzed: 03/18/24

Chromium, Hexavalent 27.8 0.30 mg/kg dry 28.3 ND 98.4 75-125 0.00 20

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/19/24 15:13

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD	
		Limit	Units		Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0243 - General Preparation

Blank (BHC0243-BLK1)

Prepared: 03/08/24 Analyzed: 03/14/24

Calcium	ND	0.0500	mg/L wet
Magnesium	ND	0.0500	"
Sodium	ND	0.0500	"

LCS (BHC0243-BS1)

Prepared: 03/08/24 Analyzed: 03/14/24

Calcium	5.54	0.0500	mg/L wet	5.00	111	70-130
Magnesium	5.34	0.0500	"	5.00	107	70-130
Sodium	5.80	0.0500	"	5.00	116	70-130

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/19/24 15:13

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD	
		Limit	Units		Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0244 - General Preparation

Blank (BHC0244-BLK1)

Prepared: 03/08/24 Analyzed: 03/13/24

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BHC0244-BS1)

Prepared: 03/08/24 Analyzed: 03/13/24

Specific Conductance (EC) 0.152 0.0100 mmhos/cm 0.150 101 95-105

Duplicate (BHC0244-DUP1)

Source: 2402471-01

Prepared: 03/08/24 Analyzed: 03/13/24

Specific Conductance (EC) 0.363 0.0100 mmhos/cm 0.367 1.12 20

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/19/24 15:13

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source Result	%REC		RPD		Notes
		Limit	Units			%REC	Limits	RPD	Limit	

Batch BHC0245 - General Preparation

LCS (BHC0245-BS1)

Prepared: 03/08/24 Analyzed: 03/13/24

pH	9.06	pH Units	9.18	98.7	95-105

Duplicate (BHC0245-DUP1)

Source: 2402471-01

Prepared: 03/08/24 Analyzed: 03/13/24

pH	8.17	pH Units	8.15	0.245	20

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/19/24 15:13

Notes and Definitions

QR-04	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
QLCS-01	The spike recovery was outside acceptance limits for this analyte indicating a potential high bias. The corresponding samples did not exhibit concentrations above reporting level for this analyte. Data quality is not affected.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

March 22, 2024

Karen Olson

Tasman Geosciences

6855 W. 119th Ave.

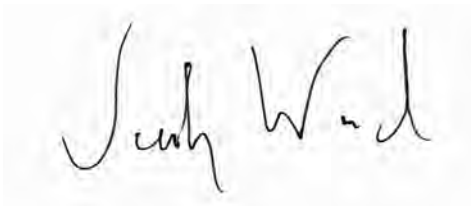
Broomfield, CO 80020

RE: PDC - Merritt Combined Wellheads

Work Order #2402504

Enclosed are the results of analyses for samples received by Summit Scientific on 02/28/24 17:58. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Jacob Wood", is written on a light blue rectangular background.

Jacob Wood For Paul Shrewsbury

President



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/22/24 11:37

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
WC01@4'	2402504-01	Soil	02/28/24 09:20	02/28/24 17:58
WH03-B@6'	2402504-02	Soil	02/28/24 10:30	02/28/24 17:58
WH03-N@4'	2402504-03	Soil	02/28/24 10:35	02/28/24 17:58
WH03-W@4'	2402504-04	Soil	02/28/24 10:40	02/28/24 17:58
WH03-S@4'	2402504-05	Soil	02/28/24 10:45	02/28/24 17:58
WH03-E@4'	2402504-06	Soil	02/28/24 10:50	02/28/24 17:58

Case Narrative

Hunter Merlo requested full Table 915 be added to WC01@4' on 2/29/2024.

Hunter Merlo requested full Table 915 be added to WH03-N@4', WH03-S@4', & WH03-E@4' on 3/1/2024.

This report includes those results.

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client: PDC PDC / Tasman				Send Data To: Project Manager: Karen Olson				Send Invoice To: Company: PDC Energy													
Address: 6855 W 119th Ave				E-Mail: karen.olson@chevron.com				Project Name/Location:													
City/State/Zip: Broomfield / CO / 80220								AFE#:													
Phone: 303-487-1228				Project Name: Merritt Combined Wellheads				PO/Billing Codes:													
Sampler Name: Jordan Hestmark				Project Number:				Contact: Karen Olson													
				Preservative				Matrix				Analysis Requested				Special Instructions					
ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEXN - 8260B	TPH - (C6 - C36)	1,2,4 & 1,3,5 - TMB	Boron - HWS	pH, EC, SAR	PAHs - 915	Metals - 915	TDS, SO4, CI	Hold
1	WCO1 @ 4'	2/28/24	920	2			X			X											X
2	WH03-B @ 6'		1030	1									X	X	X	X	X	X	X		
3	WH03-N @ 4'		1035	1																	X
4	WH03-W @ 4'		1040	1									X	X	X	X	X	X	X		
5	WH03-S @ 4'		1045	1																	X
6	WH03-E @ 4'		1050	1																	X
7																					
8																					
9																					
10																					
11																					
12																					
13																					
14																					
15																					

Relinquished by: Jordan Hestmark	Date/Time: 2/28/24 1614	Received by: Tasman Lockbox	Date/Time: 2/28/24 1614	TAT Business Days	Field DO	Notes: -BTEXN, TPH, & TMBs on same day All other constituents on 48 hr. turn
Relinquished by: Tasman Lockbox	Date/Time: 2/28/24 1758	Received by: [Signature]	Date/Time: 2/28/24 1758	Same Day ☒	Field EC	
				1 Day	Field ORP	
				2 Days	Field pH	
				3 Days	Field Temp.	
				Standard	Field Turb.	
Temperature Upon Receipt: 9.6	Corrected Temperature: 9	IR gun #: 1	HNO3 lot #:			

S₂

Sample Receipt Checklist

S2 Work Order# 2402504Client: Port of ManClient Project ID: Merritt Combined wellheadsShipped Via: H.D./P.U./FedEx/UPS/USPS/Other ☐

Airbill #: _____

☐	☐	☐	☐	☐

Matrix (Check all that apply)

Air

☐

Soil/Solid

☐

Water

☐

Other

☐

Temp (°C)

9.6

Thermometer #

1

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	☒	☐	☐	<u>9/26</u>
If custody seals are present, are they intact? ⁽¹⁾	☒	☐	☐	
Are samples due within 48 hours present?	☒	☐	☐	<u>same day</u>
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe ²⁺), Hexavalent Chromium (Cr ⁶⁺ , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	☐	☒	☐	
Is a chain-of-custody (COC) form present and filled out Completely? ⁽¹⁾	☒	☐	☐	
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	☒	☐	☐	
Were all samples received intact? ⁽¹⁾	☒	☐	☐	
Was adequate sample volume provided? ⁽¹⁾	☒	☐	☐	
Does the COC agree with the number and type of sample bottles received? ⁽¹⁾	☒	☐	☐	
Do the sample IDs on the bottle labels match the COC? ⁽¹⁾	☒	☐	☐	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	☐	☐	☒	
Are samples preserved that require preservation (excluding cooling)? ⁽¹⁾ Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	☐	☐	☒	
If samples are acid preserved for metals, is the pH ≤ 2? ⁽¹⁾ Record the pH in Comments.	☐	☐	☒	
If dissolved metals are requested, were samples field filtered?	☐	☐	☒	
Additional Comments (if any):				

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.
AS
Custodian Printed Name

2/28/24
Date/Time



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/22/24 11:37

WC01@4'
2402504-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/28/24 09:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	3.9	0.20	mg/kg	100	BHC0008	03/01/24	03/01/24	EPA 8260B	
Toluene	4.9	0.50	"	"	"	"	"	"	
Ethylbenzene	0.46	0.0050	"	1	"	"	03/02/24	"	
Xylenes (total)	21	1.0	"	100	"	"	03/01/24	"	
1,2,4-Trimethylbenzene	41	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	14	0.50	"	"	"	"	"	"	
Naphthalene	0.59	0.0038	"	1	"	"	03/02/24	"	
Gasoline Range Hydrocarbons	1400	50	"	100	"	"	03/01/24	"	

Date Sampled: **02/28/24 09:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4	0.0664	166 %	50-150	"	"	"	03/02/24	"	S-02
Surrogate: Toluene-d8	0.104	261 %	50-150	"	"	"	"	"	S-02
Surrogate: 4-Bromofluorobenzene	0.193	483 %	50-150	"	"	"	"	"	S-02

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/28/24 09:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (DRO)	690	50	mg/kg	1	BHC0010	03/01/24	03/02/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/28/24 09:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: o-Terphenyl	9.06	72.5 %	30-150	"	"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/22/24 11:37

WC01@4'
2402504-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **02/28/24 09:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	0.365	0.0500	mg/kg	10	BHC0035	03/04/24	03/05/24	EPA 8270D SIM	
Anthracene	ND	0.0500	"	"	"	"	"	"	R-05
Benzo (a) anthracene	ND	0.0500	"	"	"	"	"	"	R-05
Benzo (a) pyrene	ND	0.0500	"	"	"	"	"	"	R-05
Benzo (b) fluoranthene	ND	0.0500	"	"	"	"	"	"	R-05
Benzo (k) fluoranthene	ND	0.0500	"	"	"	"	"	"	R-05
Chrysene	ND	0.0500	"	"	"	"	"	"	R-05
Dibenz (a,h) anthracene	ND	0.0500	"	"	"	"	"	"	R-05
Fluoranthene	ND	0.0500	"	"	"	"	"	"	R-05
Fluorene	0.838	0.0500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.0500	"	"	"	"	"	"	R-05
Pyrene	0.227	0.0500	"	"	"	"	"	"	
1-Methylnaphthalene	3.37	0.0500	"	"	"	"	"	"	E
2-Methylnaphthalene	3.44	0.0500	"	"	"	"	"	"	E

Date Sampled: **02/28/24 09:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0743	223 %	40-150		"	"	"	"	S-01
Surrogate: Fluoranthene-d10	0.00	%	40-150		"	"	"	"	S-01

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/28/24 09:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHC0441	03/15/24	03/19/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/28/24 09:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/22/24 11:37

WC01@4'
2402504-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	6.30	0.200	mg/kg dry	1	BHC0444	03/15/24	03/16/24	EPA 6020B
Barium	1760	0.400	"	"	"	"	"	"
Cadmium	0.686	0.200	"	"	"	"	"	"
Copper	9.68	0.400	"	"	"	"	"	"
Lead	9.49	0.200	"	"	"	"	"	"
Nickel	8.57	0.400	"	"	"	"	"	"
Silver	0.103	0.0200	"	"	"	"	"	"
Zinc	1390	0.400	"	"	"	"	"	"
Selenium	0.735	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/28/24 09:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0530	03/15/24	03/18/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **02/28/24 09:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	2050	0.0500	mg/L dry	1	BHC0538	03/15/24	03/21/24	EPA 6020B	
Magnesium	110	0.0500	"	"	"	"	"	"	
Sodium	351	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **02/28/24 09:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.05	0.00100	units	1	BHC0842	03/21/24	03/21/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/28/24 09:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/22/24 11:37

WC01@4'
2402504-01 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	63.5	%	1	BHC0365	03/13/24	03/16/24	Calculation

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/28/24 09:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.23	0.0100	mmhos/cm	1	BHC0540	03/15/24	03/18/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/28/24 09:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	11.4		pH Units	1	BHC0539	03/15/24	03/18/24	EPA 9045D	

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/22/24 11:37

WH03-B@6'
2402504-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/28/24 10:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	0.035	0.0020	mg/kg	1	BHB0896	02/28/24	02/29/24	EPA 8260B	
Toluene	0.082	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.026	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.13	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	0.15	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	0.049	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	7.8	0.50	"	"	"	"	"	"	

Date Sampled: **02/28/24 10:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0384	96.1 %	50-150		"	"	"	"	
<i>Surrogate: Toluene-d8</i>	0.0428	107 %	50-150		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0476	119 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/28/24 10:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHB0895	02/28/24	02/29/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/28/24 10:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
<i>Surrogate: o-Terphenyl</i>	9.10	72.8 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Tasman Geosciences
6855 W. 119th Ave.
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Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/22/24 11:37

WH03-B@6'
2402504-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **02/28/24 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHB0903	02/29/24	03/01/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	0.0590	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	0.0804	0.00500	"	"	"	"	"	"	

Date Sampled: **02/28/24 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0216	64.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0171	51.3 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/28/24 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHC0320	03/12/24	03/13/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/28/24 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/22/24 11:37

WH03-B@6'
2402504-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	5.21	0.200	mg/kg dry	1	BHC0444	03/15/24	03/16/24	EPA 6020B
Barium	209	0.400	"	"	"	"	"	"
Cadmium	0.337	0.200	"	"	"	"	"	"
Copper	6.37	0.400	"	"	"	"	"	"
Lead	9.43	0.200	"	"	"	"	"	"
Nickel	6.73	0.400	"	"	"	"	"	"
Silver	0.0527	0.0200	"	"	"	"	"	"
Zinc	30.9	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/28/24 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0463	03/15/24	03/15/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **02/28/24 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	375	0.0500	mg/L dry	1	BHC0067	03/04/24	03/09/24	EPA 6020B	
Magnesium	29.0	0.0500	"	"	"	"	"	"	
Sodium	448	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **02/28/24 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	6.00	0.00100	units	1	BHC0274	03/11/24	03/11/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/28/24 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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Tasman Geosciences
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Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/22/24 11:37

WH03-B@6'
2402504-02 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	79.0	%	1	BHC0187	03/07/24	03/08/24	Calculation

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/28/24 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.27	0.0100	mmhos/cm	1	BHC0069	03/04/24	03/06/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/28/24 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	9.93		pH Units	1	BHC0068	03/04/24	03/06/24	EPA 9045D	

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Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/22/24 11:37

WH03-N@4'
2402504-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/28/24 10:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHC0008	03/01/24	03/01/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **02/28/24 10:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0423	106 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0385	96.2 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0415	104 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/28/24 10:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0010	03/01/24	03/02/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/28/24 10:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	9.12	73.0 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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6855 W. 119th Ave.
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Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/22/24 11:37

WH03-N@4'
2402504-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **02/28/24 10:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHC0036	03/04/24	03/06/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **02/28/24 10:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0149	44.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0163	48.9 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/28/24 10:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHC0441	03/15/24	03/19/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/28/24 10:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/22/24 11:37

WH03-N@4'
2402504-03 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	5.56	0.200	mg/kg dry	1	BHC0444	03/15/24	03/16/24	EPA 6020B
Barium	104	0.400	"	"	"	"	"	"
Cadmium	0.226	0.200	"	"	"	"	"	"
Copper	4.75	0.400	"	"	"	"	"	"
Lead	8.04	0.200	"	"	"	"	"	"
Nickel	6.12	0.400	"	"	"	"	"	"
Silver	0.0477	0.0200	"	"	"	"	"	"
Zinc	36.3	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/28/24 10:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0530	03/15/24	03/18/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **02/28/24 10:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	125	0.0500	mg/L dry	1	BHC0538	03/15/24	03/21/24	EPA 6020B	
Magnesium	10.3	0.0500	"	"	"	"	"	"	
Sodium	66.6	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **02/28/24 10:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.54	0.00100	units	1	BHC0842	03/21/24	03/21/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/28/24 10:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/22/24 11:37

WH03-N@4'
2402504-03 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	85.5	%	1	BHC0365	03/13/24	03/16/24	Calculation

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/28/24 10:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.387	0.0100	mmhos/cm	1	BHC0540	03/15/24	03/18/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/28/24 10:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.86		pH Units	1	BHC0539	03/15/24	03/18/24	EPA 9045D	

Summit Scientific

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Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/22/24 11:37

WH03-W@4'
2402504-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/28/24 10:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHB0896	02/28/24	02/29/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **02/28/24 10:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0387	96.7 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0424	106 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0436	109 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/28/24 10:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHB0895	02/28/24	02/29/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/28/24 10:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	7.42	59.3 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/22/24 11:37

WH03-W@4'
2402504-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **02/28/24 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHB0903	02/29/24	03/01/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **02/28/24 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0307	92.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0176	52.9 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/28/24 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHC0320	03/12/24	03/13/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/28/24 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/22/24 11:37

WH03-W@4'
2402504-04 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	6.29	0.200	mg/kg dry	1	BHC0444	03/15/24	03/16/24	EPA 6020B
Barium	118	0.400	"	"	"	"	"	"
Cadmium	0.334	0.200	"	"	"	"	"	"
Copper	5.68	0.400	"	"	"	"	"	"
Lead	9.50	0.200	"	"	"	"	"	"
Nickel	7.05	0.400	"	"	"	"	"	"
Silver	0.0541	0.0200	"	"	"	"	"	"
Zinc	37.5	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/28/24 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0463	03/15/24	03/15/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **02/28/24 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	38.5	0.0500	mg/L dry	1	BHC0067	03/04/24	03/09/24	EPA 6020B	
Magnesium	7.88	0.0500	"	"	"	"	"	"	
Sodium	79.0	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **02/28/24 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.03	0.00100	units	1	BHC0274	03/11/24	03/11/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/28/24 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/22/24 11:37

WH03-W@4'
2402504-04 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	82.1	%	1	BHC0187	03/07/24	03/08/24	Calculation

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/28/24 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.656	0.0100	mmhos/cm	1	BHC0069	03/04/24	03/06/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/28/24 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.08		pH Units	1	BHC0068	03/04/24	03/06/24	EPA 9045D	

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/22/24 11:37

WH03-S@4'
2402504-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/28/24 10:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHC0008	03/01/24	03/01/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **02/28/24 10:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0387	96.8 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0377	94.2 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0398	99.4 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/28/24 10:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0010	03/01/24	03/02/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/28/24 10:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	9.80	78.4 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/22/24 11:37

WH03-S@4'
2402504-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **02/28/24 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHC0036	03/04/24	03/06/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **02/28/24 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0271	81.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0196	58.7 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/28/24 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHC0441	03/15/24	03/19/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/28/24 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/22/24 11:37

WH03-S@4'
2402504-05 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	4.36	0.200	mg/kg dry	1	BHC0444	03/15/24	03/16/24	EPA 6020B
Barium	65.4	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	4.28	0.400	"	"	"	"	"	"
Lead	6.86	0.200	"	"	"	"	"	"
Nickel	5.58	0.400	"	"	"	"	"	"
Silver	0.0407	0.0200	"	"	"	"	"	"
Zinc	20.1	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/28/24 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0530	03/15/24	03/18/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **02/28/24 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	23.1	0.0500	mg/L dry	1	BHC0538	03/15/24	03/21/24	EPA 6020B	
Magnesium	5.18	0.0500	"	"	"	"	"	"	
Sodium	79.5	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **02/28/24 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.90	0.00100	units	1	BHC0842	03/21/24	03/21/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads
Project Number: [none]
Project Manager: Karen Olson

Reported:
03/22/24 11:37

WH03-S@4'
2402504-05 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/28/24 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	86.5		%	1	BHC0365	03/13/24	03/16/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/28/24 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.559	0.0100	mmhos/cm	1	BHC0540	03/15/24	03/18/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/28/24 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.81		pH Units	1	BHC0539	03/15/24	03/18/24	EPA 9045D	

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/22/24 11:37

WH03-E@4'
2402504-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/28/24 10:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHC0008	03/01/24	03/01/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **02/28/24 10:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0406	102 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0381	95.2 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0398	99.5 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/28/24 10:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0010	03/01/24	03/02/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/28/24 10:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	10.3	82.1 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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6855 W. 119th Ave.
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Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/22/24 11:37

WH03-E@4'
2402504-06 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **02/28/24 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHC0036	03/04/24	03/06/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **02/28/24 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0375	113 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0283	84.9 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/28/24 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHC0441	03/15/24	03/19/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/28/24 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/22/24 11:37

WH03-E@4'
2402504-06 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	6.48	0.200	mg/kg dry	1	BHC0444	03/15/24	03/16/24	EPA 6020B
Barium	115	0.400	"	"	"	"	"	"
Cadmium	0.284	0.200	"	"	"	"	"	"
Copper	5.26	0.400	"	"	"	"	"	"
Lead	8.41	0.200	"	"	"	"	"	"
Nickel	6.47	0.400	"	"	"	"	"	"
Silver	0.0478	0.0200	"	"	"	"	"	"
Zinc	31.9	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/28/24 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0530	03/15/24	03/18/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **02/28/24 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	92.4	0.0500	mg/L dry	1	BHC0538	03/15/24	03/21/24	EPA 6020B	
Magnesium	5.35	0.0500	"	"	"	"	"	"	
Sodium	5.62	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **02/28/24 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.154	0.00100	units	1	BHC0842	03/21/24	03/21/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/28/24 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/22/24 11:37

WH03-E@4'
2402504-06 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	86.1	%	1	BHC0365	03/13/24	03/16/24	Calculation

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/28/24 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.139	0.0100	mmhos/cm	1	BHC0540	03/15/24	03/18/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/28/24 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.62		pH Units	1	BHC0539	03/15/24	03/18/24	EPA 9045D	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/22/24 11:37

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHB0896 - EPA 5030 Soil MS

Blank (BHB0896-BLK1)

Prepared: 02/28/24 Analyzed: 02/29/24

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0376		"	0.0400		94.0	50-150			
Surrogate: Toluene-d8	0.0425		"	0.0400		106	50-150			
Surrogate: 4-Bromofluorobenzene	0.0425		"	0.0400		106	50-150			

LCS (BHB0896-BS1)

Prepared: 02/28/24 Analyzed: 02/29/24

Benzene	0.130	0.0020	mg/kg	0.100		130	70-130			
Toluene	0.125	0.0050	"	0.100		125	70-130			
Ethylbenzene	0.103	0.0050	"	0.100		103	70-130			
m,p-Xylene	0.209	0.010	"	0.200		105	70-130			
o-Xylene	0.101	0.0050	"	0.100		101	70-130			
1,2,4-Trimethylbenzene	0.101	0.0050	"	0.100		101	70-130			
1,3,5-Trimethylbenzene	0.0701	0.0050	"	0.100		70.1	70-130			
Naphthalene	0.0969	0.0038	"	0.100		96.9	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0366		"	0.0400		91.5	50-150			
Surrogate: Toluene-d8	0.0434		"	0.0400		108	50-150			
Surrogate: 4-Bromofluorobenzene	0.0422		"	0.0400		105	50-150			

Matrix Spike (BHB0896-MS1)

Source: 2402497-07

Prepared: 02/28/24 Analyzed: 02/29/24

Benzene	0.101	0.0020	mg/kg	0.100	ND	101	70-130			
Toluene	0.0959	0.0050	"	0.100	ND	95.9	70-130			
Ethylbenzene	0.0802	0.0050	"	0.100	ND	80.2	70-130			
m,p-Xylene	0.161	0.010	"	0.200	ND	80.4	70-130			
o-Xylene	0.0778	0.0050	"	0.100	ND	77.8	70-130			
1,2,4-Trimethylbenzene	0.0766	0.0050	"	0.100	ND	76.6	70-130			
1,3,5-Trimethylbenzene	0.0767	0.0050	"	0.100	ND	76.7	70-130			
Naphthalene	0.0612	0.0038	"	0.100	ND	61.2	70-130			QM-07
Surrogate: 1,2-Dichloroethane-d4	0.0387		"	0.0400		96.7	50-150			
Surrogate: Toluene-d8	0.0418		"	0.0400		104	50-150			
Surrogate: 4-Bromofluorobenzene	0.0425		"	0.0400		106	50-150			

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/22/24 11:37

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHB0896 - EPA 5030 Soil MS

Matrix Spike Dup (BHB0896-MSD1)			Source: 2402497-07		Prepared: 02/28/24 Analyzed: 02/29/24					
Benzene	0.113	0.0020	mg/kg	0.100	ND	113	70-130	10.8	30	
Toluene	0.110	0.0050	"	0.100	ND	110	70-130	13.4	30	
Ethylbenzene	0.0904	0.0050	"	0.100	ND	90.4	70-130	11.9	30	
m,p-Xylene	0.175	0.010	"	0.200	ND	87.7	70-130	8.64	30	
o-Xylene	0.0881	0.0050	"	0.100	ND	88.1	70-130	12.4	30	
1,2,4-Trimethylbenzene	0.0858	0.0050	"	0.100	ND	85.8	70-130	11.4	30	
1,3,5-Trimethylbenzene	0.0854	0.0050	"	0.100	ND	85.4	70-130	10.7	30	
Naphthalene	0.0604	0.0038	"	0.100	ND	60.4	70-130	1.43	30	QM-07
Surrogate: 1,2-Dichloroethane-d4	0.0382		"	0.0400		95.4	50-150			
Surrogate: Toluene-d8	0.0430		"	0.0400		108	50-150			
Surrogate: 4-Bromofluorobenzene	0.0426		"	0.0400		106	50-150			

Batch BHC0008 - EPA 5030 Soil MS

Blank (BHC0008-BLK1)			Prepared & Analyzed: 03/01/24							
Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0376		"	0.0400		94.0	50-150			
Surrogate: Toluene-d8	0.0377		"	0.0400		94.4	50-150			
Surrogate: 4-Bromofluorobenzene	0.0383		"	0.0400		95.7	50-150			

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/22/24 11:37

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0008 - EPA 5030 Soil MS

LCS (BHC0008-BS1)

Prepared & Analyzed: 03/01/24

Benzene	0.105	0.0020	mg/kg	0.100		105	70-130			
Toluene	0.116	0.0050	"	0.100		116	70-130			
Ethylbenzene	0.111	0.0050	"	0.100		111	70-130			
m,p-Xylene	0.226	0.010	"	0.200		113	70-130			
o-Xylene	0.116	0.0050	"	0.100		116	70-130			
1,2,4-Trimethylbenzene	0.109	0.0050	"	0.100		109	70-130			
1,3,5-Trimethylbenzene	0.108	0.0050	"	0.100		108	70-130			
Naphthalene	0.106	0.0038	"	0.100		106	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0452		"	0.0400		113	50-150			
Surrogate: Toluene-d8	0.0386		"	0.0400		96.6	50-150			
Surrogate: 4-Bromofluorobenzene	0.0404		"	0.0400		101	50-150			

Matrix Spike (BHC0008-MS1)

Source: 2402504-03

Prepared & Analyzed: 03/01/24

Benzene	0.0735	0.0020	mg/kg	0.100	ND	73.5	70-130			
Toluene	0.0795	0.0050	"	0.100	ND	79.5	70-130			
Ethylbenzene	0.0775	0.0050	"	0.100	ND	77.5	70-130			
m,p-Xylene	0.152	0.010	"	0.200	ND	75.8	70-130			
o-Xylene	0.0767	0.0050	"	0.100	ND	76.7	70-130			
1,2,4-Trimethylbenzene	0.0941	0.0050	"	0.100	ND	94.1	70-130			
1,3,5-Trimethylbenzene	0.0732	0.0050	"	0.100	ND	73.2	70-130			
Naphthalene	0.0956	0.0038	"	0.100	ND	95.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0409		"	0.0400		102	50-150			
Surrogate: Toluene-d8	0.0385		"	0.0400		96.3	50-150			
Surrogate: 4-Bromofluorobenzene	0.0384		"	0.0400		96.0	50-150			

Matrix Spike Dup (BHC0008-MSD1)

Source: 2402504-03

Prepared & Analyzed: 03/01/24

Benzene	0.0788	0.0020	mg/kg	0.100	ND	78.8	70-130	6.93	30	
Toluene	0.0841	0.0050	"	0.100	ND	84.1	70-130	5.61	30	
Ethylbenzene	0.0833	0.0050	"	0.100	ND	83.3	70-130	7.20	30	
m,p-Xylene	0.161	0.010	"	0.200	ND	80.6	70-130	6.18	30	
o-Xylene	0.0827	0.0050	"	0.100	ND	82.7	70-130	7.53	30	
1,2,4-Trimethylbenzene	0.0974	0.0050	"	0.100	ND	97.4	70-130	3.48	30	
1,3,5-Trimethylbenzene	0.0766	0.0050	"	0.100	ND	76.6	70-130	4.65	30	
Naphthalene	0.106	0.0038	"	0.100	ND	106	70-130	9.96	30	
Surrogate: 1,2-Dichloroethane-d4	0.0408		"	0.0400		102	50-150			
Surrogate: Toluene-d8	0.0373		"	0.0400		93.2	50-150			
Surrogate: 4-Bromofluorobenzene	0.0380		"	0.0400		94.9	50-150			

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads
Project Number: [none]
Project Manager: Karen Olson

Reported:
03/22/24 11:37

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHB0895 - EPA 3550A

Blank (BHB0895-BLK1)

Prepared: 02/28/24 Analyzed: 02/29/24

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: o-Terphenyl	12.4		"	12.5		99.5	30-150			

LCS (BHB0895-BS1)

Prepared: 02/28/24 Analyzed: 02/29/24

C10-C28 (DRO)	519	50	mg/kg	500		104	70-130			
Surrogate: o-Terphenyl	11.2		"	12.5		89.8	30-150			

Matrix Spike (BHB0895-MS1)

Source: 2402497-07

Prepared: 02/28/24 Analyzed: 02/29/24

C10-C28 (DRO)	438	50	mg/kg	500	30.0	81.6	70-130			
Surrogate: o-Terphenyl	9.68		"	12.5		77.5	30-150			

Matrix Spike Dup (BHB0895-MSD1)

Source: 2402497-07

Prepared: 02/28/24 Analyzed: 02/29/24

C10-C28 (DRO)	418	50	mg/kg	500	30.0	77.7	70-130	4.58	20	
Surrogate: o-Terphenyl	9.40		"	12.5		75.2	30-150			

Batch BHC0010 - EPA 3550A

Blank (BHC0010-BLK1)

Prepared: 03/01/24 Analyzed: 03/02/24

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: o-Terphenyl	15.5		"	12.5		124	30-150			

LCS (BHC0010-BS1)

Prepared: 03/01/24 Analyzed: 03/02/24

C10-C28 (DRO)	428	50	mg/kg	500		85.6	70-130			
Surrogate: o-Terphenyl	13.0		"	12.5		104	30-150			

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/22/24 11:37

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0010 - EPA 3550A

Matrix Spike (BHC0010-MS1)		Source: 2402504-01			Prepared: 03/01/24 Analyzed: 03/02/24					
C10-C28 (DRO)	390	50	mg/kg	500	686	NR	70-130			QM-07
Surrogate: o-Terphenyl	7.80		"	12.5		62.4	30-150			
Matrix Spike Dup (BHC0010-MSD1)		Source: 2402504-01			Prepared: 03/01/24 Analyzed: 03/02/24					
C10-C28 (DRO)	384	50	mg/kg	500	686	NR	70-130	1.41	20	QM-07
Surrogate: o-Terphenyl	8.77		"	12.5		70.1	30-150			

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/22/24 11:37

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Reporting			Spike		Source		%REC		RPD	
	Result	Limit	Units	Level		Result		%REC	Limits	RPD	Limit
Notes											

Batch BHB0903 - EPA 5030 Soil MS

Blank (BHB0903-BLK1)

Prepared & Analyzed: 02/29/24

Acenaphthene	ND	0.00500	mg/kg								
Anthracene	ND	0.00500	"								
Benzo (a) anthracene	ND	0.00500	"								
Benzo (a) pyrene	ND	0.00500	"								
Benzo (b) fluoranthene	ND	0.00500	"								
Benzo (k) fluoranthene	ND	0.00500	"								
Chrysene	ND	0.00500	"								
Dibenz (a,h) anthracene	ND	0.00500	"								
Fluoranthene	ND	0.00500	"								
Fluorene	ND	0.00500	"								
Indeno (1,2,3-cd) pyrene	ND	0.00500	"								
Pyrene	ND	0.00500	"								
1-Methylnaphthalene	ND	0.00500	"								
2-Methylnaphthalene	ND	0.00500	"								
Surrogate: 2-Methylnaphthalene-d10	0.0376		"	0.0333		113		40-150			
Surrogate: Fluoranthene-d10	0.0293		"	0.0333		87.8		40-150			

LCS (BHB0903-BS1)

Prepared & Analyzed: 02/29/24

Acenaphthene	0.0329	0.00500	mg/kg	0.0333		98.7		31-137			
Anthracene	0.0382	0.00500	"	0.0333		115		30-120			
Benzo (a) anthracene	0.0378	0.00500	"	0.0333		113		30-120			
Benzo (a) pyrene	0.0360	0.00500	"	0.0333		108		30-120			
Benzo (b) fluoranthene	0.0373	0.00500	"	0.0333		112		30-120			
Benzo (k) fluoranthene	0.0371	0.00500	"	0.0333		111		30-120			
Chrysene	0.0370	0.00500	"	0.0333		111		30-120			
Dibenz (a,h) anthracene	0.0279	0.00500	"	0.0333		83.8		30-120			
Fluoranthene	0.0376	0.00500	"	0.0333		113		30-120			
Fluorene	0.0373	0.00500	"	0.0333		112		30-120			
Indeno (1,2,3-cd) pyrene	0.0269	0.00500	"	0.0333		80.7		30-120			
Pyrene	0.0386	0.00500	"	0.0333		116		35-142			
1-Methylnaphthalene	0.0395	0.00500	"	0.0333		119		35-142			
2-Methylnaphthalene	0.0265	0.00500	"	0.0333		79.5		35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0297		"	0.0333		89.0		40-150			
Surrogate: Fluoranthene-d10	0.0269		"	0.0333		80.8		40-150			

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/22/24 11:37

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Reporting			Spike		Source		%REC		RPD	
	Result	Limit	Units	Level		Result	%REC	Limits	RPD	Limit	Notes

Batch BHB0903 - EPA 5030 Soil MS

Matrix Spike (BHB0903-MS1)

Source: 2402497-07

Prepared & Analyzed: 02/29/24

Acenaphthene	0.0199	0.00500	mg/kg	0.0333	ND	59.6	31-137		
Anthracene	0.0228	0.00500	"	0.0333	ND	68.4	30-120		
Benzo (a) anthracene	0.0203	0.00500	"	0.0333	ND	60.9	30-120		
Benzo (a) pyrene	0.0199	0.00500	"	0.0333	ND	59.8	30-120		
Benzo (b) fluoranthene	0.0170	0.00500	"	0.0333	ND	51.0	30-120		
Benzo (k) fluoranthene	0.0190	0.00500	"	0.0333	ND	57.1	30-120		
Chrysene	0.0205	0.00500	"	0.0333	ND	61.4	30-120		
Dibenz (a,h) anthracene	0.0171	0.00500	"	0.0333	ND	51.2	30-120		
Fluoranthene	0.0198	0.00500	"	0.0333	ND	59.5	30-120		
Fluorene	0.0203	0.00500	"	0.0333	ND	61.0	30-120		
Indeno (1,2,3-cd) pyrene	0.0161	0.00500	"	0.0333	ND	48.3	30-120		
Pyrene	0.0233	0.00500	"	0.0333	ND	69.8	35-142		
1-Methylnaphthalene	0.0241	0.00500	"	0.0333	ND	72.2	15-130		
2-Methylnaphthalene	0.0349	0.00500	"	0.0333	ND	105	15-130		
Surrogate: 2-Methylnaphthalene-d10	0.0180		"	0.0333		54.1	40-150		
Surrogate: Fluoranthene-d10	0.0142		"	0.0333		42.5	40-150		

Matrix Spike Dup (BHB0903-MSD1)

Source: 2402497-07

Prepared & Analyzed: 02/29/24

Acenaphthene	0.0191	0.00500	mg/kg	0.0333	ND	57.3	31-137	3.89	30
Anthracene	0.0227	0.00500	"	0.0333	ND	68.2	30-120	0.283	30
Benzo (a) anthracene	0.0201	0.00500	"	0.0333	ND	60.3	30-120	1.07	30
Benzo (a) pyrene	0.0191	0.00500	"	0.0333	ND	57.3	30-120	4.19	30
Benzo (b) fluoranthene	0.0156	0.00500	"	0.0333	ND	46.8	30-120	8.67	30
Benzo (k) fluoranthene	0.0177	0.00500	"	0.0333	ND	53.2	30-120	7.07	30
Chrysene	0.0203	0.00500	"	0.0333	ND	60.8	30-120	0.890	30
Dibenz (a,h) anthracene	0.0175	0.00500	"	0.0333	ND	52.4	30-120	2.27	30
Fluoranthene	0.0198	0.00500	"	0.0333	ND	59.4	30-120	0.276	30
Fluorene	0.0196	0.00500	"	0.0333	ND	58.8	30-120	3.64	30
Indeno (1,2,3-cd) pyrene	0.0165	0.00500	"	0.0333	ND	49.6	30-120	2.52	30
Pyrene	0.0224	0.00500	"	0.0333	ND	67.2	35-142	3.73	30
1-Methylnaphthalene	0.0294	0.00500	"	0.0333	ND	88.3	15-130	20.0	50
2-Methylnaphthalene	0.0290	0.00500	"	0.0333	ND	87.0	15-130	18.5	50
Surrogate: 2-Methylnaphthalene-d10	0.0178		"	0.0333		53.3	40-150		
Surrogate: Fluoranthene-d10	0.0144		"	0.0333		43.1	40-150		

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads
Project Number: [none]
Project Manager: Karen Olson

Reported:
03/22/24 11:37

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Reporting			Spike		Source		%REC		RPD	
	Result	Limit	Units	Level		Result		%REC	Limits	RPD	Limit

Batch BHC0035 - EPA 5030 Soil MS

Blank (BHC0035-BLK1)

Prepared: 03/04/24 Analyzed: 03/05/24

Acenaphthene	ND	0.00500	mg/kg								
Anthracene	ND	0.00500	"								
Benzo (a) anthracene	ND	0.00500	"								
Benzo (a) pyrene	ND	0.00500	"								
Benzo (b) fluoranthene	ND	0.00500	"								
Benzo (k) fluoranthene	ND	0.00500	"								
Chrysene	ND	0.00500	"								
Dibenz (a,h) anthracene	ND	0.00500	"								
Fluoranthene	ND	0.00500	"								
Fluorene	ND	0.00500	"								
Indeno (1,2,3-cd) pyrene	ND	0.00500	"								
Pyrene	ND	0.00500	"								
1-Methylnaphthalene	ND	0.00500	"								
2-Methylnaphthalene	ND	0.00500	"								
Surrogate: 2-Methylnaphthalene-d10	0.0393		"	0.0333		118		40-150			
Surrogate: Fluoranthene-d10	0.0320		"	0.0333		96.1		40-150			

LCS (BHC0035-BS1)

Prepared: 03/04/24 Analyzed: 03/05/24

Acenaphthene	0.0268	0.00500	mg/kg	0.0333		80.4		31-137			
Anthracene	0.0324	0.00500	"	0.0333		97.1		30-120			
Benzo (a) anthracene	0.0279	0.00500	"	0.0333		83.8		30-120			
Benzo (a) pyrene	0.0301	0.00500	"	0.0333		90.2		30-120			
Benzo (b) fluoranthene	0.0304	0.00500	"	0.0333		91.1		30-120			
Benzo (k) fluoranthene	0.0329	0.00500	"	0.0333		98.7		30-120			
Chrysene	0.0321	0.00500	"	0.0333		96.3		30-120			
Dibenz (a,h) anthracene	0.0263	0.00500	"	0.0333		79.0		30-120			
Fluoranthene	0.0355	0.00500	"	0.0333		107		30-120			
Fluorene	0.0292	0.00500	"	0.0333		87.6		30-120			
Indeno (1,2,3-cd) pyrene	0.0307	0.00500	"	0.0333		92.0		30-120			
Pyrene	0.0320	0.00500	"	0.0333		96.1		35-142			
1-Methylnaphthalene	0.0366	0.00500	"	0.0333		110		35-142			
2-Methylnaphthalene	0.0374	0.00500	"	0.0333		112		35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0294		"	0.0333		88.3		40-150			
Surrogate: Fluoranthene-d10	0.0369		"	0.0333		111		40-150			

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/22/24 11:37

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Reporting			Spike Level	Source		%REC		RPD	
	Result	Limit	Units		Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0035 - EPA 5030 Soil MS

Matrix Spike (BHC0035-MS1)

Source: 2402512-01

Prepared: 03/04/24 Analyzed: 03/05/24

Acenaphthene	0.0224	0.00500	mg/kg	0.0333	ND	67.2	31-137		
Anthracene	0.0220	0.00500	"	0.0333	ND	66.1	30-120		
Benzo (a) anthracene	0.0206	0.00500	"	0.0333	ND	61.7	30-120		
Benzo (a) pyrene	0.0216	0.00500	"	0.0333	ND	64.9	30-120		
Benzo (b) fluoranthene	0.0215	0.00500	"	0.0333	ND	64.5	30-120		
Benzo (k) fluoranthene	0.0251	0.00500	"	0.0333	ND	75.4	30-120		
Chrysene	0.0242	0.00500	"	0.0333	ND	72.7	30-120		
Dibenz (a,h) anthracene	0.0190	0.00500	"	0.0333	ND	56.9	30-120		
Fluoranthene	0.0243	0.00500	"	0.0333	ND	72.9	30-120		
Fluorene	0.0231	0.00500	"	0.0333	ND	69.3	30-120		
Indeno (1,2,3-cd) pyrene	0.0205	0.00500	"	0.0333	ND	61.5	30-120		
Pyrene	0.0246	0.00500	"	0.0333	ND	73.7	35-142		
1-Methylnaphthalene	0.0257	0.00500	"	0.0333	ND	77.0	15-130		
2-Methylnaphthalene	0.0208	0.00500	"	0.0333	ND	62.4	15-130		
Surrogate: 2-Methylnaphthalene-d10	0.0250		"	0.0333		75.0	40-150		
Surrogate: Fluoranthene-d10	0.0243		"	0.0333		73.0	40-150		

Matrix Spike Dup (BHC0035-MSD1)

Source: 2402512-01

Prepared: 03/04/24 Analyzed: 03/05/24

Acenaphthene	0.0198	0.00500	mg/kg	0.0333	ND	59.4	31-137	12.2	30
Anthracene	0.0191	0.00500	"	0.0333	ND	57.4	30-120	14.2	30
Benzo (a) anthracene	0.0171	0.00500	"	0.0333	ND	51.3	30-120	18.5	30
Benzo (a) pyrene	0.0179	0.00500	"	0.0333	ND	53.7	30-120	19.0	30
Benzo (b) fluoranthene	0.0181	0.00500	"	0.0333	ND	54.3	30-120	17.1	30
Benzo (k) fluoranthene	0.0214	0.00500	"	0.0333	ND	64.1	30-120	16.2	30
Chrysene	0.0208	0.00500	"	0.0333	ND	62.4	30-120	15.2	30
Dibenz (a,h) anthracene	0.0153	0.00500	"	0.0333	ND	45.8	30-120	21.7	30
Fluoranthene	0.0215	0.00500	"	0.0333	ND	64.5	30-120	12.1	30
Fluorene	0.0205	0.00500	"	0.0333	ND	61.4	30-120	12.0	30
Indeno (1,2,3-cd) pyrene	0.0161	0.00500	"	0.0333	ND	48.3	30-120	24.0	30
Pyrene	0.0213	0.00500	"	0.0333	ND	64.0	35-142	14.0	30
1-Methylnaphthalene	0.0212	0.00500	"	0.0333	ND	63.5	15-130	19.2	50
2-Methylnaphthalene	0.0163	0.00500	"	0.0333	ND	49.0	15-130	24.0	50
Surrogate: 2-Methylnaphthalene-d10	0.0236		"	0.0333		70.8	40-150		
Surrogate: Fluoranthene-d10	0.0215		"	0.0333		64.4	40-150		

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/22/24 11:37

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Reporting			Spike Level	Source		%REC		RPD	
	Result	Limit	Units		Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0036 - EPA 5030 Soil MS

Blank (BHC0036-BLK1)

Prepared: 03/04/24 Analyzed: 03/06/24

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
Surrogate: 2-Methylnaphthalene-d10	0.0376		"	0.0333		113	40-150			
Surrogate: Fluoranthene-d10	0.0389		"	0.0333		117	40-150			

LCS (BHC0036-BS1)

Prepared: 03/04/24 Analyzed: 03/06/24

Acenaphthene	0.0390	0.00500	mg/kg	0.0333		117	31-137			
Anthracene	0.0339	0.00500	"	0.0333		102	30-120			
Benzo (a) anthracene	0.0316	0.00500	"	0.0333		94.9	30-120			
Benzo (a) pyrene	0.0342	0.00500	"	0.0333		102	30-120			
Benzo (b) fluoranthene	0.0351	0.00500	"	0.0333		105	30-120			
Benzo (k) fluoranthene	0.0392	0.00500	"	0.0333		117	30-120			
Chrysene	0.0385	0.00500	"	0.0333		116	30-120			
Dibenz (a,h) anthracene	0.0283	0.00500	"	0.0333		84.9	30-120			
Fluoranthene	0.0377	0.00500	"	0.0333		113	30-120			
Fluorene	0.0389	0.00500	"	0.0333		117	30-120			
Indeno (1,2,3-cd) pyrene	0.0329	0.00500	"	0.0333		98.7	30-120			
Pyrene	0.0398	0.00500	"	0.0333		119	35-142			
1-Methylnaphthalene	0.0400	0.00500	"	0.0333		120	35-142			
2-Methylnaphthalene	0.0214	0.00500	"	0.0333		64.1	35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0318		"	0.0333		95.4	40-150			
Surrogate: Fluoranthene-d10	0.0385		"	0.0333		116	40-150			

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/22/24 11:37

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Reporting			Spike Level	Source		%REC		RPD	
	Result	Limit	Units		Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0036 - EPA 5030 Soil MS

Matrix Spike (BHC0036-MS1)

Source: 2402504-03

Prepared: 03/04/24 Analyzed: 03/06/24

Acenaphthene	0.0173	0.00500	mg/kg	0.0333	ND	51.9	31-137		
Anthracene	0.0136	0.00500	"	0.0333	ND	40.8	30-120		
Benzo (a) anthracene	0.0144	0.00500	"	0.0333	ND	43.1	30-120		
Benzo (a) pyrene	0.0138	0.00500	"	0.0333	ND	41.5	30-120		
Benzo (b) fluoranthene	0.0143	0.00500	"	0.0333	ND	42.8	30-120		
Benzo (k) fluoranthene	0.0188	0.00500	"	0.0333	ND	56.4	30-120		
Chrysene	0.0187	0.00500	"	0.0333	ND	56.1	30-120		
Dibenz (a,h) anthracene	0.0149	0.00500	"	0.0333	ND	44.6	30-120		
Fluoranthene	0.0175	0.00500	"	0.0333	ND	52.6	30-120		
Fluorene	0.0169	0.00500	"	0.0333	ND	50.7	30-120		
Indeno (1,2,3-cd) pyrene	0.0175	0.00500	"	0.0333	ND	52.5	30-120		
Pyrene	0.0193	0.00500	"	0.0333	ND	58.0	35-142		
1-Methylnaphthalene	0.0188	0.00500	"	0.0333	ND	56.5	15-130		
2-Methylnaphthalene	0.0168	0.00500	"	0.0333	ND	50.3	15-130		
Surrogate: 2-Methylnaphthalene-d10	0.0202		"	0.0333		60.5	40-150		
Surrogate: Fluoranthene-d10	0.0173		"	0.0333		51.8	40-150		

Matrix Spike Dup (BHC0036-MSD1)

Source: 2402504-03

Prepared: 03/04/24 Analyzed: 03/06/24

Acenaphthene	0.0204	0.00500	mg/kg	0.0333	ND	61.1	31-137	16.3	30
Anthracene	0.0153	0.00500	"	0.0333	ND	45.8	30-120	11.7	30
Benzo (a) anthracene	0.0162	0.00500	"	0.0333	ND	48.7	30-120	12.2	30
Benzo (a) pyrene	0.0156	0.00500	"	0.0333	ND	46.8	30-120	12.0	30
Benzo (b) fluoranthene	0.0171	0.00500	"	0.0333	ND	51.3	30-120	17.9	30
Benzo (k) fluoranthene	0.0208	0.00500	"	0.0333	ND	62.5	30-120	10.1	30
Chrysene	0.0204	0.00500	"	0.0333	ND	61.1	30-120	8.58	30
Dibenz (a,h) anthracene	0.0164	0.00500	"	0.0333	ND	49.2	30-120	9.82	30
Fluoranthene	0.0191	0.00500	"	0.0333	ND	57.3	30-120	8.50	30
Fluorene	0.0204	0.00500	"	0.0333	ND	61.3	30-120	18.9	30
Indeno (1,2,3-cd) pyrene	0.0145	0.00500	"	0.0333	ND	43.4	30-120	18.9	30
Pyrene	0.0217	0.00500	"	0.0333	ND	65.0	35-142	11.3	30
1-Methylnaphthalene	0.0176	0.00500	"	0.0333	ND	52.8	15-130	6.72	50
2-Methylnaphthalene	0.0202	0.00500	"	0.0333	ND	60.7	15-130	18.7	50
Surrogate: 2-Methylnaphthalene-d10	0.0224		"	0.0333		67.1	40-150		
Surrogate: Fluoranthene-d10	0.0193		"	0.0333		58.0	40-150		

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/22/24 11:37

Total Metals by EPA 6020B Hot Water Soluble Extraction - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0320 - EPA 3050B

Blank (BHC0320-BLK1)

Prepared: 03/12/24 Analyzed: 03/13/24

Boron ND 2.00 mg/L

LCS (BHC0320-BS1)

Prepared: 03/12/24 Analyzed: 03/13/24

Boron 4.80 2.00 mg/L 5.00 96.1 80-120

Duplicate (BHC0320-DUP1)

Source: 2402438-01

Prepared: 03/12/24 Analyzed: 03/13/24

Boron 0.0962 2.00 mg/L 0.110 13.5 20

Matrix Spike (BHC0320-MS1)

Source: 2402438-01

Prepared: 03/12/24 Analyzed: 03/13/24

Boron 5.07 2.00 mg/L 5.00 0.110 99.1 75-125

Matrix Spike Dup (BHC0320-MSD1)

Source: 2402438-01

Prepared: 03/12/24 Analyzed: 03/13/24

Boron 5.02 2.00 mg/L 5.00 0.110 98.2 75-125 0.901 25

Batch BHC0441 - EPA 3050B

Blank (BHC0441-BLK1)

Prepared: 03/15/24 Analyzed: 03/19/24

Boron ND 2.00 mg/L

LCS (BHC0441-BS1)

Prepared: 03/15/24 Analyzed: 03/19/24

Boron 4.73 2.00 mg/L 5.00 94.6 80-120

Duplicate (BHC0441-DUP1)

Source: 2402504-01

Prepared: 03/15/24 Analyzed: 03/19/24

Boron 0.148 2.00 mg/L 0.191 25.1 20 QR-01

Matrix Spike (BHC0441-MS1)

Source: 2402504-01

Prepared: 03/15/24 Analyzed: 03/19/24

Boron 5.38 2.00 mg/L 5.00 0.191 104 75-125

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/22/24 11:37

Total Metals by EPA 6020B Hot Water Soluble Extraction - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD	
		Limit	Units		Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0441 - EPA 3050B

Matrix Spike Dup (BHC0441-MSD1)				Source: 2402504-01		Prepared: 03/15/24 Analyzed: 03/19/24				
Boron	4.82	2.00	mg/L	5.00	0.191	92.5	75-125	11.1	25	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/22/24 11:37

Total Metals by EPA 6020B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0444 - EPA 3050B

Blank (BHC0444-BLK1)

Prepared: 03/15/24 Analyzed: 03/16/24

Arsenic	ND	0.200	mg/kg wet
Barium	ND	0.400	"
Cadmium	ND	0.200	"
Copper	ND	0.400	"
Lead	ND	0.200	"
Nickel	ND	0.400	"
Silver	ND	0.0200	"
Zinc	ND	0.400	"
Selenium	ND	0.260	"

LCS (BHC0444-BS1)

Prepared: 03/15/24 Analyzed: 03/16/24

Arsenic	40.9	0.200	mg/kg wet	40.0	102	80-120
Barium	42.1	0.400	"	40.0	105	80-120
Cadmium	1.98	0.200	"	2.00	99.0	80-120
Copper	44.4	0.400	"	40.0	111	80-120
Lead	20.5	0.200	"	20.0	102	80-120
Nickel	43.6	0.400	"	40.0	109	80-120
Silver	2.03	0.0200	"	2.00	101	80-120
Zinc	43.7	0.400	"	40.0	109	80-120
Selenium	3.97	0.260	"	4.00	99.3	80-120

Duplicate (BHC0444-DUP1)

Source: 2401552-01RE1

Prepared: 03/15/24 Analyzed: 03/16/24

Arsenic	2.26	0.200	mg/kg wet	2.28	1.06	20
Barium	70.4	0.400	"	70.7	0.441	20
Cadmium	0.175	0.200	"	0.170	2.78	20
Copper	9.47	0.400	"	9.10	4.00	20
Lead	6.60	0.200	"	6.19	6.46	20
Nickel	4.44	0.400	"	4.46	0.530	20
Silver	0.0464	0.0200	"	0.0452	2.62	20
Zinc	20.2	0.400	"	19.3	4.22	20
Selenium	ND	0.260	"	ND		20

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/22/24 11:37

Total Metals by EPA 6020B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0444 - EPA 3050B

Matrix Spike (BHC0444-MS1)

Source: 2401552-01RE1 Prepared: 03/15/24 Analyzed: 03/16/24

Arsenic	44.5	0.200	mg/kg wet	40.0	2.28	106	75-125			
Barium	114	0.400	"	40.0	70.7	109	75-125			
Cadmium	2.21	0.200	"	2.00	0.170	102	75-125			
Copper	34.3	0.400	"	40.0	9.10	62.9	75-125			QM-07
Lead	26.2	0.200	"	20.0	6.19	100	75-125			
Nickel	29.9	0.400	"	40.0	4.46	63.6	75-125			QM-07
Silver	2.04	0.0200	"	2.00	0.0452	99.7	75-125			
Zinc	44.3	0.400	"	40.0	19.3	62.5	75-125			QM-07
Selenium	3.63	0.260	"	4.00	ND	90.8	75-125			

Matrix Spike Dup (BHC0444-MSD1)

Source: 2401552-01RE1 Prepared: 03/15/24 Analyzed: 03/16/24

Arsenic	45.0	0.200	mg/kg wet	40.0	2.28	107	75-125	0.973	25	
Barium	113	0.400	"	40.0	70.7	106	75-125	0.751	25	
Cadmium	2.19	0.200	"	2.00	0.170	101	75-125	0.545	25	
Copper	34.2	0.400	"	40.0	9.10	62.8	75-125	0.190	25	QM-07
Lead	26.2	0.200	"	20.0	6.19	99.9	75-125	0.156	25	
Nickel	29.7	0.400	"	40.0	4.46	63.2	75-125	0.543	25	QM-07
Silver	2.03	0.0200	"	2.00	0.0452	99.1	75-125	0.590	25	
Zinc	44.7	0.400	"	40.0	19.3	63.5	75-125	0.896	25	QM-07
Selenium	3.96	0.260	"	4.00	ND	98.9	75-125	8.54	25	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/22/24 11:37

Hexavalent Chromium by EPA Method 7196 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0463 - 3060A Mod

Blank (BHC0463-BLK1)

Prepared & Analyzed: 03/15/24

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BHC0463-BS1)

Prepared & Analyzed: 03/15/24

Chromium, Hexavalent 24.6 0.30 mg/kg wet 25.0 98.2 80-120

Duplicate (BHC0463-DUP1)

Source: 2402424-01

Prepared & Analyzed: 03/15/24

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BHC0463-MS1)

Source: 2402424-01

Prepared & Analyzed: 03/15/24

Chromium, Hexavalent 31.7 0.30 mg/kg dry 30.3 ND 105 75-125

Matrix Spike Dup (BHC0463-MSD1)

Source: 2402424-01

Prepared & Analyzed: 03/15/24

Chromium, Hexavalent 31.7 0.30 mg/kg dry 30.3 ND 105 75-125 0.00 20

Batch BHC0530 - 3060A Mod

Blank (BHC0530-BLK1)

Prepared: 03/15/24 Analyzed: 03/18/24

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BHC0530-BS1)

Prepared: 03/15/24 Analyzed: 03/18/24

Chromium, Hexavalent 24.6 0.30 mg/kg wet 25.0 98.4 80-120

Duplicate (BHC0530-DUP1)

Source: 2402504-01

Prepared: 03/15/24 Analyzed: 03/18/24

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BHC0530-MS1)

Source: 2402504-01

Prepared: 03/15/24 Analyzed: 03/18/24

Chromium, Hexavalent 36.5 0.30 mg/kg dry 39.3 ND 92.8 75-125

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/22/24 11:37

Hexavalent Chromium by EPA Method 7196 - Quality Control
Summit Scientific

Reporting				Spike	Source	%REC		RPD		
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0530 - 3060A Mod

Matrix Spike Dup (BHC0530-MSD1)		Source: 2402504-01		Prepared: 03/15/24		Analyzed: 03/18/24			
Chromium, Hexavalent	36.5	0.30	mg/kg dry	39.3	ND	92.8	75-125	0.00	20

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/22/24 11:37

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0067 - General Preparation

Blank (BHC0067-BLK1)

Prepared: 03/04/24 Analyzed: 03/09/24

Calcium	ND	0.0500	mg/L wet
Magnesium	ND	0.0500	"
Sodium	ND	0.0500	"

LCS (BHC0067-BS1)

Prepared: 03/04/24 Analyzed: 03/09/24

Calcium	5.10	0.0500	mg/L wet	5.00	102	70-130
Magnesium	5.08	0.0500	"	5.00	102	70-130
Sodium	5.17	0.0500	"	5.00	103	70-130

Batch BHC0538 - General Preparation

Blank (BHC0538-BLK1)

Prepared: 03/15/24 Analyzed: 03/21/24

Calcium	ND	0.0500	mg/L wet
Magnesium	ND	0.0500	"
Sodium	ND	0.0500	"

LCS (BHC0538-BS1)

Prepared: 03/15/24 Analyzed: 03/21/24

Calcium	5.00	0.0500	mg/L wet	5.00	100	70-130
Magnesium	4.78	0.0500	"	5.00	95.5	70-130
Sodium	4.81	0.0500	"	5.00	96.2	70-130

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/22/24 11:37

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control

Summit Scientific

Reporting				Spike	Source	%REC			RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0187 - General Preparation

Duplicate (BHC0187-DUP1)		Source: 2402424-01			Prepared: 03/07/24 Analyzed: 03/08/24						
% Solids	82.7		%		82.4			0.358		20	

Batch BHC0365 - General Preparation

Duplicate (BHC0365-DUP1)		Source: 2402504-01			Prepared: 03/13/24 Analyzed: 03/16/24						
% Solids	63.6		%		63.5			0.0576		20	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/22/24 11:37

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction - Quality Control
Summit Scientific

Analyte	Result	Reporting			Spike	Source	%REC		RPD		
		Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes	

Batch BHC0069 - General Preparation

Blank (BHC0069-BLK1)

Prepared: 03/04/24 Analyzed: 03/06/24

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BHC0069-BS1)

Prepared: 03/04/24 Analyzed: 03/06/24

Specific Conductance (EC) 0.154 0.0100 mmhos/cm 0.150 102 95-105

Duplicate (BHC0069-DUP1)

Source: 2402384-01

Prepared: 03/04/24 Analyzed: 03/06/24

Specific Conductance (EC) 0.424 0.0100 mmhos/cm 0.439 3.29 20

Batch BHC0540 - General Preparation

Blank (BHC0540-BLK1)

Prepared: 03/15/24 Analyzed: 03/18/24

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BHC0540-BS1)

Prepared: 03/15/24 Analyzed: 03/18/24

Specific Conductance (EC) 0.158 0.0100 mmhos/cm 0.150 105 95-105

Duplicate (BHC0540-DUP1)

Source: 2402504-01

Prepared: 03/15/24 Analyzed: 03/18/24

Specific Conductance (EC) 1.21 0.0100 mmhos/cm 1.23 2.21 20

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/22/24 11:37

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0068 - General Preparation

LCS (BHC0068-BS1)

Prepared: 03/04/24 Analyzed: 03/06/24

pH	9.07		pH Units	9.18		98.8	95-105		

Duplicate (BHC0068-DUP1)

Source: 2402384-01

Prepared: 03/04/24 Analyzed: 03/06/24

pH	9.77		pH Units		9.91			1.42	20

Batch BHC0539 - General Preparation

LCS (BHC0539-BS1)

Prepared: 03/15/24 Analyzed: 03/18/24

pH	9.06		pH Units	9.18		98.7	95-105		

Duplicate (BHC0539-DUP1)

Source: 2402504-01

Prepared: 03/15/24 Analyzed: 03/18/24

pH	11.2		pH Units		11.4			1.32	20

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/22/24 11:37

Notes and Definitions

S-02	The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.
S-01	The surrogate recovery for this sample is not available due to sample dilution required from high analyte concentration and/or matrix interference's.
R-05	The sample was diluted due to the presence of high levels of non-target analytes resulting in elevated reporting limits.
QR-01	Analyses are not controlled on RPD values from sample concentrations less than 10 times the reporting limit. QC batch accepted based on LCS and/or LCSD QC results.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
E	The concentration indicated for this analyte is an estimated value above the calibration range of the instrument.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

April 16, 2024

Karen Olson

Tasman Geosciences

6855 W. 119th Ave.

Broomfield, CO 80020

RE: PDC - Merritt Combined Wellheads

Work Order #2402515

Enclosed are the results of analyses for samples received by Summit Scientific on 02/28/24 17:58. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'P. Shrewsbury', with a stylized, cursive script.

Paul Shrewsbury

President



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/16/24 12:04

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
WH04@8'	2402515-01	Soil	02/28/24 14:00	02/28/24 17:58
FLR04@4'	2402515-02	Soil	02/28/24 14:05	02/28/24 17:58
COMP01-FL04@4'	2402515-03	Soil	02/28/24 14:10	02/28/24 17:58

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client: PDC PDC / Tasman				Send Data To:				Send Invoice To:													
Address: 6855 W 119th Ave				Project Manager: Karen Olson				Company: PDC Energy													
City/State/Zip: Broomfield / CO / 80220				E-Mail: karen.olson@chevron.com				Project Name/Location:													
Phone: 303-487-1228				Project Name: Merritt Combined Wellheads				AFE#:													
Sampler Name: Jordan Hestmark				Project Number:				PO/Billing Codes:													
				Contact: Karen Olson																	
				Preservative				Matrix				Analysis Requested								Special Instructions	
ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEXN - 8260B	TPH - (C6 - C36)	1,2,4 & 1,3,5 - TMB	Boron - HWS	pH, EC, SAR	PAHs - 915	Metals - 915	TDS, SO4, Cl	
1	WH04 @ 8'	2/28/24	1400	2			X			X			X	X	X	X	X	X	X		
2	FLR04 @ 4'		1405	1																	
3	COMP01-FL04 @ 4'		1410	1																	
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					
13																					
14																					
15																					

Relinquished by: Jordan Hestmark	Date/Time: 2/28/24 1614	Received by: Tasman Lockbox	Date/Time: 2/28/24 1614	TAT Business Days	Field DO	Notes:
Relinquished by: Tasman Lockbox	Date/Time: 2/28/24 1758	Received by: [Signature]	Date/Time: 2/28/24 1758	Same Day	Field EC	
Relinquished by:	Date/Time:	Received by:	Date/Time:	1 Day	Field ORP	
				2 Days	Field pH	
				3 Days	Field Temp.	
Relinquished by:	Date/Time:	Received by:	Date/Time:	Standard	Field Turb.	
Temperature Upon Receipt: 9.6	Corrected Temperature: 6	IR gun #: 1	HNO3 lot #:			

S₂

Sample Receipt Checklist

S2 Work Order# 2402515Client: Rock Casman Client Project ID: Merritt Combined WellheadsShipped Via: H.D./P.U./FedEx/UPS/USPS/Other ☐ Airbill #:

☐	☒	☐	☐	☐

Matrix (Check all that apply) Air ☐ Soil/Solid ☒ Water ☐ Other ☐Temp (°C) 9.6Thermometer # 1

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	☒	☐	☐	once
If custody seals are present, are they intact? ⁽¹⁾	☒	☐	☐	
Are samples due within 48 hours present?	☐	☒	☐	
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe ²⁺), Hexavalent Chromium (Cr ⁶⁺ , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	☐	☒	☐	
Is a chain-of-custody (COC) form present and filled out Completely? ⁽¹⁾	☒	☐	☐	
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	☒	☐	☐	
Were all samples received intact? ⁽¹⁾	☒	☐	☐	
Was adequate sample volume provided? ⁽¹⁾	☒	☐	☐	
Does the COC agree with the number and type of sample bottles received? ⁽¹⁾	☒	☐	☐	
Do the sample IDs on the bottle labels match the COC? ⁽¹⁾	☒	☐	☐	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	☐	☐	☒	"
Are samples preserved that require preservation (excluding cooling)? ⁽¹⁾ Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	☐	☐	☒	
If samples are acid preserved for metals, is the pH ≤ 2? ⁽¹⁾ Record the pH in Comments.	☐	☐	☒	
If dissolved metals are requested, were samples field filtered?	☐	☐	☒	
Additional Comments (if any):				

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.
AS
Custodian Printed Name

2/28/24
Date/Time



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/16/24 12:04

WH04@8'
2402515-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/28/24 14:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHC0008	03/01/24	03/02/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **02/28/24 14:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0380	95.0 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0380	94.9 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0392	98.0 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/28/24 14:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0010	03/01/24	03/02/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/28/24 14:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	11.2	89.4 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/16/24 12:04

WH04@8'
2402515-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **02/28/24 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHB0905	02/29/24	03/02/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **02/28/24 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0216	64.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0159	47.8 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/28/24 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHC0401	03/13/24	03/16/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/28/24 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/16/24 12:04

WH04@8'
2402515-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	5.83	0.200	mg/kg dry	1	BHC0260	03/10/24	03/15/24	EPA 6020B
Barium	404	0.400	"	"	"	"	"	"
Cadmium	0.275	0.200	"	"	"	"	"	"
Copper	6.36	0.400	"	"	"	"	"	"
Lead	8.71	0.200	"	"	"	"	"	"
Nickel	6.75	0.400	"	"	"	"	"	"
Silver	0.0434	0.0200	"	"	"	"	"	"
Zinc	117	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/28/24 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0472	03/15/24	03/18/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **02/28/24 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	52.1	0.0500	mg/L dry	1	BHC0257	03/10/24	03/16/24	EPA 6020B	
Magnesium	5.96	0.0500	"	"	"	"	"	"	
Sodium	16.2	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **02/28/24 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.567	0.00100	units	1	BHC0638	03/18/24	03/18/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/28/24 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/16/24 12:04

WH04@8'
2402515-01 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	84.8	%	1	BHC0299	03/12/24	03/12/24	Calculation

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/28/24 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.236	0.0100	mmhos/cm	1	BHC0258	03/10/24	03/13/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/28/24 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.28		pH Units	1	BHC0259	03/10/24	03/13/24	EPA 9045D	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/16/24 12:04

FLR04@4'
2402515-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/28/24 14:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHC0008	03/01/24	03/02/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **02/28/24 14:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0398	99.5 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0382	95.5 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0394	98.4 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/28/24 14:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0010	03/01/24	03/02/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/28/24 14:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	9.38	75.0 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/16/24 12:04

FLR04@4'
2402515-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **02/28/24 14:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHB0905	02/29/24	03/02/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **02/28/24 14:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0176	52.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0165	49.6 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/28/24 14:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHC0401	03/13/24	03/16/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/28/24 14:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/16/24 12:04

FLR04@4'
2402515-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	6.08	0.200	mg/kg dry	1	BHC0260	03/10/24	03/15/24	EPA 6020B
Cadmium	0.282	0.200	"	"	"	"	"	"
Copper	6.42	0.400	"	"	"	"	"	"
Lead	8.03	0.200	"	"	"	"	"	"
Nickel	6.63	0.400	"	"	"	"	"	"
Silver	0.0441	0.0200	"	"	"	"	"	"
Zinc	24.3	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/28/24 14:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0472	03/15/24	03/18/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **02/28/24 14:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	51.2	0.0500	mg/L dry	1	BHC0257	03/10/24	03/16/24	EPA 6020B	
Magnesium	5.80	0.0500	"	"	"	"	"	"	
Sodium	4.74	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **02/28/24 14:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.167	0.00100	units	1	BHC0638	03/18/24	03/18/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/28/24 14:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	81.6		%	1	BHC0299	03/12/24	03/12/24	Calculation	

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Tasman Geosciences
6855 W. 119th Ave.
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Project: PDC - Merritt Combined Wellheads
Project Number: [none]
Project Manager: Karen Olson

Reported:
04/16/24 12:04

FLR04@4'
2402515-02 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/28/24 14:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	0.189	0.0100		mmhos/cm	1	BHC0258	03/10/24	03/13/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/28/24 14:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	8.17			pH Units	1	BHC0259	03/10/24	03/13/24	EPA 9045D	

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Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/16/24 12:04

FLR04@4'
2402515-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **02/28/24 14:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Barium	400	0.400		mg/kg dry	1	BHC0865	03/10/24	04/02/24	EPA 6020B	

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6855 W. 119th Ave.
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Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/16/24 12:04

COMP01-FL04@4'
2402515-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/28/24 14:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHC0008	03/01/24	03/02/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **02/28/24 14:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0409	102 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0375	93.8 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0389	97.2 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/28/24 14:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0010	03/01/24	03/02/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/28/24 14:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	12.1	97.1 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Tasman Geosciences
6855 W. 119th Ave.
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Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/16/24 12:04

COMP01-FL04@4'
2402515-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **02/28/24 14:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHB0905	02/29/24	03/02/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **02/28/24 14:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0188	56.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0150	45.1 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/28/24 14:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHC0401	03/13/24	03/16/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/28/24 14:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/16/24 12:04

COMP01-FL04@4'
2402515-03 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	6.77	0.200	mg/kg dry	1	BHC0260	03/10/24	03/15/24	EPA 6020B
Cadmium	0.302	0.200	"	"	"	"	"	"
Copper	6.61	0.400	"	"	"	"	"	"
Lead	7.34	0.200	"	"	"	"	"	"
Nickel	5.85	0.400	"	"	"	"	"	"
Silver	0.0363	0.0200	"	"	"	"	"	"
Zinc	72.4	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/28/24 14:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0472	03/15/24	03/18/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **02/28/24 14:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	64.6	0.0500	mg/L dry	1	BHC0257	03/10/24	03/16/24	EPA 6020B	
Magnesium	4.71	0.0500	"	"	"	"	"	"	
Sodium	6.64	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **02/28/24 14:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.215	0.00100	units	1	BHC0638	03/18/24	03/18/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/28/24 14:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	85.9		%	1	BHC0299	03/12/24	03/12/24	Calculation	

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Tasman Geosciences
6855 W. 119th Ave.
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Project: PDC - Merritt Combined Wellheads
Project Number: [none]
Project Manager: Karen Olson

Reported:
04/16/24 12:04

COMP01-FL04@4'
2402515-03 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/28/24 14:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	0.180	0.0100		mmhos/cm	1	BHC0258	03/10/24	03/13/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/28/24 14:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	8.26			pH Units	1	BHC0259	03/10/24	03/13/24	EPA 9045D	

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Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/16/24 12:04

COMP01-FL04@4'
2402515-03 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **02/28/24 14:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Barium	531	0.400		mg/kg dry	1	BHC0865	03/10/24	04/02/24	EPA 6020B	

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Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/16/24 12:04

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0008 - EPA 5030 Soil MS

Blank (BHC0008-BLK1)

Prepared & Analyzed: 03/01/24

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0376		"	0.0400		94.0	50-150			
Surrogate: Toluene-d8	0.0377		"	0.0400		94.4	50-150			
Surrogate: 4-Bromofluorobenzene	0.0383		"	0.0400		95.7	50-150			

LCS (BHC0008-BS1)

Prepared & Analyzed: 03/01/24

Benzene	0.105	0.0020	mg/kg	0.100		105	70-130			
Toluene	0.116	0.0050	"	0.100		116	70-130			
Ethylbenzene	0.111	0.0050	"	0.100		111	70-130			
m,p-Xylene	0.226	0.010	"	0.200		113	70-130			
o-Xylene	0.116	0.0050	"	0.100		116	70-130			
1,2,4-Trimethylbenzene	0.109	0.0050	"	0.100		109	70-130			
1,3,5-Trimethylbenzene	0.108	0.0050	"	0.100		108	70-130			
Naphthalene	0.106	0.0038	"	0.100		106	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0452		"	0.0400		113	50-150			
Surrogate: Toluene-d8	0.0386		"	0.0400		96.6	50-150			
Surrogate: 4-Bromofluorobenzene	0.0404		"	0.0400		101	50-150			

Matrix Spike (BHC0008-MS1)

Source: 2402504-03

Prepared & Analyzed: 03/01/24

Benzene	0.0735	0.0020	mg/kg	0.100	ND	73.5	70-130			
Toluene	0.0795	0.0050	"	0.100	ND	79.5	70-130			
Ethylbenzene	0.0775	0.0050	"	0.100	ND	77.5	70-130			
m,p-Xylene	0.152	0.010	"	0.200	ND	75.8	70-130			
o-Xylene	0.0767	0.0050	"	0.100	ND	76.7	70-130			
1,2,4-Trimethylbenzene	0.0941	0.0050	"	0.100	ND	94.1	70-130			
1,3,5-Trimethylbenzene	0.0732	0.0050	"	0.100	ND	73.2	70-130			
Naphthalene	0.0956	0.0038	"	0.100	ND	95.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0409		"	0.0400		102	50-150			
Surrogate: Toluene-d8	0.0385		"	0.0400		96.3	50-150			
Surrogate: 4-Bromofluorobenzene	0.0384		"	0.0400		96.0	50-150			

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/16/24 12:04

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0008 - EPA 5030 Soil MS

Matrix Spike Dup (BHC0008-MSD1)		Source: 2402504-03			Prepared & Analyzed: 03/01/24					
Benzene	0.0788	0.0020	mg/kg	0.100	ND	78.8	70-130	6.93	30	
Toluene	0.0841	0.0050	"	0.100	ND	84.1	70-130	5.61	30	
Ethylbenzene	0.0833	0.0050	"	0.100	ND	83.3	70-130	7.20	30	
m,p-Xylene	0.161	0.010	"	0.200	ND	80.6	70-130	6.18	30	
o-Xylene	0.0827	0.0050	"	0.100	ND	82.7	70-130	7.53	30	
1,2,4-Trimethylbenzene	0.0974	0.0050	"	0.100	ND	97.4	70-130	3.48	30	
1,3,5-Trimethylbenzene	0.0766	0.0050	"	0.100	ND	76.6	70-130	4.65	30	
Naphthalene	0.106	0.0038	"	0.100	ND	106	70-130	9.96	30	
Surrogate: 1,2-Dichloroethane-d4	0.0408		"	0.0400		102	50-150			
Surrogate: Toluene-d8	0.0373		"	0.0400		93.2	50-150			
Surrogate: 4-Bromofluorobenzene	0.0380		"	0.0400		94.9	50-150			

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Project: PDC - Merritt Combined Wellheads
Project Number: [none]
Project Manager: Karen Olson

Reported:
04/16/24 12:04

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0010 - EPA 3550A

Blank (BHC0010-BLK1)

Prepared: 03/01/24 Analyzed: 03/02/24

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: o-Terphenyl	15.5		"	12.5	124		30-150			

LCS (BHC0010-BS1)

Prepared: 03/01/24 Analyzed: 03/02/24

C10-C28 (DRO)	428	50	mg/kg	500	85.6		70-130			
Surrogate: o-Terphenyl	13.0		"	12.5	104		30-150			

Matrix Spike (BHC0010-MS1)

Source: 2402504-01

Prepared: 03/01/24 Analyzed: 03/02/24

C10-C28 (DRO)	390	50	mg/kg	500	686	NR	70-130			QM-07
Surrogate: o-Terphenyl	7.80		"	12.5	62.4		30-150			

Matrix Spike Dup (BHC0010-MSD1)

Source: 2402504-01

Prepared: 03/01/24 Analyzed: 03/02/24

C10-C28 (DRO)	384	50	mg/kg	500	686	NR	70-130	1.41	20	QM-07
Surrogate: o-Terphenyl	8.77		"	12.5	70.1		30-150			

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/16/24 12:04

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Reporting			Spike		Source		%REC		RPD	
	Result	Limit	Units	Level		Result		%REC	Limits	RPD	Limit

Batch BHB0905 - EPA 5030 Soil MS

Blank (BHB0905-BLK1)

Prepared: 02/29/24 Analyzed: 03/01/24

Acenaphthene	ND	0.00500	mg/kg								
Anthracene	ND	0.00500	"								
Benzo (a) anthracene	ND	0.00500	"								
Benzo (a) pyrene	ND	0.00500	"								
Benzo (b) fluoranthene	ND	0.00500	"								
Benzo (k) fluoranthene	ND	0.00500	"								
Chrysene	ND	0.00500	"								
Dibenz (a,h) anthracene	ND	0.00500	"								
Fluoranthene	ND	0.00500	"								
Fluorene	ND	0.00500	"								
Indeno (1,2,3-cd) pyrene	ND	0.00500	"								
Pyrene	ND	0.00500	"								
1-Methylnaphthalene	ND	0.00500	"								
2-Methylnaphthalene	ND	0.00500	"								
Surrogate: 2-Methylnaphthalene-d10	0.0229		"	0.0333		68.7		40-150			
Surrogate: Fluoranthene-d10	0.0298		"	0.0333		89.5		40-150			

LCS (BHB0905-BS1)

Prepared: 02/29/24 Analyzed: 03/01/24

Acenaphthene	0.0315	0.00500	mg/kg	0.0333		94.4		31-137			
Anthracene	0.0306	0.00500	"	0.0333		91.8		30-120			
Benzo (a) anthracene	0.0256	0.00500	"	0.0333		76.7		30-120			
Benzo (a) pyrene	0.0263	0.00500	"	0.0333		79.0		30-120			
Benzo (b) fluoranthene	0.0238	0.00500	"	0.0333		71.5		30-120			
Benzo (k) fluoranthene	0.0285	0.00500	"	0.0333		85.5		30-120			
Chrysene	0.0315	0.00500	"	0.0333		94.5		30-120			
Dibenz (a,h) anthracene	0.0201	0.00500	"	0.0333		60.3		30-120			
Fluoranthene	0.0281	0.00500	"	0.0333		84.4		30-120			
Fluorene	0.0309	0.00500	"	0.0333		92.7		30-120			
Indeno (1,2,3-cd) pyrene	0.0231	0.00500	"	0.0333		69.4		30-120			
Pyrene	0.0340	0.00500	"	0.0333		102		35-142			
1-Methylnaphthalene	0.0314	0.00500	"	0.0333		94.1		35-142			
2-Methylnaphthalene	0.0392	0.00500	"	0.0333		118		35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0187		"	0.0333		56.1		40-150			
Surrogate: Fluoranthene-d10	0.0192		"	0.0333		57.6		40-150			

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/16/24 12:04

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Reporting			Spike		Source		%REC		RPD	
	Result	Limit	Units	Level		Result		%REC	Limits	RPD	Notes

Batch BHB0905 - EPA 5030 Soil MS

Matrix Spike (BHB0905-MS1)

Source: 2402506-01

Prepared: 02/29/24 Analyzed: 03/01/24

Acenaphthene	0.0225	0.00500	mg/kg	0.0333	ND	67.4	31-137
Anthracene	0.0229	0.00500	"	0.0333	ND	68.6	30-120
Benzo (a) anthracene	0.0226	0.00500	"	0.0333	ND	67.9	30-120
Benzo (a) pyrene	0.0208	0.00500	"	0.0333	ND	62.5	30-120
Benzo (b) fluoranthene	0.0151	0.00500	"	0.0333	ND	45.4	30-120
Benzo (k) fluoranthene	0.0167	0.00500	"	0.0333	ND	50.1	30-120
Chrysene	0.0223	0.00500	"	0.0333	ND	67.0	30-120
Dibenz (a,h) anthracene	0.0170	0.00500	"	0.0333	ND	50.9	30-120
Fluoranthene	0.0216	0.00500	"	0.0333	ND	64.9	30-120
Fluorene	0.0244	0.00500	"	0.0333	ND	73.1	30-120
Indeno (1,2,3-cd) pyrene	0.0174	0.00500	"	0.0333	ND	52.1	30-120
Pyrene	0.0250	0.00500	"	0.0333	ND	74.9	35-142
1-Methylnaphthalene	0.0160	0.00500	"	0.0333	ND	48.1	15-130
2-Methylnaphthalene	0.0419	0.00500	"	0.0333	ND	126	15-130
Surrogate: 2-Methylnaphthalene-d10	0.0135		"	0.0333		40.5	40-150
Surrogate: Fluoranthene-d10	0.0154		"	0.0333		46.2	40-150

Matrix Spike Dup (BHB0905-MSD1)

Source: 2402506-01

Prepared: 02/29/24 Analyzed: 03/01/24

Acenaphthene	0.0167	0.00500	mg/kg	0.0333	ND	50.1	31-137	29.3	30
Anthracene	0.0190	0.00500	"	0.0333	ND	57.0	30-120	18.5	30
Benzo (a) anthracene	0.0188	0.00500	"	0.0333	ND	56.3	30-120	18.7	30
Benzo (a) pyrene	0.0179	0.00500	"	0.0333	ND	53.7	30-120	15.2	30
Benzo (b) fluoranthene	0.0154	0.00500	"	0.0333	ND	46.3	30-120	2.14	30
Benzo (k) fluoranthene	0.0169	0.00500	"	0.0333	ND	50.8	30-120	1.44	30
Chrysene	0.0181	0.00500	"	0.0333	ND	54.2	30-120	21.2	30
Dibenz (a,h) anthracene	0.0133	0.00500	"	0.0333	ND	40.0	30-120	24.1	30
Fluoranthene	0.0187	0.00500	"	0.0333	ND	56.2	30-120	14.5	30
Fluorene	0.0191	0.00500	"	0.0333	ND	57.4	30-120	24.0	30
Indeno (1,2,3-cd) pyrene	0.0172	0.00500	"	0.0333	ND	51.5	30-120	1.21	30
Pyrene	0.0198	0.00500	"	0.0333	ND	59.5	35-142	22.9	30
1-Methylnaphthalene	0.0252	0.00500	"	0.0333	ND	75.5	15-130	44.2	50
2-Methylnaphthalene	0.0365	0.00500	"	0.0333	ND	110	15-130	13.7	50
Surrogate: 2-Methylnaphthalene-d10	0.0153		"	0.0333		45.8	40-150		
Surrogate: Fluoranthene-d10	0.0160		"	0.0333		47.9	40-150		

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/16/24 12:04

Total Metals by EPA 6020B Hot Water Soluble Extraction - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0401 - EPA 3050B

Blank (BHC0401-BLK1)

Prepared: 03/13/24 Analyzed: 03/16/24

Boron ND 2.00 mg/L

LCS (BHC0401-BS1)

Prepared: 03/13/24 Analyzed: 03/16/24

Boron 4.57 2.00 mg/L 5.00 91.4 80-120

Duplicate (BHC0401-DUP1)

Source: 2402511-21

Prepared: 03/13/24 Analyzed: 03/16/24

Boron 0.228 2.00 mg/L 0.168 30.4 20 QR-01

Matrix Spike (BHC0401-MS1)

Source: 2402511-21

Prepared: 03/13/24 Analyzed: 03/16/24

Boron 4.46 2.00 mg/L 5.00 0.168 85.9 75-125

Matrix Spike Dup (BHC0401-MSD1)

Source: 2402511-21

Prepared: 03/13/24 Analyzed: 03/16/24

Boron 4.97 2.00 mg/L 5.00 0.168 96.1 75-125 10.8 25

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/16/24 12:04

Total Metals by EPA 6020B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0260 - EPA 3050B

Blank (BHC0260-BLK1)

Prepared: 03/10/24 Analyzed: 03/15/24

Arsenic	ND	0.200	mg/kg wet
Barium	ND	0.400	"
Cadmium	ND	0.200	"
Copper	ND	0.400	"
Lead	ND	0.200	"
Nickel	ND	0.400	"
Silver	ND	0.0200	"
Zinc	ND	0.400	"
Selenium	ND	0.260	"

LCS (BHC0260-BS1)

Prepared: 03/10/24 Analyzed: 03/15/24

Arsenic	42.8	0.200	mg/kg wet	40.0	107	80-120
Barium	43.1	0.400	"	40.0	108	80-120
Cadmium	2.15	0.200	"	2.00	107	80-120
Copper	46.7	0.400	"	40.0	117	80-120
Lead	21.7	0.200	"	20.0	109	80-120
Nickel	45.9	0.400	"	40.0	115	80-120
Silver	2.18	0.0200	"	2.00	109	80-120
Zinc	45.7	0.400	"	40.0	114	80-120
Selenium	4.45	0.260	"	4.00	111	80-120

Duplicate (BHC0260-DUP1)

Source: 2402473-01

Prepared: 03/10/24 Analyzed: 03/15/24

Arsenic	5.32	0.200	mg/kg dry	4.57	15.2	20
Barium	115	0.400	"	112	2.63	20
Cadmium	0.260	0.200	"	0.246	5.36	20
Copper	5.22	0.400	"	5.21	0.165	20
Lead	25.1	0.200	"	23.0	8.84	20
Nickel	6.13	0.400	"	6.00	2.12	20
Silver	0.0362	0.0200	"	0.0362	0.00	20
Zinc	36.4	0.400	"	37.9	4.23	20
Selenium	ND	0.260	"	ND		20

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/16/24 12:04

Total Metals by EPA 6020B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0260 - EPA 3050B

Matrix Spike (BHC0260-MS1)		Source: 2402473-01			Prepared: 03/10/24 Analyzed: 03/15/24						
Arsenic	53.0	0.200	mg/kg dry	45.2	4.57	107	75-125				
Barium	155	0.400	"	45.2	112	93.9	75-125				
Cadmium	2.71	0.200	"	2.26	0.246	109	75-125				
Copper	34.5	0.400	"	45.2	5.21	64.8	75-125				QM-07
Lead	44.0	0.200	"	22.6	23.0	92.9	75-125				
Nickel	36.1	0.400	"	45.2	6.00	66.5	75-125				QM-07
Silver	2.46	0.0200	"	2.26	0.0362	107	75-125				
Zinc	64.8	0.400	"	45.2	37.9	59.3	75-125				QM-07
Selenium	4.70	0.260	"	4.52	ND	104	75-125				

Matrix Spike Dup (BHC0260-MSD1)		Source: 2402473-01			Prepared: 03/10/24 Analyzed: 03/15/24						
Arsenic	53.2	0.200	mg/kg dry	45.2	4.57	108	75-125	0.533	25		
Barium	155	0.400	"	45.2	112	94.0	75-125	0.0228	25		
Cadmium	2.72	0.200	"	2.26	0.246	109	75-125	0.583	25		
Copper	33.8	0.400	"	45.2	5.21	63.2	75-125	2.10	25		QM-07
Lead	44.3	0.200	"	22.6	23.0	94.3	75-125	0.726	25		
Nickel	35.1	0.400	"	45.2	6.00	64.3	75-125	2.89	25		QM-07
Silver	2.44	0.0200	"	2.26	0.0362	106	75-125	0.646	25		
Zinc	63.3	0.400	"	45.2	37.9	56.1	75-125	2.25	25		QM-07
Selenium	4.94	0.260	"	4.52	ND	109	75-125	5.07	25		

Batch BHC0865 - EPA 3050B

Blank (BHC0865-BLK1)		Prepared: 03/22/24 Analyzed: 04/02/24									
Arsenic	ND	0.200	mg/kg wet								
Barium	ND	0.400	"								
Cadmium	ND	0.200	"								
Copper	ND	0.400	"								
Lead	ND	0.200	"								
Nickel	ND	0.400	"								
Silver	ND	0.0200	"								
Zinc	ND	0.400	"								
Selenium	ND	0.260	"								

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/16/24 12:04

Total Metals by EPA 6020B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0865 - EPA 3050B

LCS (BHC0865-BS1)

Prepared: 03/22/24 Analyzed: 04/02/24

Arsenic	43.2	0.200	mg/kg wet	40.0		108	80-120			
Barium	41.6	0.400	"	40.0		104	80-120			
Cadmium	2.05	0.200	"	2.00		102	80-120			
Copper	41.3	0.400	"	40.0		103	80-120			
Lead	20.4	0.200	"	20.0		102	80-120			
Nickel	41.0	0.400	"	40.0		103	80-120			
Silver	2.04	0.0200	"	2.00		102	80-120			
Zinc	41.7	0.400	"	40.0		104	80-120			
Selenium	3.96	0.260	"	4.00		98.9	80-120			

Duplicate (BHC0865-DUP1)

Source: 2402325-01

Prepared: 03/22/24 Analyzed: 04/02/24

Arsenic	3.06	0.200	mg/kg dry		3.29			7.36	20	
Barium	98.3	0.400	"		105			6.51	20	
Cadmium	0.801	0.200	"		0.681			16.1	20	
Copper	7.72	0.400	"		8.15			5.48	20	
Lead	18.7	0.200	"		24.7			27.7	20	QR-01
Nickel	4.85	0.400	"		5.14			5.80	20	
Silver	0.0478	0.0200	"		0.0433			9.90	20	
Zinc	23.4	0.400	"		24.5			4.56	20	
Selenium	ND	0.260	"		ND				20	

Matrix Spike (BHC0865-MS1)

Source: 2402325-01

Prepared: 03/22/24 Analyzed: 04/02/24

Arsenic	51.3	0.200	mg/kg dry	45.1	3.29	106	75-125			
Barium	143	0.400	"	45.1	105	83.8	75-125			
Cadmium	2.89	0.200	"	2.26	0.681	98.0	75-125			
Copper	33.9	0.400	"	45.1	8.15	57.0	75-125			QM-07
Lead	40.9	0.200	"	22.6	24.7	71.7	75-125			QM-07
Nickel	31.1	0.400	"	45.1	5.14	57.4	75-125			QM-07
Silver	2.30	0.0200	"	2.26	0.0433	99.9	75-125			
Zinc	49.6	0.400	"	45.1	24.5	55.5	75-125			QM-07
Selenium	3.67	0.260	"	4.51	ND	81.3	75-125			

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/16/24 12:04

Total Metals by EPA 6020B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0865 - EPA 3050B

Matrix Spike Dup (BHC0865-MSD1)		Source: 2402325-01			Prepared: 03/22/24 Analyzed: 04/02/24					
Arsenic	50.7	0.200	mg/kg dry	45.1	3.29	105	75-125	1.09	25	
Barium	143	0.400	"	45.1	105	83.3	75-125	0.166	25	
Cadmium	2.90	0.200	"	2.26	0.681	98.1	75-125	0.0779	25	
Copper	33.9	0.400	"	45.1	8.15	57.2	75-125	0.225	25	QM-07
Lead	40.9	0.200	"	22.6	24.7	71.4	75-125	0.153	25	QM-07
Nickel	31.1	0.400	"	45.1	5.14	57.4	75-125	0.00435	25	QM-07
Silver	2.32	0.0200	"	2.26	0.0433	101	75-125	0.861	25	
Zinc	49.9	0.400	"	45.1	24.5	56.1	75-125	0.539	25	QM-07
Selenium	3.73	0.260	"	4.51	ND	82.6	75-125	1.66	25	

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/16/24 12:04

Hexavalent Chromium by EPA Method 7196 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0472 - 3060A Mod

Blank (BHC0472-BLK1)

Prepared: 03/15/24 Analyzed: 03/18/24

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BHC0472-BS1)

Prepared: 03/15/24 Analyzed: 03/18/24

Chromium, Hexavalent 23.4 0.30 mg/kg wet 25.0 93.8 80-120

Duplicate (BHC0472-DUP1)

Source: 2402508-01

Prepared: 03/15/24 Analyzed: 03/18/24

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BHC0472-MS1)

Source: 2402508-01

Prepared: 03/15/24 Analyzed: 03/18/24

Chromium, Hexavalent 27.1 0.30 mg/kg dry 27.3 ND 99.2 75-125

Matrix Spike Dup (BHC0472-MSD1)

Source: 2402508-01

Prepared: 03/15/24 Analyzed: 03/18/24

Chromium, Hexavalent 27.1 0.30 mg/kg dry 27.3 ND 99.2 75-125 0.00 20

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/16/24 12:04

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction - Quality Control

Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD	
		Limit	Units		Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0257 - General Preparation

Blank (BHC0257-BLK1)

Prepared: 03/10/24 Analyzed: 03/16/24

Calcium	ND	0.0500	mg/L wet
Magnesium	ND	0.0500	"
Sodium	ND	0.0500	"

LCS (BHC0257-BS1)

Prepared: 03/10/24 Analyzed: 03/16/24

Calcium	4.86	0.0500	mg/L wet	5.00	97.1	70-130
Magnesium	5.20	0.0500	"	5.00	104	70-130
Sodium	5.19	0.0500	"	5.00	104	70-130

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/16/24 12:04

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control

Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD	
		Limit	Units		Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0299 - General Preparation

Duplicate (BHC0299-DUP1)

Source: 2402252-01

Prepared & Analyzed: 03/12/24

% Solids	90.7	%		92.9		2.43	20

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/16/24 12:04

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD	
		Limit	Units		Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0258 - General Preparation

Blank (BHC0258-BLK1)

Prepared: 03/10/24 Analyzed: 03/13/24

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BHC0258-BS1)

Prepared: 03/10/24 Analyzed: 03/13/24

Specific Conductance (EC) 0.154 0.0100 mmhos/cm 0.150 102 95-105

Duplicate (BHC0258-DUP1)

Source: 2402349-01

Prepared: 03/10/24 Analyzed: 03/13/24

Specific Conductance (EC) 0.267 0.0100 mmhos/cm 0.272 1.89 20

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/16/24 12:04

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction - Quality Control

Summit Scientific

Analyte	Result	Reporting		Spike Level	Source Result	%REC		RPD		Notes
		Limit	Units			%REC	Limits	RPD	Limit	

Batch BHC0259 - General Preparation

LCS (BHC0259-BS1)

Prepared: 03/10/24 Analyzed: 03/13/24

pH	9.06	pH Units	9.18	98.7	95-105

Duplicate (BHC0259-DUP1)

Source: 2402349-01

Prepared: 03/10/24 Analyzed: 03/13/24

pH	7.78	pH Units	8.00	2.79	20

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/16/24 12:04

Notes and Definitions

QR-01	Analyses are not controlled on RPD values from sample concentrations less than 10 times the reporting limit. QC batch accepted based on LCS and/or LCSD QC results.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

April 16, 2024

Karen Olson

Tasman Geosciences

6855 W. 119th Ave.

Broomfield, CO 80020

RE: PDC - Merritt Combined Wellheads

Work Order #2402528

Enclosed are the results of analyses for samples received by Summit Scientific on 02/29/24 17:45. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'P. Shrewsbury', with a stylized, cursive script.

Paul Shrewsbury

President



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/16/24 12:08

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
WH08-B@9'	2402528-01	Soil	02/29/24 14:30	02/29/24 17:45
WH08-W@4'	2402528-03	Soil	02/29/24 14:40	02/29/24 17:45
WH08-S@4'	2402528-04	Soil	02/29/24 14:45	02/29/24 17:45
WH08-E@4'	2402528-05	Soil	02/29/24 14:50	02/29/24 17:45

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

				Send Data To:				Send Invoice To:														
Client: PDC PDC / Tasman				Project Manager: Karen Olson				Company: PDC Energy														
Address: 6855 W 119th Ave				E-Mail: karen.olson@chevron.com				Project Name/Location:														
City/State/Zip: Broomfield / CO / 80220								AFE#:														
Phone: 303-487-1228				Project Name: Merritt Combined Wellheads				PO/Billing Codes:														
Sampler Name: Jordan Hestmark				Project Number:				Contact: Karen Olson														
				Preservative				Matrix				Analysis Requested								Special Instructions		
ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEXN - 8260B	TPH - (C6 - C36)	1,2,4 & 1,3,5 - TMB	Boron - HWS	pH, EC, SAR	PAHs	Metals	TDS, SO4, Cl	Hold	
1	WH08-B @ 9'	2/29/24	1430	2			X			X			X	X	X	X	X	X	X			
2	WH08-N @ 4'		1435																		X	
3	WH08-W @ 4'		1440										X	X	X	X	X	X	X			
4	WH08-S @ 4'		1445																			
5	WH08-E @ 4'		1450																			
6	W102 @ 8'		1420																		X	
7																						
8																						
9																						
10																						
11																						
12																						
13																						
14																						
15																						

Relinquished by: Jordan Hestmark	Date/Time: 2/29/24 1700	Received by: Tasman Lockbox	Date/Time: 2/29/24 1700	TAT Business Days	Field DO	Notes: - BTEXN, TPH, & TMB's on same day. All other constituents on 48 hr turn
Relinquished by: Tasman Lockbox	Date/Time: 2/29/24 1745	Received by: [Signature]	Date/Time: 2/29/24 1745	Same Day	Field EC	
				1 Day	Field ORP	
				2 Days	Field pH	
				3 Days	Field Temp.	
				Standard	Field Turb.	
Temperature Upon Receipt: 8.1		Corrected Temperature: 6		IR gun #: 1	HNO3 lot #:	

S₂

Sample Receipt Checklist

S2 Work Order# 2408528Client: Pactrasman Client Project ID: Merritt Combined wellheadsShipped Via: H.D./P.U./FedEx/UPS/USPS/Other ☐ Airbill #: _____

☐	☐	☐	☐	☐

Matrix (Check all that apply) Air ☐ Soil/Solid ☐ Water ☐ Other ☐Temp (°C) 8.1Thermometer # 1

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	☒	☐	☐	
If custody seals are present, are they intact? ⁽¹⁾	☒	☐	☐	On ICE
Are samples due within 48 hours present?	☒	☐	☐	Same day
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe ²⁺), Hexavalent Chromium (Cr ⁶⁺ , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	☐	☒	☐	
Is a chain-of-custody (COC) form present and filled out Completely? ⁽¹⁾	☒	☐	☐	
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	☒	☐	☐	
Were all samples received intact? ⁽¹⁾	☒	☐	☐	
Was adequate sample volume provided? ⁽¹⁾	☒	☐	☐	
Does the COC agree with the number and type of sample bottles received? ⁽¹⁾	☒	☐	☐	
Do the sample IDs on the bottle labels match the COC? ⁽¹⁾	☒	☐	☐	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	☐	☐	☒	
Are samples preserved that require preservation (excluding cooling)? ⁽¹⁾ Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	☐	☐	☒	
If samples are acid preserved for metals, is the pH ≤ 2? ⁽¹⁾ Record the pH in Comments.	☐	☐	☒	
If dissolved metals are requested, were samples field filtered?	☐	☐	☒	
Additional Comments (if any):				

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.
AS
Custodian Printed Name

2/29/24
Date/Time



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/16/24 12:08

WH08-B@9'
2402528-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/29/24 14:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.0020	mg/kg	1	BHB0931	02/29/24	02/29/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **02/29/24 14:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4	0.0370	92.6 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0382	95.5 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0383	95.8 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/29/24 14:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (DRO)	ND	50	mg/kg	1	BHB0933	02/29/24	02/29/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/29/24 14:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: o-Terphenyl	6.19	49.5 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/16/24 12:08

WH08-B@9'
2402528-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **02/29/24 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHC0035	03/04/24	03/06/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **02/29/24 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0328	98.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0260	77.9 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/29/24 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHC0369	03/13/24	03/15/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/29/24 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/16/24 12:08

WH08-B@9'
2402528-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	3.80	0.200	mg/kg dry	1	BHC0191	03/07/24	03/12/24	EPA 6020B
Barium	88.0	0.400	"	"	"	"	"	"
Cadmium	0.207	0.200	"	"	"	"	"	"
Copper	4.85	0.400	"	"	"	"	"	"
Lead	6.44	0.200	"	"	"	"	"	"
Nickel	6.28	0.400	"	"	"	"	"	"
Silver	0.0342	0.0200	"	"	"	"	"	"
Zinc	20.2	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/29/24 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0468	03/15/24	03/18/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **02/29/24 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	1380	0.0500	mg/L dry	1	BHC0204	03/07/24	03/15/24	EPA 6020B	
Magnesium	103	0.0500	"	"	"	"	"	"	
Sodium	397	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **02/29/24 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.78	0.00100	units	1	BHC0633	03/18/24	03/18/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/29/24 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/16/24 12:08

WH08-B@9'
2402528-01 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	80.8	%	1	BHC0263	03/11/24	03/13/24	Calculation

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/29/24 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.791	0.0100	mmhos/cm	1	BHC0205	03/07/24	03/09/24	EPA 120.1	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/16/24 12:08

WH08-B@9'
2402528-01 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/29/24 14:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	10.2			pH Units	1	BHC0770	03/20/24	03/21/24	EPA 9045D	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/16/24 12:08

WH08-W@4'
2402528-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/29/24 14:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHB0931	02/29/24	02/29/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **02/29/24 14:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0350	87.4 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0379	94.8 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0376	94.1 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/29/24 14:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHB0933	02/29/24	02/29/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/29/24 14:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	6.79	54.3 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
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Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/16/24 12:08

WH08-W@4'
2402528-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **02/29/24 14:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHC0035	03/04/24	03/06/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **02/29/24 14:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0326	97.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0247	74.2 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/29/24 14:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHC0369	03/13/24	03/15/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/29/24 14:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/16/24 12:08

WH08-W@4'
2402528-03 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	5.57	0.200	mg/kg dry	1	BHC0191	03/07/24	03/12/24	EPA 6020B
Cadmium	0.370	0.200	"	"	"	"	"	"
Copper	9.81	0.400	"	"	"	"	"	"
Lead	8.60	0.200	"	"	"	"	"	"
Nickel	6.25	0.400	"	"	"	"	"	"
Silver	0.0667	0.0200	"	"	"	"	"	"
Zinc	26.6	0.400	"	"	"	"	"	"
Selenium	0.496	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/29/24 14:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0468	03/15/24	03/18/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **02/29/24 14:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	82.2	0.0500	mg/L dry	1	BHC0204	03/07/24	03/15/24	EPA 6020B	
Magnesium	4.73	0.0500	"	"	"	"	"	"	
Sodium	2.34	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **02/29/24 14:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0680	0.00100	units	1	BHC0633	03/18/24	03/18/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/29/24 14:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	84.0		%	1	BHC0263	03/11/24	03/13/24	Calculation	

Summit Scientific

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads
Project Number: [none]
Project Manager: Karen Olson

Reported:
04/16/24 12:08

WH08-W@4'
2402528-03 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/29/24 14:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Specific Conductance (EC)	0.164	0.0100	mmhos/cm	1	BHC0205	03/07/24	03/09/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/29/24 14:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
pH	8.23		pH Units	1	BHC0206	03/07/24	03/09/24	EPA 9045D	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads
Project Number: [none]
Project Manager: Karen Olson

Reported:
04/16/24 12:08

WH08-W@4'
2402528-03 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **02/29/24 14:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Barium	1430	0.400		mg/kg dry	1	BHC0864	03/22/24	04/04/24	EPA 6020B	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/16/24 12:08

WH08-S@4'
2402528-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/29/24 14:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHB0931	02/29/24	02/29/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **02/29/24 14:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0372	93.1 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0391	97.8 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0385	96.2 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/29/24 14:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHB0933	02/29/24	02/29/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/29/24 14:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	7.55	60.4 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/16/24 12:08

WH08-S@4'
2402528-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **02/29/24 14:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHC0035	03/04/24	03/06/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **02/29/24 14:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0340	102 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0275	82.4 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/29/24 14:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHC0369	03/13/24	03/15/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/29/24 14:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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Project Number: [none]
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WH08-S@4'
2402528-04 (Soil)

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Total Metals by EPA 6020B

Arsenic	4.50	0.200	mg/kg dry	1	BHC0191	03/07/24	03/12/24	EPA 6020B
Barium	74.4	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	4.17	0.400	"	"	"	"	"	"
Lead	7.21	0.200	"	"	"	"	"	"
Nickel	5.39	0.400	"	"	"	"	"	"
Silver	0.0302	0.0200	"	"	"	"	"	"
Zinc	20.2	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/29/24 14:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0468	03/15/24	03/18/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **02/29/24 14:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	95.4	0.0500	mg/L dry	1	BHC0204	03/07/24	03/15/24	EPA 6020B	
Magnesium	22.1	0.0500	"	"	"	"	"	"	
Sodium	61.9	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **02/29/24 14:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.49	0.00100	units	1	BHC0633	03/18/24	03/18/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Project Number: [none]
Project Manager: Karen Olson

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WH08-S@4'
2402528-04 (Soil)

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Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/29/24 14:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	86.0		%	1	BHC0263	03/11/24	03/13/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/29/24 14:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.794	0.0100	mmhos/cm	1	BHC0205	03/07/24	03/09/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/29/24 14:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.01		pH Units	1	BHC0206	03/07/24	03/09/24	EPA 9045D	

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WH08-E@4'
2402528-05 (Soil)

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Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/29/24 14:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHB0931	02/29/24	02/29/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **02/29/24 14:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0425	106 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0379	94.7 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0396	98.9 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/29/24 14:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHB0933	02/29/24	02/29/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/29/24 14:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	6.24	49.9 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Project: PDC - Merritt Combined Wellheads

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WH08-E@4'
2402528-05 (Soil)

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PAH by EPA Method 8270D SIM

Date Sampled: **02/29/24 14:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHC0035	03/04/24	03/06/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **02/29/24 14:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0403	121 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0316	94.7 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/29/24 14:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHC0369	03/13/24	03/15/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/29/24 14:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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04/16/24 12:08

WH08-E@4'
2402528-05 (Soil)

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Total Metals by EPA 6020B

Arsenic	5.46	0.200	mg/kg dry	1	BHC0191	03/07/24	03/12/24	EPA 6020B
Cadmium	0.322	0.200	"	"	"	"	"	"
Copper	8.24	0.400	"	"	"	"	"	"
Lead	8.02	0.200	"	"	"	"	"	"
Nickel	7.36	0.400	"	"	"	"	"	"
Silver	0.0418	0.0200	"	"	"	"	"	"
Zinc	35.1	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/29/24 14:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0468	03/15/24	03/18/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **02/29/24 14:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	68.4	0.0500	mg/L dry	1	BHC0204	03/07/24	03/15/24	EPA 6020B	
Magnesium	4.75	0.0500	"	"	"	"	"	"	
Sodium	3.20	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **02/29/24 14:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.101	0.00100	units	1	BHC0633	03/18/24	03/18/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/29/24 14:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	84.2		%	1	BHC0263	03/11/24	03/13/24	Calculation	

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Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/16/24 12:08

WH08-E@4'
2402528-05 (Soil)

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Physical Parameters by APHA/ASTM/EPA Methods

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/29/24 14:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Specific Conductance (EC)	0.196	0.0100	mmhos/cm	1	BHC0205	03/07/24	03/09/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/29/24 14:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
pH	8.15		pH Units	1	BHC0206	03/07/24	03/09/24	EPA 9045D	

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Project: PDC - Merritt Combined Wellheads

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Project Manager: Karen Olson

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WH08-E@4'
2402528-05 (Soil)

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Total Metals by EPA 6020B

Date Sampled: **02/29/24 14:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Barium	999	0.400		mg/kg dry	1	BHC0864	03/22/24	04/04/24	EPA 6020B	

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Project: PDC - Merritt Combined Wellheads
Project Number: [none]
Project Manager: Karen Olson

Reported:
04/16/24 12:08

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHB0931 - EPA 5030 Soil MS

Blank (BHB0931-BLK1)

Prepared: 02/29/24 Analyzed: 03/01/24

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0363		"	0.0400		90.8	50-150			
Surrogate: Toluene-d8	0.0380		"	0.0400		95.0	50-150			
Surrogate: 4-Bromofluorobenzene	0.0386		"	0.0400		96.5	50-150			

LCS (BHB0931-BS1)

Prepared: 02/29/24 Analyzed: 03/01/24

Benzene	0.0899	0.0020	mg/kg	0.100		89.9	70-130			
Toluene	0.0961	0.0050	"	0.100		96.1	70-130			
Ethylbenzene	0.0988	0.0050	"	0.100		98.8	70-130			
m,p-Xylene	0.199	0.010	"	0.200		99.4	70-130			
o-Xylene	0.0995	0.0050	"	0.100		99.5	70-130			
1,2,4-Trimethylbenzene	0.0921	0.0050	"	0.100		92.1	70-130			
1,3,5-Trimethylbenzene	0.0927	0.0050	"	0.100		92.7	70-130			
Naphthalene	0.0950	0.0038	"	0.100		95.0	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0353		"	0.0400		88.2	50-150			
Surrogate: Toluene-d8	0.0375		"	0.0400		93.8	50-150			
Surrogate: 4-Bromofluorobenzene	0.0380		"	0.0400		95.0	50-150			

Matrix Spike (BHB0931-MS1)

Source: 2402527-01

Prepared: 02/29/24 Analyzed: 03/01/24

Benzene	0.0930	0.0020	mg/kg	0.100	ND	93.0	70-130			
Toluene	0.104	0.0050	"	0.100	ND	104	70-130			
Ethylbenzene	0.101	0.0050	"	0.100	ND	101	70-130			
m,p-Xylene	0.204	0.010	"	0.200	ND	102	70-130			
o-Xylene	0.0994	0.0050	"	0.100	ND	99.4	70-130			
1,2,4-Trimethylbenzene	0.0934	0.0050	"	0.100	ND	93.4	70-130			
1,3,5-Trimethylbenzene	0.0950	0.0050	"	0.100	ND	95.0	70-130			
Naphthalene	0.0946	0.0038	"	0.100	ND	94.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0356		"	0.0400		89.0	50-150			
Surrogate: Toluene-d8	0.0384		"	0.0400		96.0	50-150			
Surrogate: 4-Bromofluorobenzene	0.0388		"	0.0400		97.0	50-150			

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Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/16/24 12:08

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHB0931 - EPA 5030 Soil MS

Matrix Spike Dup (BHB0931-MSD1)		Source: 2402527-01			Prepared: 02/29/24 Analyzed: 03/01/24					
Benzene	0.0959	0.0020	mg/kg	0.100	ND	95.9	70-130	3.08	30	
Toluene	0.109	0.0050	"	0.100	ND	109	70-130	4.89	30	
Ethylbenzene	0.104	0.0050	"	0.100	ND	104	70-130	2.52	30	
m,p-Xylene	0.210	0.010	"	0.200	ND	105	70-130	2.89	30	
o-Xylene	0.100	0.0050	"	0.100	ND	100	70-130	0.902	30	
1,2,4-Trimethylbenzene	0.0955	0.0050	"	0.100	ND	95.5	70-130	2.19	30	
1,3,5-Trimethylbenzene	0.0976	0.0050	"	0.100	ND	97.6	70-130	2.65	30	
Naphthalene	0.0949	0.0038	"	0.100	ND	94.9	70-130	0.285	30	
Surrogate: 1,2-Dichloroethane-d4	0.0366		"	0.0400		91.5	50-150			
Surrogate: Toluene-d8	0.0381		"	0.0400		95.3	50-150			
Surrogate: 4-Bromofluorobenzene	0.0385		"	0.0400		96.2	50-150			

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Project: PDC - Merritt Combined Wellheads
Project Number: [none]
Project Manager: Karen Olson

Reported:
04/16/24 12:08

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHB0933 - EPA 3550A

Blank (BHB0933-BLK1)

Prepared: 02/29/24 Analyzed: 03/01/24

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: o-Terphenyl	11.8		"	12.5		94.7	30-150			

LCS (BHB0933-BS1)

Prepared: 02/29/24 Analyzed: 03/01/24

C10-C28 (DRO)	510	50	mg/kg	500		102	70-130			
Surrogate: o-Terphenyl	12.1		"	12.5		96.6	30-150			

Matrix Spike (BHB0933-MS1)

Source: 2402527-01

Prepared: 02/29/24 Analyzed: 03/01/24

C10-C28 (DRO)	476	50	mg/kg	500	42.3	86.8	70-130			
Surrogate: o-Terphenyl	8.51		"	12.5		68.1	30-150			

Matrix Spike Dup (BHB0933-MSD1)

Source: 2402527-01

Prepared: 02/29/24 Analyzed: 03/01/24

C10-C28 (DRO)	519	50	mg/kg	500	42.3	95.3	70-130	8.53	20	
Surrogate: o-Terphenyl	10.7		"	12.5		85.6	30-150			

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads
Project Number: [none]
Project Manager: Karen Olson

Reported:
04/16/24 12:08

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0035 - EPA 5030 Soil MS

Blank (BHC0035-BLK1)

Prepared: 03/04/24 Analyzed: 03/05/24

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
Surrogate: 2-Methylnaphthalene-d10	0.0393		"	0.0333		118	40-150			
Surrogate: Fluoranthene-d10	0.0320		"	0.0333		96.1	40-150			

LCS (BHC0035-BS1)

Prepared: 03/04/24 Analyzed: 03/05/24

Acenaphthene	0.0268	0.00500	mg/kg	0.0333	80.4	31-137
Anthracene	0.0324	0.00500	"	0.0333	97.1	30-120
Benzo (a) anthracene	0.0279	0.00500	"	0.0333	83.8	30-120
Benzo (a) pyrene	0.0301	0.00500	"	0.0333	90.2	30-120
Benzo (b) fluoranthene	0.0304	0.00500	"	0.0333	91.1	30-120
Benzo (k) fluoranthene	0.0329	0.00500	"	0.0333	98.7	30-120
Chrysene	0.0321	0.00500	"	0.0333	96.3	30-120
Dibenz (a,h) anthracene	0.0263	0.00500	"	0.0333	79.0	30-120
Fluoranthene	0.0355	0.00500	"	0.0333	107	30-120
Fluorene	0.0292	0.00500	"	0.0333	87.6	30-120
Indeno (1,2,3-cd) pyrene	0.0307	0.00500	"	0.0333	92.0	30-120
Pyrene	0.0320	0.00500	"	0.0333	96.1	35-142
1-Methylnaphthalene	0.0366	0.00500	"	0.0333	110	35-142
2-Methylnaphthalene	0.0374	0.00500	"	0.0333	112	35-142
Surrogate: 2-Methylnaphthalene-d10	0.0294		"	0.0333	88.3	40-150
Surrogate: Fluoranthene-d10	0.0369		"	0.0333	111	40-150

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Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/16/24 12:08

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Reporting			Spike		Source		%REC		RPD	
	Result	Limit	Units	Level		Result		%REC	Limits	RPD	Limit
Notes											

Batch BHC0035 - EPA 5030 Soil MS

Matrix Spike (BHC0035-MS1)

Source: 2402512-01

Prepared: 03/04/24 Analyzed: 03/05/24

Acenaphthene	0.0224	0.00500	mg/kg	0.0333	ND	67.2	31-137				
Anthracene	0.0220	0.00500	"	0.0333	ND	66.1	30-120				
Benzo (a) anthracene	0.0206	0.00500	"	0.0333	ND	61.7	30-120				
Benzo (a) pyrene	0.0216	0.00500	"	0.0333	ND	64.9	30-120				
Benzo (b) fluoranthene	0.0215	0.00500	"	0.0333	ND	64.5	30-120				
Benzo (k) fluoranthene	0.0251	0.00500	"	0.0333	ND	75.4	30-120				
Chrysene	0.0242	0.00500	"	0.0333	ND	72.7	30-120				
Dibenz (a,h) anthracene	0.0190	0.00500	"	0.0333	ND	56.9	30-120				
Fluoranthene	0.0243	0.00500	"	0.0333	ND	72.9	30-120				
Fluorene	0.0231	0.00500	"	0.0333	ND	69.3	30-120				
Indeno (1,2,3-cd) pyrene	0.0205	0.00500	"	0.0333	ND	61.5	30-120				
Pyrene	0.0246	0.00500	"	0.0333	ND	73.7	35-142				
1-Methylnaphthalene	0.0257	0.00500	"	0.0333	ND	77.0	15-130				
2-Methylnaphthalene	0.0208	0.00500	"	0.0333	ND	62.4	15-130				
Surrogate: 2-Methylnaphthalene-d10	0.0250		"	0.0333		75.0	40-150				
Surrogate: Fluoranthene-d10	0.0243		"	0.0333		73.0	40-150				

Matrix Spike Dup (BHC0035-MSD1)

Source: 2402512-01

Prepared: 03/04/24 Analyzed: 03/05/24

Acenaphthene	0.0198	0.00500	mg/kg	0.0333	ND	59.4	31-137	12.2	30
Anthracene	0.0191	0.00500	"	0.0333	ND	57.4	30-120	14.2	30
Benzo (a) anthracene	0.0171	0.00500	"	0.0333	ND	51.3	30-120	18.5	30
Benzo (a) pyrene	0.0179	0.00500	"	0.0333	ND	53.7	30-120	19.0	30
Benzo (b) fluoranthene	0.0181	0.00500	"	0.0333	ND	54.3	30-120	17.1	30
Benzo (k) fluoranthene	0.0214	0.00500	"	0.0333	ND	64.1	30-120	16.2	30
Chrysene	0.0208	0.00500	"	0.0333	ND	62.4	30-120	15.2	30
Dibenz (a,h) anthracene	0.0153	0.00500	"	0.0333	ND	45.8	30-120	21.7	30
Fluoranthene	0.0215	0.00500	"	0.0333	ND	64.5	30-120	12.1	30
Fluorene	0.0205	0.00500	"	0.0333	ND	61.4	30-120	12.0	30
Indeno (1,2,3-cd) pyrene	0.0161	0.00500	"	0.0333	ND	48.3	30-120	24.0	30
Pyrene	0.0213	0.00500	"	0.0333	ND	64.0	35-142	14.0	30
1-Methylnaphthalene	0.0212	0.00500	"	0.0333	ND	63.5	15-130	19.2	50
2-Methylnaphthalene	0.0163	0.00500	"	0.0333	ND	49.0	15-130	24.0	50
Surrogate: 2-Methylnaphthalene-d10	0.0236		"	0.0333		70.8	40-150		
Surrogate: Fluoranthene-d10	0.0215		"	0.0333		64.4	40-150		

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/16/24 12:08

Total Metals by EPA 6020B Hot Water Soluble Extraction - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0369 - EPA 3050B

Blank (BHC0369-BLK1)

Prepared: 03/13/24 Analyzed: 03/15/24

Boron ND 2.00 mg/L

LCS (BHC0369-BS1)

Prepared: 03/13/24 Analyzed: 03/15/24

Boron 4.49 2.00 mg/L 5.00 89.9 80-120

Duplicate (BHC0369-DUP1)

Source: 2402528-01

Prepared: 03/13/24 Analyzed: 03/15/24

Boron 0.240 2.00 mg/L 0.282 16.0 20

Matrix Spike (BHC0369-MS1)

Source: 2402528-01

Prepared: 03/13/24 Analyzed: 03/15/24

Boron 4.90 2.00 mg/L 5.00 0.282 92.3 75-125

Matrix Spike Dup (BHC0369-MSD1)

Source: 2402528-01

Prepared: 03/13/24 Analyzed: 03/15/24

Boron 5.06 2.00 mg/L 5.00 0.282 95.5 75-125 3.14 25

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Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/16/24 12:08

Total Metals by EPA 6020B - Quality Control

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Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0191 - EPA 3050B

Blank (BHC0191-BLK1)

Prepared: 03/07/24 Analyzed: 03/12/24

Arsenic	ND	0.200	mg/kg wet
Barium	ND	0.400	"
Cadmium	ND	0.200	"
Copper	ND	0.400	"
Lead	ND	0.200	"
Nickel	ND	0.400	"
Silver	ND	0.0200	"
Zinc	ND	0.400	"
Selenium	ND	0.260	"

LCS (BHC0191-BS1)

Prepared: 03/07/24 Analyzed: 03/12/24

Arsenic	40.3	0.200	mg/kg wet	40.0	101	80-120
Barium	40.4	0.400	"	40.0	101	80-120
Cadmium	2.02	0.200	"	2.00	101	80-120
Copper	42.6	0.400	"	40.0	106	80-120
Lead	20.2	0.200	"	20.0	101	80-120
Nickel	41.9	0.400	"	40.0	105	80-120
Silver	2.02	0.0200	"	2.00	101	80-120
Zinc	41.9	0.400	"	40.0	105	80-120
Selenium	4.46	0.260	"	4.00	111	80-120

Duplicate (BHC0191-DUP1)

Source: 2402518-01

Prepared: 03/07/24 Analyzed: 03/12/24

Arsenic	1.37	0.200	mg/kg dry	1.40	1.95	20
Barium	14.0	0.400	"	14.1	0.892	20
Cadmium	0.0550	0.200	"	0.0456	18.8	20
Copper	2.79	0.400	"	3.17	12.6	20
Lead	2.63	0.200	"	2.66	0.931	20
Nickel	2.36	0.400	"	2.50	5.92	20
Silver	0.0107	0.0200	"	0.0107	0.00	20
Zinc	7.52	0.400	"	7.89	4.82	20
Selenium	ND	0.260	"	ND		20

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6855 W. 119th Ave.
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Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/16/24 12:08

Total Metals by EPA 6020B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0191 - EPA 3050B

Matrix Spike (BHC0191-MS1)

Source: 2402518-01

Prepared: 03/07/24 Analyzed: 03/12/24

Arsenic	43.7	0.200	mg/kg dry	41.1	1.40	103	75-125
Barium	55.5	0.400	"	41.1	14.1	101	75-125
Cadmium	2.22	0.200	"	2.05	0.0456	106	75-125
Copper	38.3	0.400	"	41.1	3.17	85.6	75-125
Lead	23.7	0.200	"	20.5	2.66	103	75-125
Nickel	38.0	0.400	"	41.1	2.50	86.5	75-125
Silver	2.08	0.0200	"	2.05	0.0107	101	75-125
Zinc	45.2	0.400	"	41.1	7.89	90.8	75-125
Selenium	4.49	0.260	"	4.11	ND	109	75-125

Matrix Spike Dup (BHC0191-MSD1)

Source: 2402518-01

Prepared: 03/07/24 Analyzed: 03/12/24

Arsenic	44.2	0.200	mg/kg dry	41.1	1.40	104	75-125	1.12	25
Barium	56.0	0.400	"	41.1	14.1	102	75-125	0.827	25
Cadmium	2.26	0.200	"	2.05	0.0456	108	75-125	1.84	25
Copper	39.1	0.400	"	41.1	3.17	87.4	75-125	1.96	25
Lead	24.2	0.200	"	20.5	2.66	105	75-125	1.91	25
Nickel	38.8	0.400	"	41.1	2.50	88.3	75-125	1.99	25
Silver	2.11	0.0200	"	2.05	0.0107	102	75-125	1.14	25
Zinc	45.7	0.400	"	41.1	7.89	92.2	75-125	1.26	25
Selenium	4.63	0.260	"	4.11	ND	113	75-125	3.09	25

Batch BHC0864 - EPA 3050B

Blank (BHC0864-BLK1)

Prepared: 03/22/24 Analyzed: 04/04/24

Arsenic	ND	0.200	mg/kg wet
Barium	ND	0.400	"
Cadmium	ND	0.200	"
Copper	ND	0.400	"
Lead	ND	0.200	"
Nickel	ND	0.400	"
Silver	ND	0.0200	"
Zinc	ND	0.400	"
Selenium	ND	0.260	"

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Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/16/24 12:08

Total Metals by EPA 6020B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0864 - EPA 3050B

LCS (BHC0864-BS1)

Prepared: 03/22/24 Analyzed: 04/04/24

Arsenic	39.6	0.200	mg/kg wet	40.0		99.0	80-120			
Barium	39.6	0.400	"	40.0		99.1	80-120			
Cadmium	2.04	0.200	"	2.00		102	80-120			
Copper	41.5	0.400	"	40.0		104	80-120			
Lead	19.5	0.200	"	20.0		97.7	80-120			
Nickel	40.9	0.400	"	40.0		102	80-120			
Silver	2.00	0.0200	"	2.00		99.9	80-120			
Zinc	41.4	0.400	"	40.0		104	80-120			
Selenium	4.09	0.260	"	4.00		102	80-120			

Duplicate (BHC0864-DUP1)

Source: 2402477-01RE1

Prepared: 03/22/24 Analyzed: 04/04/24

Arsenic	4.37	0.200	mg/kg wet		4.64			5.88	20	
Barium	441	0.400	"		1090			85.0	20	QR-04
Cadmium	0.208	0.200	"		0.220			5.79	20	
Copper	5.51	0.400	"		12.8			79.9	20	QR-04
Lead	6.49	0.200	"		6.75			3.95	20	
Nickel	4.83	0.400	"		4.83			0.182	20	
Silver	0.0548	0.0200	"		0.0356			42.5	20	QR-01
Zinc	26.1	0.400	"		30.7			16.1	20	
Selenium	ND	0.260	"		ND				20	

Matrix Spike (BHC0864-MS1)

Source: 2402477-01RE1

Prepared: 03/22/24 Analyzed: 04/04/24

Arsenic	43.3	0.200	mg/kg wet	40.0	4.64	96.6	75-125			
Barium	578	0.400	"	40.0	1090	NR	75-125			QM-05
Cadmium	2.22	0.200	"	2.00	0.220	100	75-125			
Copper	31.7	0.400	"	40.0	12.8	47.3	75-125			QM-05
Lead	25.5	0.200	"	20.0	6.75	93.6	75-125			
Nickel	30.6	0.400	"	40.0	4.83	64.4	75-125			QM-05
Silver	2.01	0.0200	"	2.00	0.0356	98.7	75-125			
Zinc	55.2	0.400	"	40.0	30.7	61.4	75-125			QM-05
Selenium	3.35	0.260	"	4.00	ND	83.7	75-125			

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/16/24 12:08

Total Metals by EPA 6020B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0864 - EPA 3050B

Matrix Spike Dup (BHC0864-MSD1)

Source: 2402477-01RE1

Prepared: 03/22/24 Analyzed: 04/04/24

Arsenic	43.7	0.200	mg/kg wet	40.0	4.64	97.7	75-125	1.01	25	
Barium	584	0.400	"	40.0	1090	NR	75-125	0.905	25	QM-05
Cadmium	2.20	0.200	"	2.00	0.220	99.2	75-125	0.813	25	
Copper	30.8	0.400	"	40.0	12.8	45.0	75-125	2.88	25	QM-05
Lead	25.5	0.200	"	20.0	6.75	93.9	75-125	0.304	25	
Nickel	29.8	0.400	"	40.0	4.83	62.3	75-125	2.76	25	QM-05
Silver	2.01	0.0200	"	2.00	0.0356	98.6	75-125	0.0996	25	
Zinc	53.7	0.400	"	40.0	30.7	57.7	75-125	2.69	25	QM-05
Selenium	3.43	0.260	"	4.00	ND	85.7	75-125	2.35	25	

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Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/16/24 12:08

Hexavalent Chromium by EPA Method 7196 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0468 - 3060A Mod

Blank (BHC0468-BLK1)

Prepared: 03/15/24 Analyzed: 03/18/24

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BHC0468-BS1)

Prepared: 03/15/24 Analyzed: 03/18/24

Chromium, Hexavalent 21.8 0.30 mg/kg wet 25.0 87.2 80-120

Duplicate (BHC0468-DUP1)

Source: 2402474-01

Prepared: 03/15/24 Analyzed: 03/18/24

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BHC0468-MS1)

Source: 2402474-01

Prepared: 03/15/24 Analyzed: 03/18/24

Chromium, Hexavalent 29.6 0.30 mg/kg dry 29.9 ND 99.0 75-125

Matrix Spike Dup (BHC0468-MSD1)

Source: 2402474-01

Prepared: 03/15/24 Analyzed: 03/18/24

Chromium, Hexavalent 29.6 0.30 mg/kg dry 29.9 ND 99.0 75-125 0.00 20

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Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/16/24 12:08

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0204 - General Preparation

Blank (BHC0204-BLK1)

Prepared: 03/07/24 Analyzed: 03/15/24

Calcium	ND	0.0500	mg/L wet
Magnesium	ND	0.0500	"
Sodium	ND	0.0500	"

LCS (BHC0204-BS1)

Prepared: 03/07/24 Analyzed: 03/15/24

Calcium	5.36	0.0500	mg/L wet	5.00	107	70-130
Magnesium	5.52	0.0500	"	5.00	110	70-130
Sodium	5.53	0.0500	"	5.00	111	70-130

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Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/16/24 12:08

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD	
		Limit	Units		Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0263 - General Preparation

Duplicate (BHC0263-DUP1)		Source: 2402460-01			Prepared: 03/11/24 Analyzed: 03/13/24					
% Solids	80.9		%		81.9		1.22		20	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/16/24 12:08

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD	
		Limit	Units		Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0205 - General Preparation

Blank (BHC0205-BLK1)

Prepared: 03/07/24 Analyzed: 03/09/24

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BHC0205-BS1)

Prepared: 03/07/24 Analyzed: 03/09/24

Specific Conductance (EC) 0.147 0.0100 mmhos/cm 0.150 98.1 95-105

Duplicate (BHC0205-DUP1)

Source: 2402445-01

Prepared: 03/07/24 Analyzed: 03/09/24

Specific Conductance (EC) 0.350 0.0100 mmhos/cm 0.351 0.228 20

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/16/24 12:08

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0206 - General Preparation

LCS (BHC0206-BS1)

Prepared: 03/07/24 Analyzed: 03/09/24

pH	9.07		pH Units	9.18		98.8	95-105		

Duplicate (BHC0206-DUP1)

Source: 2402445-01

Prepared: 03/07/24 Analyzed: 03/09/24

pH	8.09		pH Units		8.18			1.11	20

Batch BHC0770 - General Preparation

LCS (BHC0770-BS1)

Prepared: 03/20/24 Analyzed: 03/21/24

pH	9.18		pH Units	9.18		100	95-105		

Duplicate (BHC0770-DUP1)

Source: 2402078-01

Prepared: 03/20/24 Analyzed: 03/21/24

pH	9.13		pH Units		9.12			0.110	20

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/16/24 12:08

Notes and Definitions

QR-04	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QR-01	Analyses are not controlled on RPD values from sample concentrations less than 10 times the reporting limit. QC batch accepted based on LCS and/or LCSD QC results.
QM-05	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The associated LCS and/or LCSD were within acceptance limits, therefore the data are considered valid.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

May 30, 2024

Karen Olson

Tasman Geosciences

6855 W. 119th Ave.

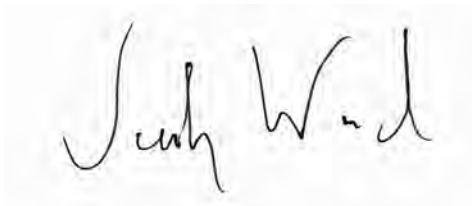
Broomfield, CO 80020

RE: PDC - Merritt Combined Wellheads

Work Order #2402535

Enclosed are the results of analyses for samples received by Summit Scientific on 02/29/24 17:45. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Jacob Wood". The signature is written in a cursive, flowing style.

Jacob Wood For Paul Shrewsbury

President



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/30/24 15:04

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
WH06@8'	2402535-01	Soil	02/29/24 09:20	02/29/24 17:45
FLR06@4'	2402535-02	Soil	02/29/24 09:25	02/29/24 17:45
COMP01-FL06@4'	2402535-03	Soil	02/29/24 09:30	02/29/24 17:45
WH07@8'	2402535-04	Soil	02/29/24 10:35	02/29/24 17:45
FLR07@4'	2402535-05	Soil	02/29/24 10:40	02/29/24 17:45
COMP01-FL07@4'	2402535-06	Soil	02/29/24 10:45	02/29/24 17:45

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client: PDC PDC / Tasman				Send Data To:				Send Invoice To:			
Address: 6855 W 119th Ave				Project Manager: Karen Olson				Company: PDC Energy			
City/State/Zip: Broomfield / CO / 80220				E-Mail: karen.olson@chevron.com				Project Name/Location:			
Phone: 303-487-1228				Project Name: Merritt Combined Wellheads				AFE#:			
Sampler Name: Jordan Hestmark				Project Number:				PO/Billing Codes:			
Contact: Karen Olson											

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix		Air-Canister #	Other	Analysis Requested										Special Instructions
					HCl	HNO3	None	Other	Water	Soil			BTEXN - 8260B	TPH - (C6 - C36)	1,2,4 & 1,3,5 - TMB	Boron - HWS	pH, EC, SAR	PAHs - 915	Metals - 915	TDS, SO4, CI			
1	WH06 @ 8'	2/24/24	920	2			X			X			X	X	X	X	X	X					
2	FLR06 @ 4'		925																				
3	COMP01-FL06 @ 4'		930																				
4	WH07 @ 8'		1035																				
5	FLR07 @ 8' 5" 4'		1040																				
6	COMP01-FL07 @		1045																				
7																							
8																							
9																							
10																							
11																							
12																							
13																							
14																							
15																							

Relinquished by: Jordan Hestmark	Date/Time: 2/29/24 1700	Received by: Tasman Lockbox	Date/Time: 2/29/24 1700	TAT Business Days	Field DO	Notes:
Relinquished by: Tasman Lockbox	Date/Time: 2/29/24 1745	Received by: [Signature]	Date/Time: 2/29/24 1745	Same Day	Field EC	
				1 Day	Field ORP	
				2 Days	Field pH	
				3 Days	Field Temp.	
Relinquished by:	Date/Time:	Received by:	Date/Time:	Standard	Field Turb.	
Temperature Upon Receipt: 8.1		Corrected Temperature: 8		IR gun #: 1	HNO3 lot #:	

S₂

Sample Receipt Checklist

S2 Work Order# 2402535Client: POC Tasmann Client Project ID: Merritt Combined wellheadsShipped Via: H.D./P.U./FedEx/UPS/USPS/Other ☐ Airbill #:

☐	☐	☐	☐	☐

Matrix (Check all that apply) Air ☐ Soil/Solid ☒ Water ☐ Other ☐Temp (°C) 8.1Thermometer # 1

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	☒	☐	☐	ADCE
If custody seals are present, are they intact? ⁽¹⁾	☒	☐	☐	
Are samples due within 48 hours present?	☐	☒	☐	
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe ²⁺), Hexavalent Chromium (Cr ⁶⁺ , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	☐	☒	☐	
Is a chain-of-custody (COC) form present and filled out Completely? ⁽¹⁾	☒	☐	☐	
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	☒	☐	☐	
Were all samples received intact? ⁽¹⁾	☒	☐	☐	
Was adequate sample volume provided? ⁽¹⁾	☒	☐	☐	
Does the COC agree with the number and type of sample bottles received? ⁽¹⁾	☒	☐	☐	
Do the sample IDs on the bottle labels match the COC? ⁽¹⁾	☒	☐	☐	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	☐	☐	☒	"
Are samples preserved that require preservation (excluding cooling)? ⁽¹⁾ Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	☐	☐	☒	
If samples are acid preserved for metals, is the pH ≤ 2? ⁽¹⁾ Record the pH in Comments.	☐	☐	☒	
If dissolved metals are requested, were samples field filtered?	☐	☐	☒	
Additional Comments (if any):				

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.
AS
Custodian Printed Name

2/29/24
Date/Time



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/30/24 15:04

WH06@8'
2402535-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/29/24 09:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHC0051	03/04/24	03/04/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **02/29/24 09:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0371	92.8 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0423	106 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0431	108 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/29/24 09:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0049	03/04/24	03/05/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/29/24 09:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	6.84	54.7 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/30/24 15:04

WH06@8'
2402535-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **02/29/24 09:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHC0036	03/04/24	03/06/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **02/29/24 09:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0225	67.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0184	55.3 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/29/24 09:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHC0414	03/14/24	03/16/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/29/24 09:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/30/24 15:04

WH06@8'
2402535-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	3.37	0.200	mg/kg dry	1	BHC0498	03/15/24	03/19/24	EPA 6020B
Barium	88.8	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	4.86	0.400	"	"	"	"	"	"
Lead	6.69	0.200	"	"	"	"	"	"
Nickel	5.48	0.400	"	"	"	"	"	"
Silver	0.0295	0.0200	"	"	"	"	"	"
Zinc	38.1	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/29/24 09:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0528	03/15/24	03/18/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **02/29/24 09:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	599	0.0500	mg/L dry	1	BHC0333	03/12/24	03/20/24	EPA 6020B	
Magnesium	23.7	0.0500	"	"	"	"	"	"	
Sodium	302	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **02/29/24 09:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.29	0.00100	units	1	BHC0820	03/21/24	03/21/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads
Project Number: [none]
Project Manager: Karen Olson

Reported:
05/30/24 15:04

WH06@8'
2402535-01 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/29/24 09:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	82.8		%	1	BHC0316	03/12/24	03/13/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/29/24 09:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.48	0.0100	mmhos/cm	1	BHC0334	03/12/24	03/18/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/29/24 09:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	11.8		pH Units	1	BHC0335	03/12/24	03/18/24	EPA 9045D	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/30/24 15:04

FLR06@4'
2402535-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/29/24 09:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHC0051	03/04/24	03/04/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **02/29/24 09:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0376	94.0 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0425	106 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0428	107 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/29/24 09:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0049	03/04/24	03/05/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/29/24 09:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	6.91	55.3 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/30/24 15:04

FLR06@4'
2402535-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **02/29/24 09:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHC0036	03/04/24	03/06/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **02/29/24 09:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0341	102 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0252	75.6 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/29/24 09:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHC0414	03/14/24	03/16/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/29/24 09:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/30/24 15:04

FLR06@4'
2402535-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	4.43	0.200	mg/kg dry	1	BHC0498	03/15/24	03/19/24	EPA 6020B
Barium	208	0.400	"	"	"	"	"	"
Cadmium	0.275	0.200	"	"	"	"	"	"
Copper	5.39	0.400	"	"	"	"	"	"
Lead	7.47	0.200	"	"	"	"	"	"
Nickel	6.25	0.400	"	"	"	"	"	"
Silver	0.0326	0.0200	"	"	"	"	"	"
Zinc	38.8	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/29/24 09:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0528	03/15/24	03/18/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **02/29/24 09:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	74.1	0.0500	mg/L dry	1	BHC0333	03/12/24	03/20/24	EPA 6020B	
Magnesium	3.95	0.0500	"	"	"	"	"	"	
Sodium	4.73	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **02/29/24 09:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.145	0.00100	units	1	BHC0820	03/21/24	03/21/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/29/24 09:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/30/24 15:04

FLR06@4'
2402535-02 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	87.2	%	1	BHC0316	03/12/24	03/13/24	Calculation

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/29/24 09:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.162	0.0100	mmhos/cm	1	BHC0334	03/12/24	03/18/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/29/24 09:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.68		pH Units	1	BHC0335	03/12/24	03/18/24	EPA 9045D	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/30/24 15:04

COMP01-FL06@4'
2402535-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/29/24 09:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHC0051	03/04/24	03/04/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **02/29/24 09:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0368	91.9 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0436	109 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0436	109 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/29/24 09:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0049	03/04/24	03/05/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/29/24 09:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	5.92	47.4 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/30/24 15:04

COMP01-FL06@4'
2402535-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **02/29/24 09:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHC0036	03/04/24	03/06/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **02/29/24 09:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0251	75.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0218	65.3 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/29/24 09:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHC0414	03/14/24	03/16/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/29/24 09:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads
Project Number: [none]
Project Manager: Karen Olson

Reported:
05/30/24 15:04

COMP01-FL06@4'
2402535-03 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	5.71	0.200	mg/kg dry	1	BHC0498	03/15/24	03/19/24	EPA 6020B
Cadmium	0.258	0.200	"	"	"	"	"	"
Copper	7.73	0.400	"	"	"	"	"	"
Lead	7.96	0.200	"	"	"	"	"	"
Nickel	7.04	0.400	"	"	"	"	"	"
Silver	0.0375	0.0200	"	"	"	"	"	"
Zinc	26.8	0.400	"	"	"	"	"	"
Selenium	0.306	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/29/24 09:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0528	03/15/24	03/18/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **02/29/24 09:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	67.6	0.0500	mg/L dry	1	BHC0333	03/12/24	03/20/24	EPA 6020B	
Magnesium	3.98	0.0500	"	"	"	"	"	"	
Sodium	6.63	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **02/29/24 09:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.212	0.00100	units	1	BHC0820	03/21/24	03/21/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/29/24 09:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	86.4		%	1	BHC0316	03/12/24	03/13/24	Calculation	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/30/24 15:04

COMP01-FL06@4'
2402535-03 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/29/24 09:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Specific Conductance (EC)	0.182	0.0100	mmhos/cm	1	BHC0334	03/12/24	03/18/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/29/24 09:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
pH	8.51		pH Units	1	BHC0335	03/12/24	03/18/24	EPA 9045D	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/30/24 15:04

COMP01-FL06@4'
2402535-03 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **02/29/24 09:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Barium	700	0.400		mg/kg dry	1	BHC0969	03/15/24	04/12/24	EPA 6020B	

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Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/30/24 15:04

WH07@8'
2402535-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/29/24 10:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHC0051	03/04/24	03/05/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **02/29/24 10:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0374	93.4 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0422	106 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0434	108 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/29/24 10:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0049	03/04/24	03/05/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/29/24 10:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	6.02	48.2 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/30/24 15:04

WH07@8'
2402535-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **02/29/24 10:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHC0036	03/04/24	03/06/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **02/29/24 10:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0180	54.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0161	48.3 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/29/24 10:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHC0414	03/14/24	03/16/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/29/24 10:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/30/24 15:04

WH07@8'
2402535-04 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	3.94	0.200	mg/kg dry	1	BHC0498	03/15/24	03/19/24	EPA 6020B
Barium	82.4	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	4.73	0.400	"	"	"	"	"	"
Lead	7.25	0.200	"	"	"	"	"	"
Nickel	5.89	0.400	"	"	"	"	"	"
Silver	0.0296	0.0200	"	"	"	"	"	"
Zinc	33.3	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/29/24 10:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0528	03/15/24	03/18/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **02/29/24 10:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	84.3	0.0500	mg/L dry	1	BHC0333	03/12/24	03/20/24	EPA 6020B	
Magnesium	4.20	0.0500	"	"	"	"	"	"	
Sodium	78.4	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **02/29/24 10:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.26	0.00100	units	1	BHC0820	03/21/24	03/21/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/30/24 15:04

WH07@8'
2402535-04 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/29/24 10:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	85.0			%	1	BHC0316	03/12/24	03/13/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/29/24 10:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	0.428	0.0100		mmhos/cm	1	BHC0334	03/12/24	03/18/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/29/24 10:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	8.93			pH Units	1	BHC0335	03/12/24	03/18/24	EPA 9045D	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/30/24 15:04

FLR07@4'
2402535-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/29/24 10:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHC0051	03/04/24	03/05/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **02/29/24 10:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0363	90.7 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0425	106 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0432	108 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/29/24 10:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0049	03/04/24	03/06/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/29/24 10:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	7.18	57.5 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Tasman Geosciences
6855 W. 119th Ave.
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Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/30/24 15:04

FLR07@4'
2402535-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **02/29/24 10:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHC0036	03/04/24	03/06/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **02/29/24 10:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0193	57.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0153	46.0 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/29/24 10:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHC0414	03/14/24	03/16/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/29/24 10:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/30/24 15:04

FLR07@4'
2402535-05 (Soil)

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Total Metals by EPA 6020B

Arsenic	5.12	0.200	mg/kg dry	1	BHC0498	03/15/24	03/19/24	EPA 6020B
Barium	174	0.400	"	"	"	"	"	"
Cadmium	0.210	0.200	"	"	"	"	"	"
Copper	5.60	0.400	"	"	"	"	"	"
Lead	7.68	0.200	"	"	"	"	"	"
Nickel	6.42	0.400	"	"	"	"	"	"
Silver	0.0304	0.0200	"	"	"	"	"	"
Zinc	27.3	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/29/24 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0528	03/15/24	03/18/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **02/29/24 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	76.5	0.0500	mg/L dry	1	BHC0333	03/12/24	03/20/24	EPA 6020B	
Magnesium	4.85	0.0500	"	"	"	"	"	"	
Sodium	3.33	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **02/29/24 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0998	0.00100	units	1	BHC0820	03/21/24	03/21/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/29/24 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/30/24 15:04

FLR07@4'
2402535-05 (Soil)

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Physical Parameters by APHA/ASTM/EPA Methods

% Solids	86.7	%	1	BHC0316	03/12/24	03/13/24	Calculation

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/29/24 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.191	0.0100	mmhos/cm	1	BHC0334	03/12/24	03/18/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/29/24 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.56		pH Units	1	BHC0335	03/12/24	03/18/24	EPA 9045D	

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Project: PDC - Merritt Combined Wellheads
Project Number: [none]
Project Manager: Karen Olson

Reported:
05/30/24 15:04

COMP01-FL07@4'
2402535-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/29/24 10:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHC0051	03/04/24	03/05/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **02/29/24 10:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0362	90.4 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0421	105 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0432	108 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/29/24 10:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0049	03/04/24	03/06/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/29/24 10:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	7.69	61.5 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Tasman Geosciences
6855 W. 119th Ave.
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Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/30/24 15:04

COMP01-FL07@4'
2402535-06 (Soil)

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PAH by EPA Method 8270D SIM

Date Sampled: **02/29/24 10:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHC0036	03/04/24	03/06/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **02/29/24 10:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0326	97.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0236	70.9 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/29/24 10:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHC0414	03/14/24	03/16/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/29/24 10:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/30/24 15:04

COMP01-FL07@4'
2402535-06 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	5.13	0.200	mg/kg dry	1	BHC0498	03/15/24	03/19/24	EPA 6020B
Barium	109	0.400	"	"	"	"	"	"
Cadmium	0.454	0.200	"	"	"	"	"	"
Copper	5.53	0.400	"	"	"	"	"	"
Lead	8.93	0.200	"	"	"	"	"	"
Nickel	8.42	0.400	"	"	"	"	"	"
Silver	0.0356	0.0200	"	"	"	"	"	"
Zinc	29.6	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/29/24 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0528	03/15/24	03/18/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **02/29/24 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	82.5	0.0500	mg/L dry	1	BHC0333	03/12/24	03/20/24	EPA 6020B	
Magnesium	3.44	0.0500	"	"	"	"	"	"	
Sodium	3.08	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **02/29/24 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0903	0.00100	units	1	BHC0820	03/21/24	03/21/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/29/24 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/30/24 15:04

COMP01-FL07@4'
2402535-06 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	84.3	%	1	BHC0316	03/12/24	03/13/24	Calculation

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/29/24 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.168	0.0100	mmhos/cm	1	BHC0334	03/12/24	03/18/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/29/24 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.64		pH Units	1	BHC0335	03/12/24	03/18/24	EPA 9045D	

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Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/30/24 15:04

Volatile Organic Compounds by EPA Method 8260B - Quality Control

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Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0051 - EPA 5030 Soil MS

Blank (BHC0051-BLK1)

Prepared & Analyzed: 03/04/24

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0346		"	0.0400		86.6	50-150			
Surrogate: Toluene-d8	0.0420		"	0.0400		105	50-150			
Surrogate: 4-Bromofluorobenzene	0.0425		"	0.0400		106	50-150			

LCS (BHC0051-BS1)

Prepared & Analyzed: 03/04/24

Benzene	0.130	0.0020	mg/kg	0.100		130	70-130			
Toluene	0.125	0.0050	"	0.100		125	70-130			
Ethylbenzene	0.0995	0.0050	"	0.100		99.5	70-130			
m,p-Xylene	0.197	0.010	"	0.200		98.7	70-130			
o-Xylene	0.0968	0.0050	"	0.100		96.8	70-130			
1,2,4-Trimethylbenzene	0.0967	0.0050	"	0.100		96.7	70-130			
1,3,5-Trimethylbenzene	0.0961	0.0050	"	0.100		96.1	70-130			
Naphthalene	0.0776	0.0038	"	0.100		77.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0362		"	0.0400		90.4	50-150			
Surrogate: Toluene-d8	0.0435		"	0.0400		109	50-150			
Surrogate: 4-Bromofluorobenzene	0.0423		"	0.0400		106	50-150			

Matrix Spike (BHC0051-MS1)

Source: 2402535-01

Prepared & Analyzed: 03/04/24

Benzene	0.121	0.0020	mg/kg	0.100	ND	121	70-130			
Toluene	0.117	0.0050	"	0.100	ND	117	70-130			
Ethylbenzene	0.0923	0.0050	"	0.100	ND	92.3	70-130			
m,p-Xylene	0.184	0.010	"	0.200	ND	91.8	70-130			
o-Xylene	0.0892	0.0050	"	0.100	ND	89.2	70-130			
1,2,4-Trimethylbenzene	0.0895	0.0050	"	0.100	ND	89.5	70-130			
1,3,5-Trimethylbenzene	0.0871	0.0050	"	0.100	ND	87.1	70-130			
Naphthalene	0.0723	0.0038	"	0.100	ND	72.3	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0373		"	0.0400		93.2	50-150			
Surrogate: Toluene-d8	0.0432		"	0.0400		108	50-150			
Surrogate: 4-Bromofluorobenzene	0.0436		"	0.0400		109	50-150			

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Tasman Geosciences
6855 W. 119th Ave.
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Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/30/24 15:04

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0051 - EPA 5030 Soil MS

Matrix Spike Dup (BHC0051-MSD1)		Source: 2402535-01			Prepared & Analyzed: 03/04/24					
Benzene	0.136	0.0020	mg/kg	0.100	ND	136	70-130	11.9	30	QM-07
Toluene	0.132	0.0050	"	0.100	ND	132	70-130	12.0	30	QM-07
Ethylbenzene	0.109	0.0050	"	0.100	ND	109	70-130	16.4	30	
m,p-Xylene	0.214	0.010	"	0.200	ND	107	70-130	15.2	30	
o-Xylene	0.100	0.0050	"	0.100	ND	100	70-130	11.8	30	
1,2,4-Trimethylbenzene	0.101	0.0050	"	0.100	ND	101	70-130	12.3	30	
1,3,5-Trimethylbenzene	0.101	0.0050	"	0.100	ND	101	70-130	15.0	30	
Naphthalene	0.0727	0.0038	"	0.100	ND	72.7	70-130	0.621	30	
Surrogate: 1,2-Dichloroethane-d4		0.0351	"	0.0400		87.8	50-150			
Surrogate: Toluene-d8		0.0423	"	0.0400		106	50-150			
Surrogate: 4-Bromofluorobenzene		0.0428	"	0.0400		107	50-150			

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Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/30/24 15:04

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0049 - EPA 3550A

Blank (BHC0049-BLK1)

Prepared: 03/04/24 Analyzed: 03/05/24

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: o-Terphenyl	10.5		"	12.5		84.3	30-150			

LCS (BHC0049-BS1)

Prepared: 03/04/24 Analyzed: 03/05/24

C10-C28 (DRO)	446	50	mg/kg	500		89.1	70-130			
Surrogate: o-Terphenyl	10.5		"	12.5		84.3	30-150			

Matrix Spike (BHC0049-MS1)

Source: 2402535-01

Prepared: 03/04/24 Analyzed: 03/05/24

C10-C28 (DRO)	449	50	mg/kg	500	43.4	81.1	70-130			
Surrogate: o-Terphenyl	7.89		"	12.5		63.1	30-150			

Matrix Spike Dup (BHC0049-MSD1)

Source: 2402535-01

Prepared: 03/04/24 Analyzed: 03/05/24

C10-C28 (DRO)	428	50	mg/kg	500	43.4	76.9	70-130	4.75	20	
Surrogate: o-Terphenyl	6.97		"	12.5		55.8	30-150			

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Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/30/24 15:04

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0036 - EPA 5030 Soil MS

Blank (BHC0036-BLK1)

Prepared: 03/04/24 Analyzed: 03/06/24

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
Surrogate: 2-Methylnaphthalene-d10	0.0376		"	0.0333		113	40-150			
Surrogate: Fluoranthene-d10	0.0389		"	0.0333		117	40-150			

LCS (BHC0036-BS1)

Prepared: 03/04/24 Analyzed: 03/06/24

Acenaphthene	0.0390	0.00500	mg/kg	0.0333		117	31-137			
Anthracene	0.0339	0.00500	"	0.0333		102	30-120			
Benzo (a) anthracene	0.0316	0.00500	"	0.0333		94.9	30-120			
Benzo (a) pyrene	0.0342	0.00500	"	0.0333		102	30-120			
Benzo (b) fluoranthene	0.0351	0.00500	"	0.0333		105	30-120			
Benzo (k) fluoranthene	0.0392	0.00500	"	0.0333		117	30-120			
Chrysene	0.0385	0.00500	"	0.0333		116	30-120			
Dibenz (a,h) anthracene	0.0283	0.00500	"	0.0333		84.9	30-120			
Fluoranthene	0.0377	0.00500	"	0.0333		113	30-120			
Fluorene	0.0389	0.00500	"	0.0333		117	30-120			
Indeno (1,2,3-cd) pyrene	0.0329	0.00500	"	0.0333		98.7	30-120			
Pyrene	0.0398	0.00500	"	0.0333		119	35-142			
1-Methylnaphthalene	0.0400	0.00500	"	0.0333		120	35-142			
2-Methylnaphthalene	0.0214	0.00500	"	0.0333		64.1	35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0318		"	0.0333		95.4	40-150			
Surrogate: Fluoranthene-d10	0.0385		"	0.0333		116	40-150			

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/30/24 15:04

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Reporting			Spike Level	Source		%REC		RPD	
	Result	Limit	Units		Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0036 - EPA 5030 Soil MS

Matrix Spike (BHC0036-MS1)

Source: 2402504-03

Prepared: 03/04/24 Analyzed: 03/06/24

Acenaphthene	0.0173	0.00500	mg/kg	0.0333	ND	51.9	31-137		
Anthracene	0.0136	0.00500	"	0.0333	ND	40.8	30-120		
Benzo (a) anthracene	0.0144	0.00500	"	0.0333	ND	43.1	30-120		
Benzo (a) pyrene	0.0138	0.00500	"	0.0333	ND	41.5	30-120		
Benzo (b) fluoranthene	0.0143	0.00500	"	0.0333	ND	42.8	30-120		
Benzo (k) fluoranthene	0.0188	0.00500	"	0.0333	ND	56.4	30-120		
Chrysene	0.0187	0.00500	"	0.0333	ND	56.1	30-120		
Dibenz (a,h) anthracene	0.0149	0.00500	"	0.0333	ND	44.6	30-120		
Fluoranthene	0.0175	0.00500	"	0.0333	ND	52.6	30-120		
Fluorene	0.0169	0.00500	"	0.0333	ND	50.7	30-120		
Indeno (1,2,3-cd) pyrene	0.0175	0.00500	"	0.0333	ND	52.5	30-120		
Pyrene	0.0193	0.00500	"	0.0333	ND	58.0	35-142		
1-Methylnaphthalene	0.0188	0.00500	"	0.0333	ND	56.5	15-130		
2-Methylnaphthalene	0.0168	0.00500	"	0.0333	ND	50.3	15-130		
Surrogate: 2-Methylnaphthalene-d10	0.0202		"	0.0333		60.5	40-150		
Surrogate: Fluoranthene-d10	0.0173		"	0.0333		51.8	40-150		

Matrix Spike Dup (BHC0036-MSD1)

Source: 2402504-03

Prepared: 03/04/24 Analyzed: 03/06/24

Acenaphthene	0.0204	0.00500	mg/kg	0.0333	ND	61.1	31-137	16.3	30
Anthracene	0.0153	0.00500	"	0.0333	ND	45.8	30-120	11.7	30
Benzo (a) anthracene	0.0162	0.00500	"	0.0333	ND	48.7	30-120	12.2	30
Benzo (a) pyrene	0.0156	0.00500	"	0.0333	ND	46.8	30-120	12.0	30
Benzo (b) fluoranthene	0.0171	0.00500	"	0.0333	ND	51.3	30-120	17.9	30
Benzo (k) fluoranthene	0.0208	0.00500	"	0.0333	ND	62.5	30-120	10.1	30
Chrysene	0.0204	0.00500	"	0.0333	ND	61.1	30-120	8.58	30
Dibenz (a,h) anthracene	0.0164	0.00500	"	0.0333	ND	49.2	30-120	9.82	30
Fluoranthene	0.0191	0.00500	"	0.0333	ND	57.3	30-120	8.50	30
Fluorene	0.0204	0.00500	"	0.0333	ND	61.3	30-120	18.9	30
Indeno (1,2,3-cd) pyrene	0.0145	0.00500	"	0.0333	ND	43.4	30-120	18.9	30
Pyrene	0.0217	0.00500	"	0.0333	ND	65.0	35-142	11.3	30
1-Methylnaphthalene	0.0176	0.00500	"	0.0333	ND	52.8	15-130	6.72	50
2-Methylnaphthalene	0.0202	0.00500	"	0.0333	ND	60.7	15-130	18.7	50
Surrogate: 2-Methylnaphthalene-d10	0.0224		"	0.0333		67.1	40-150		
Surrogate: Fluoranthene-d10	0.0193		"	0.0333		58.0	40-150		

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/30/24 15:04

Total Metals by EPA 6020B Hot Water Soluble Extraction - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0414 - EPA 3050B

Blank (BHC0414-BLK1)

Prepared: 03/14/24 Analyzed: 03/16/24

Boron ND 2.00 mg/L

LCS (BHC0414-BS1)

Prepared: 03/14/24 Analyzed: 03/16/24

Boron 4.77 2.00 mg/L 5.00 95.3 80-120

Duplicate (BHC0414-DUP1)

Source: 2402535-01

Prepared: 03/14/24 Analyzed: 03/16/24

Boron 0.0108 2.00 mg/L 0.0988 161 20 QR-01

Matrix Spike (BHC0414-MS1)

Source: 2402535-01

Prepared: 03/14/24 Analyzed: 03/16/24

Boron 3.99 2.00 mg/L 5.00 0.0988 77.8 75-125

Matrix Spike Dup (BHC0414-MSD1)

Source: 2402535-01

Prepared: 03/14/24 Analyzed: 03/16/24

Boron 4.15 2.00 mg/L 5.00 0.0988 81.0 75-125 3.84 25

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads
Project Number: [none]
Project Manager: Karen Olson

Reported:
05/30/24 15:04

Total Metals by EPA 6020B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0498 - EPA 3050B

Blank (BHC0498-BLK1)

Prepared: 03/15/24 Analyzed: 03/19/24

Arsenic	ND	0.200	mg/kg wet
Barium	ND	0.400	"
Cadmium	ND	0.200	"
Copper	ND	0.400	"
Lead	ND	0.200	"
Nickel	ND	0.400	"
Silver	ND	0.0200	"
Zinc	ND	0.400	"
Selenium	ND	0.260	"

LCS (BHC0498-BS1)

Prepared: 03/15/24 Analyzed: 03/19/24

Arsenic	40.4	0.200	mg/kg wet	40.0	101	80-120
Barium	42.2	0.400	"	40.0	106	80-120
Cadmium	2.09	0.200	"	2.00	104	80-120
Copper	45.9	0.400	"	40.0	115	80-120
Lead	20.6	0.200	"	20.0	103	80-120
Nickel	45.7	0.400	"	40.0	114	80-120
Silver	2.07	0.0200	"	2.00	104	80-120
Zinc	44.1	0.400	"	40.0	110	80-120
Selenium	4.42	0.260	"	4.00	110	80-120

Duplicate (BHC0498-DUP1)

Source: 2402063-01RE1

Prepared: 03/15/24 Analyzed: 03/19/24

Arsenic	3.40	0.200	mg/kg wet	3.62	6.28	20	
Barium	91.5	0.400	"	98.3	7.16	20	
Cadmium	0.176	0.200	"	0.186	5.54	20	
Copper	6.27	0.400	"	7.33	15.6	20	
Lead	11.1	0.200	"	10.2	8.62	20	
Nickel	6.44	0.400	"	6.74	4.55	20	
Silver	0.0468	0.0200	"	0.0628	29.2	20	QR-01
Zinc	21.5	0.400	"	20.8	3.32	20	
Selenium	ND	0.260	"	0.219	200	20	QR-01

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/30/24 15:04

Total Metals by EPA 6020B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0498 - EPA 3050B

Matrix Spike (BHC0498-MS1)

Source: 2402063-01RE1 Prepared: 03/15/24 Analyzed: 03/19/24

Arsenic	41.9	0.200	mg/kg wet	40.0	3.62	95.7	75-125			
Barium	139	0.400	"	40.0	98.3	103	75-125			
Cadmium	2.27	0.200	"	2.00	0.186	104	75-125			
Copper	30.4	0.400	"	40.0	7.33	57.7	75-125			QM-07
Lead	41.6	0.200	"	20.0	10.2	157	75-125			QM-07
Nickel	29.7	0.400	"	40.0	6.74	57.3	75-125			QM-07
Silver	2.04	0.0200	"	2.00	0.0628	98.8	75-125			
Zinc	44.4	0.400	"	40.0	20.8	59.1	75-125			QM-07
Selenium	6.68	0.260	"	4.00	0.219	161	75-125			QM-07

Matrix Spike Dup (BHC0498-MSD1)

Source: 2402063-01RE1 Prepared: 03/15/24 Analyzed: 03/19/24

Arsenic	41.8	0.200	mg/kg wet	40.0	3.62	95.5	75-125	0.197	25	
Barium	138	0.400	"	40.0	98.3	100	75-125	0.680	25	
Cadmium	2.27	0.200	"	2.00	0.186	104	75-125	0.0880	25	
Copper	31.4	0.400	"	40.0	7.33	60.1	75-125	3.07	25	QM-07
Lead	41.8	0.200	"	20.0	10.2	158	75-125	0.550	25	QM-07
Nickel	30.5	0.400	"	40.0	6.74	59.3	75-125	2.62	25	QM-07
Silver	2.02	0.0200	"	2.00	0.0628	98.0	75-125	0.847	25	
Zinc	45.9	0.400	"	40.0	20.8	62.8	75-125	3.23	25	QM-07
Selenium	6.37	0.260	"	4.00	0.219	154	75-125	4.75	25	QM-07

Batch BHC0969 - EPA 3050B

Blank (BHC0969-BLK1)

Prepared: 03/26/24 Analyzed: 04/12/24

Arsenic	ND	0.200	mg/kg wet
Barium	ND	0.400	"
Cadmium	ND	0.200	"
Copper	ND	0.400	"
Lead	ND	0.200	"
Nickel	ND	0.400	"
Silver	ND	0.0200	"
Zinc	ND	0.400	"
Selenium	ND	0.260	"

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/30/24 15:04

Total Metals by EPA 6020B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0969 - EPA 3050B

LCS (BHC0969-BS1)

Prepared: 03/26/24 Analyzed: 04/12/24

Arsenic	39.1	0.200	mg/kg wet	40.0		97.7	80-120			
Barium	39.8	0.400	"	40.0		99.5	80-120			
Cadmium	1.96	0.200	"	2.00		98.2	80-120			
Copper	39.5	0.400	"	40.0		98.8	80-120			
Lead	19.6	0.200	"	20.0		97.9	80-120			
Nickel	39.4	0.400	"	40.0		98.5	80-120			
Silver	1.96	0.0200	"	2.00		98.1	80-120			
Zinc	39.2	0.400	"	40.0		98.0	80-120			
Selenium	4.03	0.260	"	4.00		101	80-120			

Duplicate (BHC0969-DUP1)

Source: 2402535-03RE1

Prepared: 03/26/24 Analyzed: 04/12/24

Arsenic	4.87	0.200	mg/kg dry		4.65			4.50	20	
Barium	711	0.400	"		700			1.49	20	
Cadmium	0.275	0.200	"		0.265			3.77	20	
Copper	10.0	0.400	"		10.9			8.53	20	
Lead	7.06	0.200	"		6.80			3.76	20	
Nickel	9.10	0.400	"		9.21			1.16	20	
Silver	0.0403	0.0200	"		0.0440			8.79	20	
Zinc	37.7	0.400	"		38.5			2.00	20	
Selenium	ND	0.260	"		ND				20	

Matrix Spike (BHC0969-MS1)

Source: 2402535-03RE1

Prepared: 03/26/24 Analyzed: 04/12/24

Arsenic	48.6	0.200	mg/kg dry	46.3	4.65	94.9	75-125			
Barium	635	0.400	"	46.3	700	NR	75-125			QM-07
Cadmium	2.54	0.200	"	2.32	0.265	98.1	75-125			
Copper	53.5	0.400	"	46.3	10.9	91.8	75-125			
Lead	28.7	0.200	"	23.2	6.80	94.8	75-125			
Nickel	53.6	0.400	"	46.3	9.21	95.8	75-125			
Silver	2.26	0.0200	"	2.32	0.0440	95.9	75-125			
Zinc	82.6	0.400	"	46.3	38.5	95.3	75-125			
Selenium	3.99	0.260	"	4.63	ND	86.2	75-125			

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/30/24 15:04

Total Metals by EPA 6020B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0969 - EPA 3050B

Matrix Spike Dup (BHC0969-MSD1)

Source: 2402535-03RE1

Prepared: 03/26/24 Analyzed: 04/12/24

Arsenic	49.3	0.200	mg/kg dry	46.3	4.65	96.4	75-125	1.47	25	
Barium	637	0.400	"	46.3	700	NR	75-125	0.368	25	QM-07
Cadmium	2.51	0.200	"	2.32	0.265	97.1	75-125	0.917	25	
Copper	54.3	0.400	"	46.3	10.9	93.7	75-125	1.65	25	
Lead	29.0	0.200	"	23.2	6.80	95.9	75-125	0.874	25	
Nickel	53.5	0.400	"	46.3	9.21	95.6	75-125	0.130	25	
Silver	2.26	0.0200	"	2.32	0.0440	95.7	75-125	0.205	25	
Zinc	82.8	0.400	"	46.3	38.5	95.6	75-125	0.180	25	
Selenium	3.94	0.260	"	4.63	ND	85.1	75-125	1.21	25	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/30/24 15:04

Hexavalent Chromium by EPA Method 7196 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0528 - 3060A Mod

Blank (BHC0528-BLK1)

Prepared: 03/15/24 Analyzed: 03/18/24

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BHC0528-BS1)

Prepared: 03/15/24 Analyzed: 03/18/24

Chromium, Hexavalent 24.0 0.30 mg/kg wet 25.0 96.0 80-120

Duplicate (BHC0528-DUP1)

Source: 2402530-01

Prepared: 03/15/24 Analyzed: 03/18/24

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BHC0528-MS1)

Source: 2402530-01

Prepared: 03/15/24 Analyzed: 03/18/24

Chromium, Hexavalent 26.8 0.30 mg/kg dry 26.6 ND 101 75-125

Matrix Spike Dup (BHC0528-MSD1)

Source: 2402530-01

Prepared: 03/15/24 Analyzed: 03/18/24

Chromium, Hexavalent 26.8 0.30 mg/kg dry 26.6 ND 101 75-125 0.00 20

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/30/24 15:04

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD	
		Limit	Units		Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0333 - General Preparation

Blank (BHC0333-BLK1)

Prepared: 03/12/24 Analyzed: 03/20/24

Calcium	ND	0.0500	mg/L wet
Magnesium	ND	0.0500	"
Sodium	ND	0.0500	"

LCS (BHC0333-BS1)

Prepared: 03/12/24 Analyzed: 03/20/24

Calcium	6.39	0.0500	mg/L wet	5.00	128	70-130
Magnesium	5.65	0.0500	"	5.00	113	70-130
Sodium	5.76	0.0500	"	5.00	115	70-130

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/30/24 15:04

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD	
		Limit	Units		Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0316 - General Preparation

Duplicate (BHC0316-DUP1)		Source: 2402506-01		Prepared: 03/12/24 Analyzed: 03/13/24	
% Solids	91.3		%	92.5	1.33 20

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/30/24 15:04

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD	
		Limit	Units		Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0334 - General Preparation

Blank (BHC0334-BLK1)

Prepared: 03/12/24 Analyzed: 03/18/24

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BHC0334-BS1)

Prepared: 03/12/24 Analyzed: 03/18/24

Specific Conductance (EC) 0.158 0.0100 mmhos/cm 0.150 105 95-105

Duplicate (BHC0334-DUP1)

Source: 2402506-01

Prepared: 03/12/24 Analyzed: 03/18/24

Specific Conductance (EC) 0.0810 0.0100 mmhos/cm 0.0800 1.27 20

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/30/24 15:04

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source Result	%REC		RPD		Notes
		Limit	Units			%REC	Limits	RPD	Limit	

Batch BHC0335 - General Preparation

LCS (BHC0335-BS1)

Prepared: 03/12/24 Analyzed: 03/18/24

pH	9.06	pH Units	9.18	98.7	95-105

Duplicate (BHC0335-DUP1)

Source: 2402506-01

Prepared: 03/12/24 Analyzed: 03/18/24

pH	9.03	pH Units	9.02	0.111	20

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/30/24 15:04

Notes and Definitions

QR-01	Analyses are not controlled on RPD values from sample concentrations less than 10 times the reporting limit. QC batch accepted based on LCS and/or LCSD QC results.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

May 01, 2024

Karen Olson

Tasman Geosciences

6855 W. 119th Ave.

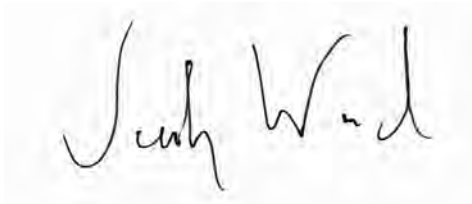
Broomfield, CO 80020

RE: PDC - Merritt Combined Wellheads

Work Order #2403036

Enclosed are the results of analyses for samples received by Summit Scientific on 03/01/24 17:39. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Jacob Wood". The signature is written in a cursive, flowing style.

Jacob Wood For Paul Shrewsbury

President



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/01/24 15:42

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
WH09@8'	2403036-01	Soil	03/01/24 09:15	03/01/24 17:39
FLR09@4'	2403036-02	Soil	03/01/24 09:20	03/01/24 17:39
COMP01-FL09@4'	2403036-03	Soil	03/01/24 09:25	03/01/24 17:39
BKG01@4'	2403036-04	Soil	03/01/24 13:20	03/01/24 17:39
BKG01@6'	2403036-05	Soil	03/01/24 13:25	03/01/24 17:39
BKG01@8'	2403036-06	Soil	03/01/24 13:00	03/01/24 17:39

Case Narrative

Hunter Merlo requested pH, EC, & SAR be added to BKG samples at 4', 6', & 8' on 04/02/2024.
This report includes those results.

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client: PDC PDC / Tasman				Send Data To:				Send Invoice To:			
Address: 6855 W 119th Ave				Project Manager: Karen Olson				Company: PDC Energy			
City/State/Zip: Broomfield / CO / 80220				E-Mail: karen.olson@chevron.com				Project Name/Location:			
Phone: 303-487-1228				Project Name: Merritt Combined Wellheads				AFE#:			
Sampler Name: Jordan Hestmark				Project Number:				PO/Billing Codes:			
Contact: Karen Olson											

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix		Air-Canister #	Other	Analysis Requested								Special Instructions
					HCl	HNO3	None	Other	Water	Soil			BTEXN - 8260B	TPH - (C6 - C36)	1,2,4 & 1,3,5 - TMB	Boron - HWS	pH, EC, SAR	PAHs - 915	Metals - 915	TDS, SO4, Cl	
1	WH09 @ 8'	3/1/24	915	2			X			X			X	X	X	X	X	X			
2	FL09 @ 4'		920	1																	
3	COMP01-FL09 @ 4'		925	1																	
4	BK601 @ 4'		1320	1														X			
5	BK601 @ 6'		1325	1																	
6	BK601 @ 8'		1330	1																	
7																					
8																					
9																					
10																					
11																					
12																					
13																					
14																					
15																					

Relinquished by: Jordan Hestmark	Date/Time: 3/1/24 1537	Received by: Tasman Lockbox	Date/Time: 3/1/24 1537	TAT Business Days	Field DO	Notes:
				Same Day	Field EC	
Relinquished by: Tasman Lockbox	Date/Time: 3/24 1739	Received by: [Signature]	Date/Time: 3/24 1739	1 Day	Field ORP	
				2 Days	Field pH	
Relinquished by:	Date/Time:	Received by:	Date/Time:	3 Days	Field Temp.	
				Standard	Field Turb.	
Temperature Upon Receipt: 10.0	Corrected Temperature: 0	IR gun #: 1	HNO3 lot #:			

S₂

Sample Receipt Checklist

S2 Work Order# **2403036**Client: POC Frisman

Client Project ID:

Merritt Combined wellheadsShipped Via: H.D./P.U./FedEx/UPS/USPS/Other ☐

Airbill #:

☐	☒	☐	☐	☐

Matrix (Check all that apply)

Air

☐

Soil/Solid

☒

Water

☐

Other

☐

Temp (°C)

10.6

Thermometer #

1

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	☒	☐	☐	
If custody seals are present, are they intact? ⁽¹⁾	☒	☐	☐	<u>NOTE</u>
Are samples due within 48 hours present?	☐	☒	☐	
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe ²⁺), Hexavalent Chromium (Cr ⁶⁺ , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	☐	☒	☐	
Is a chain-of-custody (COC) form present and filled out Completely? ⁽¹⁾	☒	☐	☐	
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	☒	☐	☐	
Were all samples received intact? ⁽¹⁾	☒	☐	☐	
Was adequate sample volume provided? ⁽¹⁾	☒	☐	☐	
Does the COC agree with the number and type of sample bottles received? ⁽¹⁾	☒	☐	☐	
Do the sample IDs on the bottle labels match the COC? ⁽¹⁾	☒	☐	☐	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	☐	☐	☒	
Are samples preserved that require preservation (excluding cooling)? ⁽¹⁾ Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	☐	☐	☒	
If samples are acid preserved for metals, is the pH ≤ 2? ⁽¹⁾ Record the pH in Comments.	☐	☐	☒	
If dissolved metals are requested, were samples field filtered?	☐	☐	☒	
Additional Comments (if any):				

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.

 Custodian Printed Name

12:45
 Date/Time



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/01/24 15:42

WH09@8'
2403036-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/01/24 09:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHC0082	03/05/24	03/05/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/01/24 09:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0455	114 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0395	98.8 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0384	95.9 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/01/24 09:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0084	03/05/24	03/06/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/01/24 09:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	7.59	60.7 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/01/24 15:42

WH09@8'
2403036-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/01/24 09:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHC0039	03/04/24	03/05/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/01/24 09:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0256	76.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0196	58.7 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/01/24 09:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHC0446	03/15/24	03/21/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/01/24 09:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/01/24 15:42

WH09@8'
2403036-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	4.07	0.200	mg/kg dry	1	BHC0544	03/16/24	03/20/24	EPA 6020B
Barium	130	0.400	"	"	"	"	"	"
Cadmium	0.448	0.200	"	"	"	"	"	"
Copper	5.02	0.400	"	"	"	"	"	"
Lead	7.08	0.200	"	"	"	"	"	"
Nickel	10.0	0.400	"	"	"	"	"	"
Silver	0.0312	0.0200	"	"	"	"	"	"
Zinc	156	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/01/24 09:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0558	03/16/24	03/19/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **03/01/24 09:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	677	0.0500	mg/L dry	1	BHC0495	03/15/24	03/21/24	EPA 6020B	
Magnesium	35.0	0.0500	"	"	"	"	"	"	
Sodium	153	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/01/24 09:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.55	0.00100	units	1	BHC0831	03/21/24	03/21/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/01/24 09:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/01/24 15:42

WH09@8'
2403036-01 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	80.9	%	1	BHC0384	03/13/24	03/16/24	Calculation

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/01/24 09:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	2.99	0.0100	mmhos/cm	1	BHC0497	03/15/24	03/19/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **03/01/24 09:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.92		pH Units	1	BHC0496	03/15/24	03/19/24	EPA 9045D	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/01/24 15:42

FLR09@4'
2403036-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/01/24 09:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHC0082	03/05/24	03/05/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/01/24 09:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0408	102 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0376	93.9 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0391	97.7 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/01/24 09:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0084	03/05/24	03/06/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/01/24 09:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	8.26	66.0 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/01/24 15:42

FLR09@4'
2403036-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/01/24 09:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHC0039	03/04/24	03/05/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/01/24 09:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0263	78.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0185	55.5 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/01/24 09:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHC0446	03/15/24	03/21/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/01/24 09:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/01/24 15:42

FLR09@4'
2403036-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	4.73	0.200	mg/kg dry	1	BHC0544	03/16/24	03/20/24	EPA 6020B
Barium	218	0.400	"	"	"	"	"	"
Cadmium	0.314	0.200	"	"	"	"	"	"
Copper	6.75	0.400	"	"	"	"	"	"
Lead	8.63	0.200	"	"	"	"	"	"
Nickel	9.64	0.400	"	"	"	"	"	"
Silver	0.0348	0.0200	"	"	"	"	"	"
Zinc	32.9	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/01/24 09:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0558	03/16/24	03/19/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **03/01/24 09:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	60.6	0.0500	mg/L dry	1	BHC0495	03/15/24	03/21/24	EPA 6020B	
Magnesium	6.60	0.0500	"	"	"	"	"	"	
Sodium	10.3	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/01/24 09:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.336	0.00100	units	1	BHC0831	03/21/24	03/21/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/01/24 09:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/01/24 15:42

FLR09@4'
2403036-02 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	83.9	%	1	BHC0384	03/13/24	03/16/24	Calculation

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/01/24 09:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.400	0.0100	mmhos/cm	1	BHC0497	03/15/24	03/19/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **03/01/24 09:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.26		pH Units	1	BHC0496	03/15/24	03/19/24	EPA 9045D	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads
Project Number: [none]
Project Manager: Karen Olson

Reported:
05/01/24 15:42

COMP01-FL09@4'
2403036-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/01/24 09:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHC0082	03/05/24	03/06/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/01/24 09:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0495	124 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0379	94.8 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0402	101 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/01/24 09:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0084	03/05/24	03/06/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/01/24 09:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	7.59	60.8 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/01/24 15:42

COMP01-FL09@4'
2403036-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/01/24 09:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHC0039	03/04/24	03/05/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/01/24 09:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0272	81.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0206	61.7 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/01/24 09:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHC0446	03/15/24	03/21/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/01/24 09:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/01/24 15:42

COMP01-FL09@4'
2403036-03 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	5.23	0.200	mg/kg dry	1	BHC0544	03/16/24	03/20/24	EPA 6020B
Barium	263	0.400	"	"	"	"	"	"
Cadmium	0.448	0.200	"	"	"	"	"	"
Copper	6.27	0.400	"	"	"	"	"	"
Lead	8.77	0.200	"	"	"	"	"	"
Nickel	9.00	0.400	"	"	"	"	"	"
Silver	0.0267	0.0200	"	"	"	"	"	"
Zinc	33.0	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/01/24 09:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0558	03/16/24	03/19/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **03/01/24 09:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	62.6	0.0500	mg/L dry	1	BHC0495	03/15/24	03/21/24	EPA 6020B	
Magnesium	3.38	0.0500	"	"	"	"	"	"	
Sodium	4.56	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/01/24 09:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.152	0.00100	units	1	BHC0831	03/21/24	03/21/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/01/24 09:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/01/24 15:42

COMP01-FL09@4'
2403036-03 (Soil)

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Physical Parameters by APHA/ASTM/EPA Methods

% Solids	83.7	%	1	BHC0384	03/13/24	03/16/24	Calculation

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/01/24 09:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.202	0.0100	mmhos/cm	1	BHC0497	03/15/24	03/19/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **03/01/24 09:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.56		pH Units	1	BHC0496	03/15/24	03/19/24	EPA 9045D	

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Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/01/24 15:42

BKG01@4'
2403036-04 (Soil)

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Total Metals by EPA 6020B

Date Sampled: **03/01/24 13:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	5.34	0.200	mg/kg dry	1	BHC0544	03/16/24	03/20/24	EPA 6020B	
Barium	87.5	0.400	"	"	"	"	"	"	
Cadmium	0.232	0.200	"	"	"	"	"	"	
Copper	5.34	0.400	"	"	"	"	"	"	
Lead	8.14	0.200	"	"	"	"	"	"	
Nickel	6.84	0.400	"	"	"	"	"	"	
Silver	0.0364	0.0200	"	"	"	"	"	"	
Zinc	24.8	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/01/24 13:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0558	03/16/24	03/19/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **03/01/24 13:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	41.5	0.0500	mg/L dry	1	BHD0701	04/20/24	04/30/24	EPA 6020B	
Magnesium	25.3	0.0500	"	"	"	"	"	"	
Sodium	242	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/01/24 13:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Sodium Adsorption Ratio	7.31	0.00100	units	1	BHE0026	05/01/24	05/01/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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6855 W. 119th Ave.
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Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/01/24 15:42

BKG01@4'
2403036-04 (Soil)

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Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/01/24 13:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	89.1		%	1	BHC0384	03/13/24	03/16/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/01/24 13:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	2.56	0.0100	mmhos/cm	1	BHD0259	04/09/24	04/10/24	EPA 120.1	I-04

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **03/01/24 13:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.89		pH Units	1	BHD0702	04/20/24	04/22/24	EPA 9045D	I-02

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6855 W. 119th Ave.
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Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/01/24 15:42

BKG01@6'
2403036-05 (Soil)

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Total Metals by EPA 6020B

Date Sampled: **03/01/24 13:25**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	3.97	0.200	mg/kg dry	1	BHC0544	03/16/24	03/20/24	EPA 6020B	
Barium	64.4	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	4.65	0.400	"	"	"	"	"	"	
Lead	6.73	0.200	"	"	"	"	"	"	
Nickel	6.25	0.400	"	"	"	"	"	"	
Silver	0.0354	0.0200	"	"	"	"	"	"	
Zinc	21.7	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/01/24 13:25**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0558	03/16/24	03/19/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **03/01/24 13:25**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	64.7	0.0500	mg/L dry	1	BHD0701	04/20/24	04/30/24	EPA 6020B	
Magnesium	59.6	0.0500	"	"	"	"	"	"	
Sodium	103	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/01/24 13:25**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Sodium Adsorption Ratio	2.22	0.00100	units	1	BHE0026	05/01/24	05/01/24	Calculation	

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Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/01/24 15:42

BKG01@6'
2403036-05 (Soil)

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Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/01/24 13:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	82.4		%	1	BHC0384	03/13/24	03/16/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/01/24 13:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.61	0.0100	mmhos/cm	1	BHD0259	04/09/24	04/10/24	EPA 120.1	I-04

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **03/01/24 13:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.28		pH Units	1	BHD0702	04/20/24	04/22/24	EPA 9045D	I-02

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Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/01/24 15:42

BKG01@8'
2403036-06 (Soil)

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Total Metals by EPA 6020B

Date Sampled: **03/01/24 13:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	4.50	0.200	mg/kg dry	1	BHC0544	03/16/24	03/20/24	EPA 6020B	
Barium	114	0.400	"	"	"	"	"	"	
Cadmium	0.360	0.200	"	"	"	"	"	"	
Copper	7.35	0.400	"	"	"	"	"	"	
Lead	10.3	0.200	"	"	"	"	"	"	
Nickel	7.48	0.400	"	"	"	"	"	"	
Silver	0.0544	0.0200	"	"	"	"	"	"	
Zinc	30.6	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/01/24 13:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0558	03/16/24	03/19/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **03/01/24 13:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	60.3	0.0500	mg/L dry	1	BHD0701	04/20/24	04/30/24	EPA 6020B	
Magnesium	39.8	0.0500	"	"	"	"	"	"	
Sodium	49.8	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/01/24 13:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Sodium Adsorption Ratio	1.22	0.00100	units	1	BHE0026	05/01/24	05/01/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/01/24 15:42

BKG01@8'
2403036-06 (Soil)

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Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/01/24 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	80.9		%	1	BHC0384	03/13/24	03/16/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/01/24 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.19	0.0100	mmhos/cm	1	BHD0259	04/09/24	04/10/24	EPA 120.1	I-04

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **03/01/24 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.09		pH Units	1	BHD0702	04/20/24	04/22/24	EPA 9045D	I-02

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Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/01/24 15:42

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0082 - EPA 5030 Soil MS

Blank (BHC0082-BLK1)

Prepared & Analyzed: 03/05/24

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0480		"	0.0400		120	50-150			
Surrogate: Toluene-d8	0.0365		"	0.0400		91.4	50-150			
Surrogate: 4-Bromofluorobenzene	0.0402		"	0.0400		101	50-150			

LCS (BHC0082-BS1)

Prepared & Analyzed: 03/05/24

Benzene	0.113	0.0020	mg/kg	0.100		113	70-130			
Toluene	0.122	0.0050	"	0.100		122	70-130			
Ethylbenzene	0.118	0.0050	"	0.100		118	70-130			
m,p-Xylene	0.233	0.010	"	0.200		116	70-130			
o-Xylene	0.113	0.0050	"	0.100		113	70-130			
1,2,4-Trimethylbenzene	0.109	0.0050	"	0.100		109	70-130			
1,3,5-Trimethylbenzene	0.111	0.0050	"	0.100		111	70-130			
Naphthalene	0.110	0.0038	"	0.100		110	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0479		"	0.0400		120	50-150			
Surrogate: Toluene-d8	0.0372		"	0.0400		92.9	50-150			
Surrogate: 4-Bromofluorobenzene	0.0385		"	0.0400		96.3	50-150			

Matrix Spike (BHC0082-MS1)

Source: 2403036-01

Prepared & Analyzed: 03/05/24

Benzene	0.0978	0.0020	mg/kg	0.100	ND	97.8	70-130			
Toluene	0.109	0.0050	"	0.100	ND	109	70-130			
Ethylbenzene	0.107	0.0050	"	0.100	ND	107	70-130			
m,p-Xylene	0.213	0.010	"	0.200	ND	107	70-130			
o-Xylene	0.102	0.0050	"	0.100	ND	102	70-130			
1,2,4-Trimethylbenzene	0.0983	0.0050	"	0.100	ND	98.3	70-130			
1,3,5-Trimethylbenzene	0.0994	0.0050	"	0.100	ND	99.4	70-130			
Naphthalene	0.101	0.0038	"	0.100	ND	101	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0424		"	0.0400		106	50-150			
Surrogate: Toluene-d8	0.0385		"	0.0400		96.2	50-150			
Surrogate: 4-Bromofluorobenzene	0.0396		"	0.0400		99.0	50-150			

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Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/01/24 15:42

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0082 - EPA 5030 Soil MS

Matrix Spike Dup (BHC0082-MSD1)		Source: 2403036-01			Prepared & Analyzed: 03/05/24					
Benzene	0.0982	0.0020	mg/kg	0.100	ND	98.2	70-130	0.398	30	
Toluene	0.109	0.0050	"	0.100	ND	109	70-130	0.275	30	
Ethylbenzene	0.110	0.0050	"	0.100	ND	110	70-130	2.79	30	
m,p-Xylene	0.220	0.010	"	0.200	ND	110	70-130	2.83	30	
o-Xylene	0.106	0.0050	"	0.100	ND	106	70-130	3.58	30	
1,2,4-Trimethylbenzene	0.100	0.0050	"	0.100	ND	100	70-130	2.14	30	
1,3,5-Trimethylbenzene	0.101	0.0050	"	0.100	ND	101	70-130	1.26	30	
Naphthalene	0.105	0.0038	"	0.100	ND	105	70-130	3.38	30	
Surrogate: 1,2-Dichloroethane-d4		0.0465	"	0.0400		116	50-150			
Surrogate: Toluene-d8		0.0369	"	0.0400		92.3	50-150			
Surrogate: 4-Bromofluorobenzene		0.0400	"	0.0400		100	50-150			

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Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads
Project Number: [none]
Project Manager: Karen Olson

Reported:
05/01/24 15:42

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0084 - EPA 3550A

Blank (BHC0084-BLK1)

Prepared: 03/05/24 Analyzed: 03/06/24

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: o-Terphenyl	13.1		"	12.5		105	30-150			

LCS (BHC0084-BS1)

Prepared: 03/05/24 Analyzed: 03/06/24

C10-C28 (DRO)	419	50	mg/kg	500		83.9	70-130			
Surrogate: o-Terphenyl	9.96		"	12.5		79.7	30-150			

Matrix Spike (BHC0084-MS1)

Source: 2403036-01

Prepared: 03/05/24 Analyzed: 03/06/24

C10-C28 (DRO)	341	50	mg/kg	500	14.2	65.3	70-130			QM-07
Surrogate: o-Terphenyl	7.90		"	12.5		63.2	30-150			

Matrix Spike Dup (BHC0084-MSD1)

Source: 2403036-01

Prepared: 03/05/24 Analyzed: 03/06/24

C10-C28 (DRO)	358	50	mg/kg	500	14.2	68.8	70-130	4.99	20	QM-07
Surrogate: o-Terphenyl	9.06		"	12.5		72.5	30-150			

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/01/24 15:42

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Reporting				Spike	Source	%REC			RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0039 - EPA 5030 Soil MS

Blank (BHC0039-BLK1)

Prepared: 03/04/24 Analyzed: 03/05/24

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
Surrogate: 2-Methylnaphthalene-d10	0.0390		"	0.0333		117	40-150			
Surrogate: Fluoranthene-d10	0.0307		"	0.0333		92.1	40-150			

LCS (BHC0039-BS1)

Prepared: 03/04/24 Analyzed: 03/05/24

Acenaphthene	0.0314	0.00500	mg/kg	0.0333	94.3	31-137
Anthracene	0.0234	0.00500	"	0.0333	70.2	30-120
Benzo (a) anthracene	0.0241	0.00500	"	0.0333	72.3	30-120
Benzo (a) pyrene	0.0266	0.00500	"	0.0333	79.8	30-120
Benzo (b) fluoranthene	0.0259	0.00500	"	0.0333	77.8	30-120
Benzo (k) fluoranthene	0.0327	0.00500	"	0.0333	98.0	30-120
Chrysene	0.0313	0.00500	"	0.0333	93.8	30-120
Dibenz (a,h) anthracene	0.0204	0.00500	"	0.0333	61.2	30-120
Fluoranthene	0.0301	0.00500	"	0.0333	90.4	30-120
Fluorene	0.0315	0.00500	"	0.0333	94.6	30-120
Indeno (1,2,3-cd) pyrene	0.0227	0.00500	"	0.0333	68.1	30-120
Pyrene	0.0300	0.00500	"	0.0333	90.0	35-142
1-Methylnaphthalene	0.0358	0.00500	"	0.0333	107	35-142
2-Methylnaphthalene	0.0356	0.00500	"	0.0333	107	35-142
Surrogate: 2-Methylnaphthalene-d10	0.0254		"	0.0333	76.2	40-150
Surrogate: Fluoranthene-d10	0.0313		"	0.0333	93.8	40-150

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/01/24 15:42

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0039 - EPA 5030 Soil MS

Matrix Spike (BHC0039-MS1)

Source: 2403028-01

Prepared: 03/04/24 Analyzed: 03/05/24

Acenaphthene	0.0255	0.00500	mg/kg	0.0333	ND	76.4	31-137		
Anthracene	0.0192	0.00500	"	0.0333	ND	57.5	30-120		
Benzo (a) anthracene	0.0213	0.00500	"	0.0333	ND	63.8	30-120		
Benzo (a) pyrene	0.0223	0.00500	"	0.0333	ND	66.9	30-120		
Benzo (b) fluoranthene	0.0219	0.00500	"	0.0333	ND	65.8	30-120		
Benzo (k) fluoranthene	0.0277	0.00500	"	0.0333	ND	83.2	30-120		
Chrysene	0.0256	0.00500	"	0.0333	ND	76.9	30-120		
Dibenz (a,h) anthracene	0.0178	0.00500	"	0.0333	ND	53.4	30-120		
Fluoranthene	0.0248	0.00500	"	0.0333	ND	74.3	30-120		
Fluorene	0.0251	0.00500	"	0.0333	ND	75.2	30-120		
Indeno (1,2,3-cd) pyrene	0.0194	0.00500	"	0.0333	ND	58.2	30-120		
Pyrene	0.0240	0.00500	"	0.0333	ND	71.9	35-142		
1-Methylnaphthalene	0.0278	0.00500	"	0.0333	ND	83.4	15-130		
2-Methylnaphthalene	0.0284	0.00500	"	0.0333	ND	85.3	15-130		
Surrogate: 2-Methylnaphthalene-d10	0.0220		"	0.0333		65.9	40-150		
Surrogate: Fluoranthene-d10	0.0252		"	0.0333		75.7	40-150		

Matrix Spike Dup (BHC0039-MSD1)

Source: 2403028-01

Prepared: 03/04/24 Analyzed: 03/05/24

Acenaphthene	0.0239	0.00500	mg/kg	0.0333	ND	71.6	31-137	6.40	30
Anthracene	0.0177	0.00500	"	0.0333	ND	53.0	30-120	8.17	30
Benzo (a) anthracene	0.0197	0.00500	"	0.0333	ND	59.1	30-120	7.62	30
Benzo (a) pyrene	0.0204	0.00500	"	0.0333	ND	61.3	30-120	8.75	30
Benzo (b) fluoranthene	0.0201	0.00500	"	0.0333	ND	60.3	30-120	8.69	30
Benzo (k) fluoranthene	0.0257	0.00500	"	0.0333	ND	77.1	30-120	7.52	30
Chrysene	0.0241	0.00500	"	0.0333	ND	72.2	30-120	6.31	30
Dibenz (a,h) anthracene	0.0160	0.00500	"	0.0333	ND	48.1	30-120	10.4	30
Fluoranthene	0.0224	0.00500	"	0.0333	ND	67.2	30-120	10.1	30
Fluorene	0.0235	0.00500	"	0.0333	ND	70.6	30-120	6.42	30
Indeno (1,2,3-cd) pyrene	0.0168	0.00500	"	0.0333	ND	50.3	30-120	14.5	30
Pyrene	0.0220	0.00500	"	0.0333	ND	66.1	35-142	8.36	30
1-Methylnaphthalene	0.0244	0.00500	"	0.0333	ND	73.2	15-130	13.1	50
2-Methylnaphthalene	0.0261	0.00500	"	0.0333	ND	78.4	15-130	8.40	50
Surrogate: 2-Methylnaphthalene-d10	0.0208		"	0.0333		62.3	40-150		
Surrogate: Fluoranthene-d10	0.0229		"	0.0333		68.8	40-150		

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/01/24 15:42

Total Metals by EPA 6020B Hot Water Soluble Extraction - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0446 - EPA 3050B

Blank (BHC0446-BLK1)

Prepared: 03/15/24 Analyzed: 03/21/24

Boron ND 2.00 mg/L

LCS (BHC0446-BS1)

Prepared: 03/15/24 Analyzed: 03/21/24

Boron 4.70 2.00 mg/L 5.00 94.0 80-120

Duplicate (BHC0446-DUP1)

Source: 2403033-01

Prepared: 03/15/24 Analyzed: 03/21/24

Boron 0.175 2.00 mg/L 0.195 10.5 20

Matrix Spike (BHC0446-MS1)

Source: 2403033-01

Prepared: 03/15/24 Analyzed: 03/21/24

Boron 4.37 2.00 mg/L 5.00 0.195 83.5 75-125

Matrix Spike Dup (BHC0446-MSD1)

Source: 2403033-01

Prepared: 03/15/24 Analyzed: 03/21/24

Boron 4.57 2.00 mg/L 5.00 0.195 87.5 75-125 4.53 25

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/01/24 15:42

Total Metals by EPA 6020B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0544 - EPA 3050B

Blank (BHC0544-BLK1)

Prepared: 03/16/24 Analyzed: 03/20/24

Arsenic	ND	0.200	mg/kg wet
Barium	ND	0.400	"
Cadmium	ND	0.200	"
Copper	ND	0.400	"
Lead	ND	0.200	"
Nickel	ND	0.400	"
Silver	ND	0.0200	"
Zinc	ND	0.400	"
Selenium	ND	0.260	"

LCS (BHC0544-BS1)

Prepared: 03/16/24 Analyzed: 03/20/24

Arsenic	39.6	0.200	mg/kg wet	40.0	99.0	80-120
Barium	40.5	0.400	"	40.0	101	80-120
Cadmium	2.07	0.200	"	2.00	103	80-120
Copper	45.9	0.400	"	40.0	115	80-120
Lead	20.3	0.200	"	20.0	102	80-120
Nickel	45.2	0.400	"	40.0	113	80-120
Silver	2.06	0.0200	"	2.00	103	80-120
Zinc	45.8	0.400	"	40.0	115	80-120
Selenium	4.41	0.260	"	4.00	110	80-120

Duplicate (BHC0544-DUP1)

Source: 2312189-04RE1

Prepared: 03/16/24 Analyzed: 03/20/24

Arsenic	9.12	0.200	mg/kg wet	10.9	18.0	20	QR-04
Barium	1130	0.400	"	100	167	20	
Cadmium	0.765	0.200	"	0.759	0.735	20	
Copper	6.66	0.400	"	7.68	14.2	20	
Lead	9.60	0.200	"	10.1	5.03	20	
Nickel	8.36	0.400	"	8.67	3.67	20	
Silver	0.0352	0.0200	"	0.0392	10.8	20	
Zinc	23.3	0.400	"	23.0	1.38	20	
Selenium	0.264	0.260	"	0.275	3.86	20	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/01/24 15:42

Total Metals by EPA 6020B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0544 - EPA 3050B

Matrix Spike (BHC0544-MS1)

Source: 2312189-04RE1 Prepared: 03/16/24 Analyzed: 03/20/24

Arsenic	47.5	0.200	mg/kg wet	40.0	10.9	91.3	75-125			
Barium	475	0.400	"	40.0	100	937	75-125			QM-07
Cadmium	2.95	0.200	"	2.00	0.759	109	75-125			
Copper	28.3	0.400	"	40.0	7.68	51.6	75-125			QM-07
Lead	29.9	0.200	"	20.0	10.1	99.2	75-125			
Nickel	30.4	0.400	"	40.0	8.67	54.3	75-125			QM-07
Silver	2.09	0.0200	"	2.00	0.0392	103	75-125			
Zinc	44.5	0.400	"	40.0	23.0	53.7	75-125			QM-07
Selenium	4.18	0.260	"	4.00	0.275	97.6	75-125			

Matrix Spike Dup (BHC0544-MSD1)

Source: 2312189-04RE1 Prepared: 03/16/24 Analyzed: 03/20/24

Arsenic	47.2	0.200	mg/kg wet	40.0	10.9	90.7	75-125	0.535	25	
Barium	473	0.400	"	40.0	100	933	75-125	0.312	25	QM-07
Cadmium	2.94	0.200	"	2.00	0.759	109	75-125	0.231	25	
Copper	27.9	0.400	"	40.0	7.68	50.6	75-125	1.49	25	QM-07
Lead	29.5	0.200	"	20.0	10.1	97.2	75-125	1.37	25	
Nickel	29.9	0.400	"	40.0	8.67	53.0	75-125	1.65	25	QM-07
Silver	2.09	0.0200	"	2.00	0.0392	102	75-125	0.325	25	
Zinc	43.8	0.400	"	40.0	23.0	52.2	75-125	1.42	25	QM-07
Selenium	4.05	0.260	"	4.00	0.275	94.4	75-125	3.13	25	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/01/24 15:42

Hexavalent Chromium by EPA Method 7196 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0558 - 3060A Mod

Blank (BHC0558-BLK1)

Prepared: 03/16/24 Analyzed: 03/19/24

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BHC0558-BS1)

Prepared: 03/16/24 Analyzed: 03/19/24

Chromium, Hexavalent 25.1 0.30 mg/kg wet 25.0 100 80-120

Duplicate (BHC0558-DUP1)

Source: 2403036-01

Prepared: 03/16/24 Analyzed: 03/19/24

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BHC0558-MS1)

Source: 2403036-01

Prepared: 03/16/24 Analyzed: 03/19/24

Chromium, Hexavalent 31.6 0.30 mg/kg dry 30.9 ND 102 75-125

Matrix Spike Dup (BHC0558-MSD1)

Source: 2403036-01

Prepared: 03/16/24 Analyzed: 03/19/24

Chromium, Hexavalent 31.6 0.30 mg/kg dry 30.9 ND 102 75-125 0.00 20

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/01/24 15:42

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0495 - General Preparation

Blank (BHC0495-BLK1)

Prepared: 03/15/24 Analyzed: 03/21/24

Calcium	ND	0.0500	mg/L wet
Magnesium	ND	0.0500	"
Sodium	ND	0.0500	"

LCS (BHC0495-BS1)

Prepared: 03/15/24 Analyzed: 03/21/24

Calcium	5.21	0.0500	mg/L wet	5.00	104	70-130
Magnesium	5.12	0.0500	"	5.00	102	70-130
Sodium	5.15	0.0500	"	5.00	103	70-130

Batch BHD0701 - General Preparation

Blank (BHD0701-BLK1)

Prepared: 04/20/24 Analyzed: 04/30/24

Calcium	ND	0.0500	mg/L wet
Magnesium	ND	0.0500	"
Sodium	ND	0.0500	"

LCS (BHD0701-BS1)

Prepared: 04/20/24 Analyzed: 04/30/24

Calcium	5.82	0.0500	mg/L wet	5.00	116	70-130
Magnesium	5.11	0.0500	"	5.00	102	70-130
Sodium	5.11	0.0500	"	5.00	102	70-130

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/01/24 15:42

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD	
		Limit	Units		Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0384 - General Preparation

Duplicate (BHC0384-DUP1)		Source: 2403029-01		Prepared: 03/13/24 Analyzed: 03/16/24	
% Solids	94.4		%	94.1	0.314 20

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/01/24 15:42

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD	
		Limit	Units		Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0497 - General Preparation

Blank (BHC0497-BLK1)

Prepared: 03/15/24 Analyzed: 03/19/24

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BHC0497-BS1)

Prepared: 03/15/24 Analyzed: 03/19/24

Specific Conductance (EC) 0.155 0.0100 mmhos/cm 0.150 103 95-105

Duplicate (BHC0497-DUP1)

Source: 2403032-01

Prepared: 03/15/24 Analyzed: 03/19/24

Specific Conductance (EC) 0.370 0.0100 mmhos/cm 0.373 1.05 20

Batch BHD0259 - General Preparation

Blank (BHD0259-BLK1)

Prepared: 04/09/24 Analyzed: 04/10/24

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BHD0259-BS1)

Prepared: 04/09/24 Analyzed: 04/10/24

Specific Conductance (EC) 0.156 0.0100 mmhos/cm 0.150 104 95-105

Duplicate (BHD0259-DUP1)

Source: 2402519-02

Prepared: 04/09/24 Analyzed: 04/10/24

Specific Conductance (EC) 0.174 0.0100 mmhos/cm 0.172 0.752 20

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/01/24 15:42

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0496 - General Preparation

LCS (BHC0496-BS1)

Prepared: 03/15/24 Analyzed: 03/19/24

pH	9.06		pH Units	9.18		98.7	95-105		

Duplicate (BHC0496-DUP1)

Source: 2403032-01

Prepared: 03/15/24 Analyzed: 03/19/24

pH	8.23		pH Units		8.23			0.00	20

Batch BHD0702 - General Preparation

LCS (BHD0702-BS1)

Prepared: 04/20/24 Analyzed: 04/22/24

pH	9.22		pH Units	9.18		100	95-105		

Duplicate (BHD0702-DUP1)

Source: 2402519-02

Prepared: 04/20/24 Analyzed: 04/22/24

pH	5.68		pH Units		5.75			1.22	20

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/01/24 15:42

Notes and Definitions

QR-04	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
I-04	Sample was analyzed out of recommended holding time per clients request.
I-02	This sample was analyzed outside of the recommended holding time.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

April 25, 2024

Karen Olson

Tasman Geosciences

6855 W. 119th Ave.

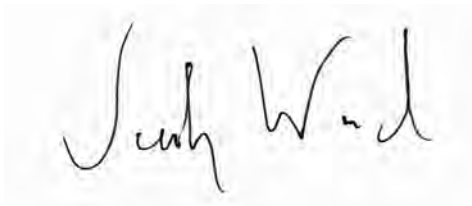
Broomfield, CO 80020

RE: PDC - Merritt Combined Wellheads

Work Order #2403199

Enclosed are the results of analyses for samples received by Summit Scientific on 03/12/24 17:43. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Jacob Wood". The signature is written in a cursive, flowing style.

Jacob Wood For Paul Shrewsbury

President



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MAN01-FL01@3'	2403199-01	Soil	03/12/24 10:30	03/12/24 17:43
MAN01-FL02@3'	2403199-02	Soil	03/12/24 10:35	03/12/24 17:43
MAN01-FL03@3'	2403199-03	Soil	03/12/24 10:40	03/12/24 17:43
MAN01-FL04@3'	2403199-04	Soil	03/12/24 10:45	03/12/24 17:43
MAN01-FL05@3'	2403199-05	Soil	03/12/24 10:50	03/12/24 17:43
MAN01-FL06@3'	2403199-06	Soil	03/12/24 10:55	03/12/24 17:43
MAN01-FL07@3'	2403199-07	Soil	03/12/24 11:00	03/12/24 17:43
MAN01-FL08@3'	2403199-08	Soil	03/12/24 11:05	03/12/24 17:43
MAN02-DL01@3'	2403199-09	Soil	03/12/24 11:10	03/12/24 17:43
MAN02-DL02@3'	2403199-10	Soil	03/12/24 11:15	03/12/24 17:43
MAN02-DL03@3'	2403199-11	Soil	03/12/24 11:20	03/12/24 17:43
MAN02-DL04@3'	2403199-12	Soil	03/12/24 11:25	03/12/24 17:43
MAN02-DL05@3'	2403199-13	Soil	03/12/24 11:30	03/12/24 17:43
MAN02-DL06@3'	2403199-14	Soil	03/12/24 11:35	03/12/24 17:43
MAN02-DL07@3'	2403199-15	Soil	03/12/24 11:40	03/12/24 17:43
MAN02-DL08@3'	2403199-16	Soil	03/12/24 11:45	03/12/24 17:43
MAN02-DL09@3'	2403199-17	Soil	03/12/24 11:50	03/12/24 17:43

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client: PDC PDC / Tasman				Send Data To:				Send Invoice To:													
Address: 6855 W 119th Ave				Project Manager: Karen Olson				Company: PDC Energy													
City/State/Zip: Broomfield / CO / 80220				E-Mail: karen.olson@chevron.com				Project Name/Location:													
Phone: 303-487-1228				Project Name: Merritt Combined Wellheads				AFE#:													
Sampler Name: Jordan Hestmark				Project Number:				PO/Billing Codes:													
				Contact: Karen Olson																	
				Preservative				Matrix				Analysis Requested				Special Instructions					
ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEXN - 8260B	TPH - (C6 - C36)	1,2,4 & 1,3,5 - TMB	Boron - HWS	pH, EC, SAR	PAHs - 915	Metals - 915	TDS, SO4, Cl	
1	MANO1-DL08 @ 3'	3/12/24	1145	2			X			X			X	X	X	X	X	X	X		
2	MANO1-DL09 @ 3'	3/12/24	1156	2			X			X			X	X	X	X	X	X	X		
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					
13																					
14																					
15																					

Relinquished by: Jordan Hestmark	Date/Time: 3/12/24 1700	Received by: Tasman Lockbox	Date/Time: 3/12/24 1700	TAT Business Days	Field DO	Notes:
				Same Day	Field EC	
Relinquished by: Tasman Lockbox	Date/Time: 3/12/24 1745	Received by: [Signature]	Date/Time: 3/12/24 1745	1 Day	Field ORP	
				2 Days	Field pH	
Relinquished by:	Date/Time:	Received by:	Date/Time:	3 Days	Field Temp.	
				Standard	X Field Turb.	
Temperature Upon Receipt: 9.3		Corrected Temperature: 9		IR gun #: 1	HNO3 lot #:	

Client: PDC PDC / Tasman		Send Data To: Project Manager: Karen Olson		Send Invoice To: Company: PDC Energy	
Address: 6855 W 119th Ave		E-Mail: karen.olson@chevron.com		Project Name/Location:	
City/State/Zip: Broomfield / CO / 80220				AFE#:	
Phone: 303-487-1228		Project Name: Merritt Combined Wellheads		PO/Billing Codes:	
Sampler Name: Jordan Hestmark		Project Number:		Contact: Karen Olson	

					Preservative				Matrix		Analysis Requested										Special Instructions	
ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEXN - 8260B	TPH - (C6 - C36)	1,2,4 & 1,3,5 - TMB	Boron - HWS	pH, EC, SAR	PAHs - 915	Metals - 915	TDS, SO4, CI		
1	MAN01-FLO1 @ 3'	3/12/24	1030	7			X			X			X	X	X	X	X	X	X			
2	MAN01-FLO2 @ 3'		1035																			
3	MAN01-FLO3 @ 3'		1040																			
4	MAN01-FLO4 @ 3'		1045																			
5	MAN01-FLO5 @ 3'		1050																			
6	MAN01-FLO6 @ 3'		1055																			
7	MAN01-FLO7 @ 3'		1100																			
8	MAN01-FLO8 @ 3'		1105																			
9	MAN02-DLO1 @ 3'		1110																			
10	MAN02-DLO2 @ 3'		1115																			
11	MAN02-DLO3 @ 3'		1120																			
12	MAN02-DLO4 @ 3'		1125																			
13	MAN02-DLO5 @ 3'		1130																			
14	MAN02-DLO6 @ 3'		1135																			
15	MAN02-DLO7 @ 3'		1140																			

Relinquished by: Jordan Hestmark	Date/Time: 3/12/24 1700	Received by: Tasman Lockbox	Date/Time: 3/12/24 1700	TAT Business Days	Field DO	Notes:
				Same Day	Field EC	
Relinquished by: Tasman Lockbox	Date/Time: 3/22/24 1745	Received by: [Signature]	Date/Time: 3/22/24 1745	1 Day	Field ORP	
				2 Days	Field pH	
Relinquished by:	Date/Time:	Received by:	Date/Time:	3 Days	Field Temp.	
				Standard	X Field Turb.	
Temperature Upon Receipt: 9.3	Corrected Temperature: 6	IR gun #: 1	HNO3 lot #:			

S₂

2/2

Sample Receipt Checklist

S2 Work Order# 2403199Client: Pectasman Client Project ID: Merritt Combined wellheadsShipped Via: H.D./P.U./FedEx/UPS/USPS/Other ☐ Airbill #:

☐	☒	☐	☐	☐

Matrix (Check all that apply) Air ☐ Soil/Solid ☒ Water ☐ Other ☐Temp (°C) 9.3Thermometer # 1

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	☒	☐	☐	
If custody seals are present, are they intact? ⁽¹⁾	☒	☐	☐	<u>NOTE</u>
Are samples due within 48 hours present?	☐	☒	☐	
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe ²⁺), Hexavalent Chromium (Cr ⁶⁺ , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	☐	☒	☐	
Is a chain-of-custody (COC) form present and filled out Completely? ⁽¹⁾	☒	☐	☐	
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	☒	☐	☐	
Were all samples received intact? ⁽¹⁾	☒	☐	☐	
Was adequate sample volume provided? ⁽¹⁾	☒	☐	☐	
Does the COC agree with the number and type of sample bottles received? ⁽¹⁾	☒	☐	☐	
Do the sample IDs on the bottle labels match the COC? ⁽¹⁾	☒	☐	☐	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	☐	☐	☒	
Are samples preserved that require preservation (excluding cooling)? ⁽¹⁾ Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	☐	☐	☒	
If samples are acid preserved for metals, is the pH ≤ 2? ⁽¹⁾ Record the pH in Comments.	☐	☐	☒	
If dissolved metals are requested, were samples field filtered?	☐	☐	☒	
Additional Comments (if any):				

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.AS
Custodian Printed Name3/12/24
Date/Time



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

MAN01-FL01@3'
2403199-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/12/24 10:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.0020	mg/kg	1	BHC0407	03/14/24	03/14/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/12/24 10:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4	0.0327	81.8 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0391	97.6 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0308	76.9 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/12/24 10:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0411	03/14/24	03/14/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/12/24 10:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: o-Terphenyl	7.18	57.5 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

MAN01-FL01@3'
2403199-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/12/24 10:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHC0621	03/18/24	03/18/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/12/24 10:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0242	72.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0242	72.6 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/12/24 10:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHC0552	03/16/24	04/25/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/12/24 10:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

MAN01-FL01@3'
2403199-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	6.67	0.200	mg/kg dry	1	BHC0734	03/20/24	04/18/24	EPA 6020B
Barium	263	0.400	"	"	"	"	"	"
Cadmium	0.261	0.200	"	"	"	"	"	"
Copper	7.35	0.400	"	"	"	"	"	"
Lead	8.46	0.200	"	"	"	"	"	"
Nickel	8.66	0.400	"	"	"	"	"	"
Silver	0.0343	0.0200	"	"	"	"	"	"
Zinc	32.3	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/12/24 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0669	03/19/24	03/21/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **03/12/24 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	89.1	0.0500	mg/L dry	1	BHC0958	03/25/24	04/19/24	EPA 6020B	
Magnesium	7.34	0.0500	"	"	"	"	"	"	
Sodium	1.84	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/12/24 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0504	0.00100	units	1	BHD0750	04/22/24	04/22/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/12/24 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

MAN01-FL01@3'
2403199-01 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	84.1	%	1	BHC0519	03/15/24	03/19/24	Calculation

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/12/24 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.172	0.0100	mmhos/cm	1	BHC0960	03/25/24	03/29/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **03/12/24 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.45		pH Units	1	BHC0959	03/25/24	03/29/24	EPA 9045D	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

MAN01-FL02@3'
2403199-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/12/24 10:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHC0407	03/14/24	03/14/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/12/24 10:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0325	81.2 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0386	96.5 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0305	76.3 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/12/24 10:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0411	03/14/24	03/14/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/12/24 10:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	7.40	59.2 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

MAN01-FL02@3'
2403199-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/12/24 10:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHC0621	03/18/24	03/18/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/12/24 10:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0241	72.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0251	75.3 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/12/24 10:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHC0552	03/16/24	04/25/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/12/24 10:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

MAN01-FL02@3'
2403199-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	6.40	0.200	mg/kg dry	1	BHC0734	03/20/24	04/18/24	EPA 6020B
Barium	191	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	7.16	0.400	"	"	"	"	"	"
Lead	8.13	0.200	"	"	"	"	"	"
Nickel	7.35	0.400	"	"	"	"	"	"
Silver	0.0327	0.0200	"	"	"	"	"	"
Zinc	30.9	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/12/24 10:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0669	03/19/24	03/21/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **03/12/24 10:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	167	0.0500	mg/L dry	1	BHC0958	03/25/24	04/19/24	EPA 6020B	
Magnesium	8.93	0.0500	"	"	"	"	"	"	
Sodium	3.13	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/12/24 10:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0639	0.00100	units	1	BHD0750	04/22/24	04/22/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads
Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

MAN01-FL02@3'
2403199-02 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/12/24 10:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	84.5		%	1	BHC0519	03/15/24	03/19/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/12/24 10:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.160	0.0100	mmhos/cm	1	BHC0960	03/25/24	03/29/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **03/12/24 10:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.56		pH Units	1	BHC0959	03/25/24	03/29/24	EPA 9045D	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

MAN01-FL03@3'
2403199-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/12/24 10:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHC0407	03/14/24	03/14/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/12/24 10:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0323	80.9 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0384	96.1 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0306	76.6 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/12/24 10:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0411	03/14/24	03/14/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/12/24 10:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	7.20	57.6 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

MAN01-FL03@3'
2403199-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/12/24 10:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHC0621	03/18/24	03/18/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/12/24 10:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0232	69.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0241	72.2 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/12/24 10:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHC0552	03/16/24	04/25/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/12/24 10:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

MAN01-FL03@3'
2403199-03 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	8.30	0.200	mg/kg dry	1	BHC0734	03/20/24	04/18/24	EPA 6020B
Barium	168	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	6.22	0.400	"	"	"	"	"	"
Lead	8.71	0.200	"	"	"	"	"	"
Nickel	5.77	0.400	"	"	"	"	"	"
Silver	0.0281	0.0200	"	"	"	"	"	"
Zinc	28.0	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/12/24 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0669	03/19/24	03/21/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **03/12/24 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	77.2	0.0500	mg/L dry	1	BHC0958	03/25/24	04/19/24	EPA 6020B	
Magnesium	7.84	0.0500	"	"	"	"	"	"	
Sodium	4.94	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/12/24 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.143	0.00100	units	1	BHD0750	04/22/24	04/22/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

MAN01-FL03@3'
2403199-03 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/12/24 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	83.8		%	1	BHC0519	03/15/24	03/19/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/12/24 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.188	0.0100	mmhos/cm	1	BHC0960	03/25/24	03/29/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **03/12/24 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.39		pH Units	1	BHC0959	03/25/24	03/29/24	EPA 9045D	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

MAN01-FL04@3'
2403199-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/12/24 10:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHC0407	03/14/24	03/14/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/12/24 10:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0320	80.0 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0382	95.6 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0308	76.9 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/12/24 10:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0411	03/14/24	03/14/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/12/24 10:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	6.48	51.9 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

MAN01-FL04@3'
2403199-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/12/24 10:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHC0621	03/18/24	03/18/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/12/24 10:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0244	73.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0244	73.1 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/12/24 10:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHC0552	03/16/24	04/25/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/12/24 10:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

MAN01-FL04@3'
2403199-04 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	6.15	0.200	mg/kg dry	1	BHC0734	03/20/24	04/18/24	EPA 6020B
Barium	170	0.400	"	"	"	"	"	"
Cadmium	0.238	0.200	"	"	"	"	"	"
Copper	7.22	0.400	"	"	"	"	"	"
Lead	8.13	0.200	"	"	"	"	"	"
Nickel	7.79	0.400	"	"	"	"	"	"
Silver	0.0304	0.0200	"	"	"	"	"	"
Zinc	31.3	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/12/24 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0669	03/19/24	03/21/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **03/12/24 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	134	0.0500	mg/L dry	1	BHC0958	03/25/24	04/19/24	EPA 6020B	
Magnesium	9.42	0.0500	"	"	"	"	"	"	
Sodium	5.07	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/12/24 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.114	0.00100	units	1	BHD0750	04/22/24	04/22/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/12/24 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

MAN01-FL04@3'
2403199-04 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	84.3	%	1	BHC0519	03/15/24	03/19/24	Calculation

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/12/24 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.189	0.0100	mmhos/cm	1	BHC0960	03/25/24	03/29/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **03/12/24 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.44		pH Units	1	BHC0959	03/25/24	03/29/24	EPA 9045D	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

MAN01-FL05@3'
2403199-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/12/24 10:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHC0407	03/14/24	03/14/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/12/24 10:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0318	79.4 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0382	95.5 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0307	76.6 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/12/24 10:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0411	03/14/24	03/14/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/12/24 10:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	7.36	58.9 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
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Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

MAN01-FL05@3'
2403199-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/12/24 10:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHC0621	03/18/24	03/18/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/12/24 10:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0257	77.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0265	79.6 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/12/24 10:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHC0552	03/16/24	04/25/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/12/24 10:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

MAN01-FL05@3'
2403199-05 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	7.10	0.200	mg/kg dry	1	BHC0734	03/20/24	04/18/24	EPA 6020B
Barium	662	0.400	"	"	"	"	"	"
Cadmium	0.252	0.200	"	"	"	"	"	"
Copper	7.49	0.400	"	"	"	"	"	"
Lead	8.21	0.200	"	"	"	"	"	"
Nickel	7.61	0.400	"	"	"	"	"	"
Silver	0.0307	0.0200	"	"	"	"	"	"
Zinc	31.5	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/12/24 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0669	03/19/24	03/21/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **03/12/24 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	143	0.0500	mg/L dry	1	BHC0958	03/25/24	04/19/24	EPA 6020B	
Magnesium	8.98	0.0500	"	"	"	"	"	"	
Sodium	9.75	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/12/24 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.214	0.00100	units	1	BHD0750	04/22/24	04/22/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/12/24 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

MAN01-FL05@3'
2403199-05 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	84.8	%	1	BHC0519	03/15/24	03/19/24	Calculation

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/12/24 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.184	0.0100	mmhos/cm	1	BHC0960	03/25/24	03/29/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **03/12/24 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.56		pH Units	1	BHC0959	03/25/24	03/29/24	EPA 9045D	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

MAN01-FL06@3'
2403199-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/12/24 10:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHC0407	03/14/24	03/14/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/12/24 10:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0331	82.6 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0380	95.0 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0303	75.8 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/12/24 10:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0411	03/14/24	03/14/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/12/24 10:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	6.57	52.6 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

MAN01-FL06@3'
2403199-06 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/12/24 10:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHC0621	03/18/24	03/18/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/12/24 10:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0253	76.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0263	79.0 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/12/24 10:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHC0552	03/16/24	04/25/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/12/24 10:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

MAN01-FL06@3'
2403199-06 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	6.26	0.200	mg/kg dry	1	BHC0734	03/20/24	04/18/24	EPA 6020B
Barium	197	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	7.65	0.400	"	"	"	"	"	"
Lead	8.52	0.200	"	"	"	"	"	"
Nickel	8.18	0.400	"	"	"	"	"	"
Silver	0.0335	0.0200	"	"	"	"	"	"
Zinc	34.8	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/12/24 10:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0669	03/19/24	03/21/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **03/12/24 10:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	90.9	0.0500	mg/L dry	1	BHC0958	03/25/24	04/19/24	EPA 6020B	
Magnesium	8.34	0.0500	"	"	"	"	"	"	
Sodium	8.80	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/12/24 10:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.237	0.00100	units	1	BHD0750	04/22/24	04/22/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads
Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

MAN01-FL06@3'
2403199-06 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/12/24 10:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	83.5		%	1	BHC0519	03/15/24	03/19/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/12/24 10:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.204	0.0100	mmhos/cm	1	BHC0960	03/25/24	03/29/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **03/12/24 10:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.42		pH Units	1	BHC0959	03/25/24	03/29/24	EPA 9045D	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

MAN01-FL07@3'
2403199-07 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/12/24 11:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHC0407	03/14/24	03/14/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/12/24 11:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0322	80.4 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0378	94.5 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0308	76.9 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/12/24 11:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0411	03/14/24	03/14/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/12/24 11:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	7.21	57.7 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

MAN01-FL07@3'
2403199-07 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/12/24 11:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHC0621	03/18/24	03/18/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/12/24 11:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0238	71.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0227	68.1 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/12/24 11:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHC0552	03/16/24	04/25/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/12/24 11:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

MAN01-FL07@3'
2403199-07 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	6.69	0.200	mg/kg dry	1	BHC0734	03/20/24	04/18/24	EPA 6020B
Barium	178	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	6.89	0.400	"	"	"	"	"	"
Lead	8.44	0.200	"	"	"	"	"	"
Nickel	7.47	0.400	"	"	"	"	"	"
Silver	0.0276	0.0200	"	"	"	"	"	"
Zinc	36.3	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/12/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0669	03/19/24	03/21/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **03/12/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	201	0.0500	mg/L dry	1	BHC0958	03/25/24	04/19/24	EPA 6020B	
Magnesium	10.0	0.0500	"	"	"	"	"	"	
Sodium	1.87	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/12/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0349	0.00100	units	1	BHD0750	04/22/24	04/22/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads
Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

MAN01-FL07@3'
2403199-07 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/12/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	83.9		%	1	BHC0519	03/15/24	03/19/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/12/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.161	0.0100	mmhos/cm	1	BHC0960	03/25/24	03/29/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **03/12/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.47		pH Units	1	BHC0959	03/25/24	03/29/24	EPA 9045D	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads
Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

MAN01-FL08@3'
2403199-08 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/12/24 11:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHC0407	03/14/24	03/14/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/12/24 11:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0321	80.2 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0384	96.0 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0310	77.6 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/12/24 11:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0411	03/14/24	03/14/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/12/24 11:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	7.23	57.8 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

MAN01-FL08@3'
2403199-08 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/12/24 11:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHC0621	03/18/24	03/18/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/12/24 11:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0264	79.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0238	71.5 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/12/24 11:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHC0552	03/16/24	04/25/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/12/24 11:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

MAN01-FL08@3'
2403199-08 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	6.69	0.200	mg/kg dry	1	BHC0734	03/20/24	04/18/24	EPA 6020B
Barium	226	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	7.04	0.400	"	"	"	"	"	"
Lead	8.67	0.200	"	"	"	"	"	"
Nickel	7.74	0.400	"	"	"	"	"	"
Silver	0.0295	0.0200	"	"	"	"	"	"
Zinc	34.5	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/12/24 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0669	03/19/24	03/21/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **03/12/24 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	139	0.0500	mg/L dry	1	BHC0958	03/25/24	04/19/24	EPA 6020B	
Magnesium	8.33	0.0500	"	"	"	"	"	"	
Sodium	1.78	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/12/24 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0397	0.00100	units	1	BHD0750	04/22/24	04/22/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

MAN01-FL08@3'
2403199-08 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/12/24 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	84.1		%	1	BHC0519	03/15/24	03/19/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/12/24 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.155	0.0100	mmhos/cm	1	BHC0960	03/25/24	03/29/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **03/12/24 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.47		pH Units	1	BHC0959	03/25/24	03/29/24	EPA 9045D	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

MAN02-DL01@3'
2403199-09 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/12/24 11:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHC0407	03/14/24	03/14/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/12/24 11:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0337	84.2 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0391	97.7 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0303	75.8 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/12/24 11:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0411	03/14/24	03/14/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/12/24 11:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	7.42	59.4 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

MAN02-DL01@3'
2403199-09 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/12/24 11:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHC0621	03/18/24	03/18/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/12/24 11:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0252	75.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0261	78.2 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/12/24 11:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHC0552	03/16/24	04/25/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/12/24 11:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

MAN02-DL01@3'
2403199-09 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	6.11	0.200	mg/kg dry	1	BHC0734	03/20/24	04/18/24	EPA 6020B
Barium	220	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	7.91	0.400	"	"	"	"	"	"
Lead	8.24	0.200	"	"	"	"	"	"
Nickel	8.27	0.400	"	"	"	"	"	"
Silver	0.0342	0.0200	"	"	"	"	"	"
Zinc	33.8	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/12/24 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0669	03/19/24	03/21/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **03/12/24 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	273	0.0500	mg/L dry	1	BHC0958	03/25/24	04/19/24	EPA 6020B	
Magnesium	8.98	0.0500	"	"	"	"	"	"	
Sodium	12.9	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/12/24 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.209	0.00100	units	1	BHD0750	04/22/24	04/22/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

MAN02-DL01@3'
2403199-09 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/12/24 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	85.5		%	1	BHC0519	03/15/24	03/19/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/12/24 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.177	0.0100	mmhos/cm	1	BHC0960	03/25/24	03/29/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **03/12/24 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.65		pH Units	1	BHC0959	03/25/24	03/29/24	EPA 9045D	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads
Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

MAN02-DL02@3'
2403199-10 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/12/24 11:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHC0407	03/14/24	03/14/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/12/24 11:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0320	79.9 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0382	95.6 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0312	77.9 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/12/24 11:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0411	03/14/24	03/14/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/12/24 11:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	6.58	52.7 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

MAN02-DL02@3'
2403199-10 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/12/24 11:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHC0621	03/18/24	03/19/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/12/24 11:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0245	73.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0257	77.1 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/12/24 11:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHC0552	03/16/24	04/25/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/12/24 11:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

MAN02-DL02@3'
2403199-10 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	5.90	0.200	mg/kg dry	1	BHC0734	03/20/24	04/18/24	EPA 6020B
Barium	339	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	6.61	0.400	"	"	"	"	"	"
Lead	7.66	0.200	"	"	"	"	"	"
Nickel	6.68	0.400	"	"	"	"	"	"
Silver	0.0312	0.0200	"	"	"	"	"	"
Zinc	29.1	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/12/24 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0669	03/19/24	03/21/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **03/12/24 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	302	0.0500	mg/L dry	1	BHC0958	03/25/24	04/19/24	EPA 6020B	
Magnesium	9.26	0.0500	"	"	"	"	"	"	
Sodium	21.4	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/12/24 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.331	0.00100	units	1	BHD0750	04/22/24	04/22/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

MAN02-DL02@3'
2403199-10 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/12/24 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	84.7		%	1	BHC0519	03/15/24	03/19/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/12/24 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.203	0.0100	mmhos/cm	1	BHC0960	03/25/24	03/29/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **03/12/24 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.67		pH Units	1	BHC0959	03/25/24	03/29/24	EPA 9045D	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

MAN02-DL03@3'
2403199-11 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/12/24 11:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHC0407	03/14/24	03/14/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/12/24 11:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0314	78.5 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0383	95.8 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0309	77.2 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/12/24 11:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0411	03/14/24	03/14/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/12/24 11:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	6.39	51.1 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

MAN02-DL03@3'
2403199-11 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/12/24 11:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHC0621	03/18/24	03/19/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/12/24 11:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0253	76.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0251	75.4 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/12/24 11:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHC0552	03/16/24	04/25/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/12/24 11:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

MAN02-DL03@3'
2403199-11 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	6.04	0.200	mg/kg dry	1	BHC0734	03/20/24	04/18/24	EPA 6020B
Barium	224	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	7.58	0.400	"	"	"	"	"	"
Lead	8.23	0.200	"	"	"	"	"	"
Nickel	7.67	0.400	"	"	"	"	"	"
Silver	0.0295	0.0200	"	"	"	"	"	"
Zinc	31.9	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/12/24 11:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0669	03/19/24	03/21/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **03/12/24 11:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	183	0.0500	mg/L dry	1	BHC0958	03/25/24	04/19/24	EPA 6020B	
Magnesium	9.13	0.0500	"	"	"	"	"	"	
Sodium	13.5	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/12/24 11:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.264	0.00100	units	1	BHD0750	04/22/24	04/22/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads
Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

MAN02-DL03@3'
2403199-11 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/12/24 11:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	84.0		%	1	BHC0519	03/15/24	03/19/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/12/24 11:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.195	0.0100	mmhos/cm	1	BHC0960	03/25/24	03/29/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **03/12/24 11:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.53		pH Units	1	BHC0959	03/25/24	03/29/24	EPA 9045D	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

MAN02-DL04@3'
2403199-12 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/12/24 11:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHC0407	03/14/24	03/14/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/12/24 11:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0320	79.9 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0387	96.8 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0314	78.4 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/12/24 11:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0411	03/14/24	03/14/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/12/24 11:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	7.48	59.8 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

MAN02-DL04@3'
2403199-12 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/12/24 11:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHC0621	03/18/24	03/19/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/12/24 11:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0253	76.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0263	78.9 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/12/24 11:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHC0552	03/16/24	04/25/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/12/24 11:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

MAN02-DL04@3'
2403199-12 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	6.78	0.200	mg/kg dry	1	BHC0734	03/20/24	04/18/24	EPA 6020B
Barium	227	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	7.77	0.400	"	"	"	"	"	"
Lead	8.56	0.200	"	"	"	"	"	"
Nickel	7.57	0.400	"	"	"	"	"	"
Silver	0.0343	0.0200	"	"	"	"	"	"
Zinc	31.1	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/12/24 11:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0669	03/19/24	03/21/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **03/12/24 11:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	331	0.0500	mg/L dry	1	BHC0958	03/25/24	04/19/24	EPA 6020B	
Magnesium	11.3	0.0500	"	"	"	"	"	"	
Sodium	10.2	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/12/24 11:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.150	0.00100	units	1	BHD0750	04/22/24	04/22/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

MAN02-DL04@3'
2403199-12 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/12/24 11:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	83.9		%	1	BHC0519	03/15/24	03/19/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/12/24 11:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.190	0.0100	mmhos/cm	1	BHC0960	03/25/24	03/29/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **03/12/24 11:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.45		pH Units	1	BHC0959	03/25/24	03/29/24	EPA 9045D	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads
Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

MAN02-DL05@3'
2403199-13 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/12/24 11:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHC0407	03/14/24	03/15/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/12/24 11:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0316	79.1 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0392	97.9 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0302	75.4 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/12/24 11:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0411	03/14/24	03/14/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/12/24 11:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	7.04	56.4 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Tasman Geosciences
6855 W. 119th Ave.
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Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

MAN02-DL05@3'
2403199-13 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/12/24 11:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHC0621	03/18/24	03/19/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/12/24 11:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0301	90.2 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0266	79.7 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/12/24 11:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHC0552	03/16/24	04/25/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/12/24 11:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

MAN02-DL05@3'
2403199-13 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	6.45	0.200	mg/kg dry	1	BHC0734	03/20/24	04/18/24	EPA 6020B
Barium	193	0.400	"	"	"	"	"	"
Cadmium	0.268	0.200	"	"	"	"	"	"
Copper	8.25	0.400	"	"	"	"	"	"
Lead	8.84	0.200	"	"	"	"	"	"
Nickel	8.63	0.400	"	"	"	"	"	"
Silver	0.0340	0.0200	"	"	"	"	"	"
Zinc	35.5	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/12/24 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0669	03/19/24	03/21/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **03/12/24 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	189	0.0500	mg/L dry	1	BHC0958	03/25/24	04/19/24	EPA 6020B	
Magnesium	8.81	0.0500	"	"	"	"	"	"	
Sodium	4.79	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/12/24 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0925	0.00100	units	1	BHD0750	04/22/24	04/22/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/12/24 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

MAN02-DL05@3'
2403199-13 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	83.7	%	1	BHC0519	03/15/24	03/19/24	Calculation

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/12/24 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.166	0.0100	mmhos/cm	1	BHC0960	03/25/24	03/29/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **03/12/24 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.46		pH Units	1	BHC0959	03/25/24	03/29/24	EPA 9045D	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads
Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

MAN02-DL06@3'
2403199-14 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/12/24 11:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHC0407	03/14/24	03/15/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/12/24 11:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0320	80.0 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0385	96.2 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0307	76.7 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/12/24 11:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0411	03/14/24	03/14/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/12/24 11:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	6.47	51.7 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

MAN02-DL06@3'
2403199-14 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/12/24 11:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHC0621	03/18/24	03/19/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/12/24 11:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0245	73.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0247	74.1 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/12/24 11:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHC0552	03/16/24	04/25/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/12/24 11:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

MAN02-DL06@3'
2403199-14 (Soil)

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Total Metals by EPA 6020B

Arsenic	6.74	0.200	mg/kg dry	1	BHC0734	03/20/24	04/18/24	EPA 6020B
Barium	182	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	7.15	0.400	"	"	"	"	"	"
Lead	7.92	0.200	"	"	"	"	"	"
Nickel	7.85	0.400	"	"	"	"	"	"
Silver	0.0301	0.0200	"	"	"	"	"	"
Zinc	33.7	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/12/24 11:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0669	03/19/24	03/21/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **03/12/24 11:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	133	0.0500	mg/L dry	1	BHC0958	03/25/24	04/19/24	EPA 6020B	
Magnesium	9.31	0.0500	"	"	"	"	"	"	
Sodium	17.7	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/12/24 11:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.400	0.00100	units	1	BHD0750	04/22/24	04/22/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

MAN02-DL06@3'
2403199-14 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/12/24 11:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	83.7		%	1	BHC0519	03/15/24	03/19/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/12/24 11:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.236	0.0100	mmhos/cm	1	BHC0960	03/25/24	03/29/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **03/12/24 11:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.46		pH Units	1	BHC0959	03/25/24	03/29/24	EPA 9045D	

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads
Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

MAN02-DL07@3'
2403199-15 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/12/24 11:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHC0407	03/14/24	03/15/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/12/24 11:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0316	79.0 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0382	95.6 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0319	79.7 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/12/24 11:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0411	03/14/24	03/14/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/12/24 11:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	7.07	56.6 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

MAN02-DL07@3'
2403199-15 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/12/24 11:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHC0621	03/18/24	03/19/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/12/24 11:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0228	68.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0242	72.7 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/12/24 11:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHC0552	03/16/24	04/25/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/12/24 11:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

MAN02-DL07@3'
2403199-15 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	5.76	0.200	mg/kg dry	1	BHC0734	03/20/24	04/18/24	EPA 6020B
Barium	214	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	6.64	0.400	"	"	"	"	"	"
Lead	7.55	0.200	"	"	"	"	"	"
Nickel	8.06	0.400	"	"	"	"	"	"
Silver	0.0276	0.0200	"	"	"	"	"	"
Zinc	31.2	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/12/24 11:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0669	03/19/24	03/21/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **03/12/24 11:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	147	0.0500	mg/L dry	1	BHC0958	03/25/24	04/19/24	EPA 6020B	
Magnesium	7.46	0.0500	"	"	"	"	"	"	
Sodium	8.85	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/12/24 11:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.193	0.00100	units	1	BHD0750	04/22/24	04/22/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

MAN02-DL07@3'
2403199-15 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/12/24 11:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	84.0		%	1	BHC0519	03/15/24	03/19/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/12/24 11:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.177	0.0100	mmhos/cm	1	BHC0960	03/25/24	03/29/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **03/12/24 11:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.57		pH Units	1	BHC0959	03/25/24	03/29/24	EPA 9045D	

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Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

MAN02-DL08@3'
2403199-16 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/12/24 11:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHC0407	03/14/24	03/15/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/12/24 11:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0312	78.1 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0383	95.8 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0312	78.1 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/12/24 11:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0411	03/14/24	03/15/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/12/24 11:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	6.94	55.5 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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6855 W. 119th Ave.
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Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

MAN02-DL08@3'
2403199-16 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/12/24 11:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHC0621	03/18/24	03/19/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/12/24 11:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0286	85.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0288	86.5 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/12/24 11:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHC0552	03/16/24	04/25/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/12/24 11:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

MAN02-DL08@3'
2403199-16 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	6.98	0.200	mg/kg dry	1	BHC0734	03/20/24	04/18/24	EPA 6020B
Barium	292	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	6.71	0.400	"	"	"	"	"	"
Lead	10.1	0.200	"	"	"	"	"	"
Nickel	7.20	0.400	"	"	"	"	"	"
Silver	0.0317	0.0200	"	"	"	"	"	"
Zinc	31.2	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/12/24 11:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0669	03/19/24	03/21/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **03/12/24 11:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	161	0.0500	mg/L dry	1	BHC0958	03/25/24	04/19/24	EPA 6020B	
Magnesium	8.20	0.0500	"	"	"	"	"	"	
Sodium	1.15	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/12/24 11:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0240	0.00100	units	1	BHD0750	04/22/24	04/22/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads
Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

MAN02-DL08@3'
2403199-16 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/12/24 11:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	83.2		%	1	BHC0519	03/15/24	03/19/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/12/24 11:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.147	0.0100	mmhos/cm	1	BHC0960	03/25/24	03/29/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **03/12/24 11:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.52		pH Units	1	BHC0959	03/25/24	03/29/24	EPA 9045D	

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads
Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

MAN02-DL09@3'
2403199-17 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/12/24 11:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHC0407	03/14/24	03/15/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/12/24 11:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0330	82.5 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0393	98.3 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0309	77.2 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/12/24 11:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0411	03/14/24	03/15/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/12/24 11:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	7.19	57.5 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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MAN02-DL09@3'
2403199-17 (Soil)

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PAH by EPA Method 8270D SIM

Date Sampled: **03/12/24 11:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHC0621	03/18/24	03/19/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/12/24 11:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0230	69.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0240	72.1 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/12/24 11:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHC0552	03/16/24	04/25/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/12/24 11:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

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MAN02-DL09@3'
2403199-17 (Soil)

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Total Metals by EPA 6020B

Arsenic	6.15	0.200	mg/kg dry	1	BHC0734	03/20/24	04/18/24	EPA 6020B
Barium	194	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	5.86	0.400	"	"	"	"	"	"
Lead	10.2	0.200	"	"	"	"	"	"
Nickel	6.39	0.400	"	"	"	"	"	"
Silver	0.0301	0.0200	"	"	"	"	"	"
Zinc	32.1	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/12/24 11:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0669	03/19/24	03/21/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **03/12/24 11:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	37.5	0.0500	mg/L dry	1	BHC0958	03/25/24	04/19/24	EPA 6020B	
Magnesium	7.99	0.0500	"	"	"	"	"	"	
Sodium	2.09	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/12/24 11:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0808	0.00100	units	1	BHD0750	04/22/24	04/22/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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MAN02-DL09@3'
2403199-17 (Soil)

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Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/12/24 11:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	82.3		%	1	BHC0519	03/15/24	03/19/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/12/24 11:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.205	0.0100	mmhos/cm	1	BHC0960	03/25/24	03/29/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **03/12/24 11:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.23		pH Units	1	BHC0959	03/25/24	03/29/24	EPA 9045D	

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Volatile Organic Compounds by EPA Method 8260B - Quality Control

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Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0407 - EPA 5030 Soil MS

Blank (BHC0407-BLK1)

Prepared & Analyzed: 03/14/24

Benzene	ND	0.0020	mg/kg
Toluene	ND	0.0050	"
Ethylbenzene	ND	0.0050	"
Xylenes (total)	ND	0.010	"
1,2,4-Trimethylbenzene	ND	0.0050	"
1,3,5-Trimethylbenzene	ND	0.0050	"
Naphthalene	ND	0.0038	"
Gasoline Range Hydrocarbons	ND	0.50	"

Surrogate: 1,2-Dichloroethane-d4	0.0321	"	0.0400	80.2	50-150
Surrogate: Toluene-d8	0.0388	"	0.0400	97.0	50-150
Surrogate: 4-Bromofluorobenzene	0.0298	"	0.0400	74.5	50-150

LCS (BHC0407-BS1)

Prepared & Analyzed: 03/14/24

Benzene	0.0918	0.0020	mg/kg	0.100	91.8	70-130
Toluene	0.0935	0.0050	"	0.100	93.5	70-130
Ethylbenzene	0.0979	0.0050	"	0.100	97.9	70-130
m,p-Xylene	0.200	0.010	"	0.200	99.8	70-130
o-Xylene	0.0976	0.0050	"	0.100	97.6	70-130
1,2,4-Trimethylbenzene	0.0726	0.0050	"	0.100	72.6	70-130
1,3,5-Trimethylbenzene	0.0734	0.0050	"	0.100	73.4	70-130
Naphthalene	0.0797	0.0038	"	0.100	79.7	70-130

Surrogate: 1,2-Dichloroethane-d4	0.0313	"	0.0400	78.3	50-150
Surrogate: Toluene-d8	0.0377	"	0.0400	94.4	50-150
Surrogate: 4-Bromofluorobenzene	0.0316	"	0.0400	78.9	50-150

Matrix Spike (BHC0407-MS1)

Source: 2403199-01

Prepared & Analyzed: 03/14/24

Benzene	0.0821	0.0020	mg/kg	0.100	ND	82.1	70-130
Toluene	0.0835	0.0050	"	0.100	ND	83.5	70-130
Ethylbenzene	0.0819	0.0050	"	0.100	ND	81.9	70-130
m,p-Xylene	0.165	0.010	"	0.200	ND	82.7	70-130
o-Xylene	0.0819	0.0050	"	0.100	ND	81.9	70-130
1,2,4-Trimethylbenzene	0.0604	0.0050	"	0.100	ND	60.4	70-130
1,3,5-Trimethylbenzene	0.0612	0.0050	"	0.100	ND	61.2	70-130
Naphthalene	0.0704	0.0038	"	0.100	ND	70.4	70-130

Surrogate: 1,2-Dichloroethane-d4	0.0321	"	0.0400	80.3	50-150
Surrogate: Toluene-d8	0.0372	"	0.0400	93.1	50-150
Surrogate: 4-Bromofluorobenzene	0.0304	"	0.0400	75.9	50-150

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Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

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04/25/24 14:34

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0407 - EPA 5030 Soil MS

Matrix Spike Dup (BHC0407-MSD1)		Source: 2403199-01			Prepared & Analyzed: 03/14/24					
Benzene	0.0792	0.0020	mg/kg	0.100	ND	79.2	70-130	3.61	30	
Toluene	0.0811	0.0050	"	0.100	ND	81.1	70-130	2.92	30	
Ethylbenzene	0.0790	0.0050	"	0.100	ND	79.0	70-130	3.58	30	
m,p-Xylene	0.160	0.010	"	0.200	ND	80.2	70-130	3.07	30	
o-Xylene	0.0791	0.0050	"	0.100	ND	79.1	70-130	3.54	30	
1,2,4-Trimethylbenzene	0.0580	0.0050	"	0.100	ND	58.0	70-130	4.01	30	QM-07
1,3,5-Trimethylbenzene	0.0588	0.0050	"	0.100	ND	58.8	70-130	4.10	30	QM-07
Naphthalene	0.0656	0.0038	"	0.100	ND	65.6	70-130	7.02	30	QM-07
Surrogate: 1,2-Dichloroethane-d4		0.0330	"	0.0400		82.4	50-150			
Surrogate: Toluene-d8		0.0375	"	0.0400		93.7	50-150			
Surrogate: 4-Bromofluorobenzene		0.0307	"	0.0400		76.7	50-150			

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Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
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Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0411 - EPA 3550A

Blank (BHC0411-BLK1)

Prepared & Analyzed: 03/14/24

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: o-Terphenyl	13.9		"	12.5		111	30-150			

LCS (BHC0411-BS1)

Prepared & Analyzed: 03/14/24

C10-C28 (DRO)	429	50	mg/kg	500		85.7	70-130			
Surrogate: o-Terphenyl	11.4		"	12.5		91.5	30-150			

Matrix Spike (BHC0411-MS1)

Source: 2403199-01

Prepared & Analyzed: 03/14/24

C10-C28 (DRO)	413	50	mg/kg	500	17.8	79.1	70-130			
Surrogate: o-Terphenyl	8.98		"	12.5		71.9	30-150			

Matrix Spike Dup (BHC0411-MSD1)

Source: 2403199-01

Prepared & Analyzed: 03/14/24

C10-C28 (DRO)	373	50	mg/kg	500	17.8	71.1	70-130	10.1	20	
Surrogate: o-Terphenyl	8.47		"	12.5		67.8	30-150			

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PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0621 - EPA 5030 Soil MS

Blank (BHC0621-BLK1)

Prepared & Analyzed: 03/18/24

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
Surrogate: 2-Methylnaphthalene-d10	0.0269		"	0.0333		80.7	40-150			
Surrogate: Fluoranthene-d10	0.0296		"	0.0333		88.8	40-150			

LCS (BHC0621-BS1)

Prepared & Analyzed: 03/18/24

Acenaphthene	0.0360	0.00500	mg/kg	0.0333	108	31-137
Anthracene	0.0363	0.00500	"	0.0333	109	30-120
Benzo (a) anthracene	0.0323	0.00500	"	0.0333	97.0	30-120
Benzo (a) pyrene	0.0268	0.00500	"	0.0333	80.4	30-120
Benzo (b) fluoranthene	0.0299	0.00500	"	0.0333	89.7	30-120
Benzo (k) fluoranthene	0.0357	0.00500	"	0.0333	107	30-120
Chrysene	0.0367	0.00500	"	0.0333	110	30-120
Dibenz (a,h) anthracene	0.0235	0.00500	"	0.0333	70.5	30-120
Fluoranthene	0.0353	0.00500	"	0.0333	106	30-120
Fluorene	0.0328	0.00500	"	0.0333	98.4	30-120
Indeno (1,2,3-cd) pyrene	0.0226	0.00500	"	0.0333	67.9	30-120
Pyrene	0.0376	0.00500	"	0.0333	113	35-142
1-Methylnaphthalene	0.0342	0.00500	"	0.0333	103	35-142
2-Methylnaphthalene	0.0398	0.00500	"	0.0333	119	35-142
Surrogate: 2-Methylnaphthalene-d10	0.0384		"	0.0333	115	40-150
Surrogate: Fluoranthene-d10	0.0337		"	0.0333	101	40-150

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PAH by EPA Method 8270D SIM - Quality Control

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Analyte	Reporting			Spike		Source		%REC		RPD	
	Result	Limit	Units	Level		Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0621 - EPA 5030 Soil MS

Matrix Spike (BHC0621-MS1)

Source: 2403195-01

Prepared & Analyzed: 03/18/24

Acenaphthene	0.0227	0.00500	mg/kg	0.0333	ND	68.1	31-137				
Anthracene	0.0228	0.00500	"	0.0333	ND	68.5	30-120				
Benzo (a) anthracene	0.0238	0.00500	"	0.0333	ND	71.5	30-120				
Benzo (a) pyrene	0.0200	0.00500	"	0.0333	ND	60.1	30-120				
Benzo (b) fluoranthene	0.0195	0.00500	"	0.0333	ND	58.6	30-120				
Benzo (k) fluoranthene	0.0208	0.00500	"	0.0333	ND	62.5	30-120				
Chrysene	0.0230	0.00500	"	0.0333	ND	69.0	30-120				
Dibenz (a,h) anthracene	0.0155	0.00500	"	0.0333	ND	46.6	30-120				
Fluoranthene	0.0232	0.00500	"	0.0333	ND	69.6	30-120				
Fluorene	0.0200	0.00500	"	0.0333	ND	59.9	30-120				
Indeno (1,2,3-cd) pyrene	0.0160	0.00500	"	0.0333	ND	48.1	30-120				
Pyrene	0.0246	0.00500	"	0.0333	ND	73.7	35-142				
1-Methylnaphthalene	0.0209	0.00500	"	0.0333	ND	62.8	15-130				
2-Methylnaphthalene	0.0234	0.00500	"	0.0333	ND	70.3	15-130				
Surrogate: 2-Methylnaphthalene-d10	0.0237		"	0.0333		71.2	40-150				
Surrogate: Fluoranthene-d10	0.0234		"	0.0333		70.3	40-150				

Matrix Spike Dup (BHC0621-MSD1)

Source: 2403195-01

Prepared & Analyzed: 03/18/24

Acenaphthene	0.0260	0.00500	mg/kg	0.0333	ND	77.9	31-137	13.3	30		
Anthracene	0.0259	0.00500	"	0.0333	ND	77.8	30-120	12.8	30		
Benzo (a) anthracene	0.0275	0.00500	"	0.0333	ND	82.5	30-120	14.4	30		
Benzo (a) pyrene	0.0232	0.00500	"	0.0333	ND	69.5	30-120	14.6	30		
Benzo (b) fluoranthene	0.0230	0.00500	"	0.0333	ND	69.0	30-120	16.3	30		
Benzo (k) fluoranthene	0.0229	0.00500	"	0.0333	ND	68.7	30-120	9.50	30		
Chrysene	0.0260	0.00500	"	0.0333	ND	78.1	30-120	12.3	30		
Dibenz (a,h) anthracene	0.0186	0.00500	"	0.0333	ND	55.7	30-120	17.9	30		
Fluoranthene	0.0253	0.00500	"	0.0333	ND	75.8	30-120	8.57	30		
Fluorene	0.0230	0.00500	"	0.0333	ND	69.0	30-120	14.1	30		
Indeno (1,2,3-cd) pyrene	0.0201	0.00500	"	0.0333	ND	60.3	30-120	22.6	30		
Pyrene	0.0278	0.00500	"	0.0333	ND	83.5	35-142	12.4	30		
1-Methylnaphthalene	0.0248	0.00500	"	0.0333	ND	74.3	15-130	16.9	50		
2-Methylnaphthalene	0.0296	0.00500	"	0.0333	ND	88.9	15-130	23.3	50		
Surrogate: 2-Methylnaphthalene-d10	0.0270		"	0.0333		80.9	40-150				
Surrogate: Fluoranthene-d10	0.0257		"	0.0333		77.2	40-150				

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Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

Total Metals by EPA 6020B Hot Water Soluble Extraction - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0552 - EPA 3050B

Blank (BHC0552-BLK1)

Prepared: 03/16/24 Analyzed: 04/25/24

Boron ND 2.00 mg/L

LCS (BHC0552-BS1)

Prepared: 03/16/24 Analyzed: 04/25/24

Boron 5.13 2.00 mg/L 5.00 103 80-120

Duplicate (BHC0552-DUP1)

Source: 2403199-01

Prepared: 03/16/24 Analyzed: 04/25/24

Boron 0.114 2.00 mg/L 0.169 38.7 20 QR-01

Matrix Spike (BHC0552-MS1)

Source: 2403199-01

Prepared: 03/16/24 Analyzed: 04/25/24

Boron 4.94 2.00 mg/L 5.00 0.169 95.4 75-125

Matrix Spike Dup (BHC0552-MSD1)

Source: 2403199-01

Prepared: 03/16/24 Analyzed: 04/25/24

Boron 5.18 2.00 mg/L 5.00 0.169 100 75-125 4.69 25

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads
Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

Total Metals by EPA 6020B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0734 - EPA 3050B

Blank (BHC0734-BLK1)

Prepared: 03/20/24 Analyzed: 04/18/24

Arsenic	ND	0.200	mg/kg wet
Barium	ND	0.400	"
Cadmium	ND	0.200	"
Copper	ND	0.400	"
Lead	ND	0.200	"
Nickel	ND	0.400	"
Silver	ND	0.0200	"
Zinc	ND	0.400	"
Selenium	ND	0.260	"

LCS (BHC0734-BS1)

Prepared: 03/20/24 Analyzed: 04/18/24

Arsenic	43.7	0.200	mg/kg wet	40.0	109	80-120
Barium	43.5	0.400	"	40.0	109	80-120
Cadmium	2.17	0.200	"	2.00	108	80-120
Copper	44.1	0.400	"	40.0	110	80-120
Lead	21.3	0.200	"	20.0	107	80-120
Nickel	43.6	0.400	"	40.0	109	80-120
Silver	2.15	0.0200	"	2.00	108	80-120
Zinc	43.0	0.400	"	40.0	107	80-120
Selenium	4.52	0.260	"	4.00	113	80-120

Duplicate (BHC0734-DUP1)

Source: 2402489-02

Prepared: 03/20/24 Analyzed: 04/18/24

Arsenic	2.55	0.200	mg/kg dry	1.92	28.5	20	QR-04
Barium	93.1	0.400	"	46.7	66.3	20	QR-04
Cadmium	0.192	0.200	"	0.129	39.2	20	QR-04
Copper	7.65	0.400	"	6.56	15.4	20	
Lead	7.97	0.200	"	7.72	3.29	20	
Nickel	6.93	0.400	"	4.38	45.1	20	QR-04
Silver	0.0466	0.0200	"	0.0366	24.0	20	QR-04
Zinc	29.7	0.400	"	23.9	21.6	20	QR-04
Selenium	ND	0.260	"	ND		20	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

Total Metals by EPA 6020B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0734 - EPA 3050B

Matrix Spike (BHC0734-MS1)

Source: 2402489-02

Prepared: 03/20/24 Analyzed: 04/18/24

Arsenic	52.3	0.200	mg/kg dry	47.6	1.92	106	75-125
Barium	93.0	0.400	"	47.6	46.7	97.3	75-125
Cadmium	2.70	0.200	"	2.38	0.129	108	75-125
Copper	57.8	0.400	"	47.6	6.56	108	75-125
Lead	32.6	0.200	"	23.8	7.72	105	75-125
Nickel	55.6	0.400	"	47.6	4.38	108	75-125
Silver	2.52	0.0200	"	2.38	0.0366	105	75-125
Zinc	74.9	0.400	"	47.6	23.9	107	75-125
Selenium	4.68	0.260	"	4.76	ND	98.3	75-125

Matrix Spike Dup (BHC0734-MSD1)

Source: 2402489-02

Prepared: 03/20/24 Analyzed: 04/18/24

Arsenic	51.8	0.200	mg/kg dry	47.6	1.92	105	75-125	0.975	25
Barium	93.3	0.400	"	47.6	46.7	98.0	75-125	0.357	25
Cadmium	2.73	0.200	"	2.38	0.129	110	75-125	1.15	25
Copper	57.0	0.400	"	47.6	6.56	106	75-125	1.50	25
Lead	32.5	0.200	"	23.8	7.72	104	75-125	0.188	25
Nickel	54.5	0.400	"	47.6	4.38	105	75-125	1.99	25
Silver	2.56	0.0200	"	2.38	0.0366	106	75-125	1.31	25
Zinc	74.1	0.400	"	47.6	23.9	106	75-125	1.15	25
Selenium	4.66	0.260	"	4.76	ND	98.0	75-125	0.357	25

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

Hexavalent Chromium by EPA Method 7196 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0669 - 3060A Mod

Blank (BHC0669-BLK1)

Prepared: 03/19/24 Analyzed: 03/21/24

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BHC0669-BS1)

Prepared: 03/19/24 Analyzed: 03/21/24

Chromium, Hexavalent 25.0 0.30 mg/kg wet 25.0 100 80-120

Duplicate (BHC0669-DUP1)

Source: 2402489-02

Prepared: 03/19/24 Analyzed: 03/21/24

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BHC0669-MS1)

Source: 2402489-02

Prepared: 03/19/24 Analyzed: 03/21/24

Chromium, Hexavalent 29.5 0.30 mg/kg dry 29.7 ND 99.2 75-125

Matrix Spike Dup (BHC0669-MSD1)

Source: 2402489-02

Prepared: 03/19/24 Analyzed: 03/21/24

Chromium, Hexavalent 29.5 0.30 mg/kg dry 29.7 ND 99.2 75-125 0.00 20

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0958 - General Preparation

Blank (BHC0958-BLK1)

Prepared: 03/25/24 Analyzed: 04/19/24

Calcium	ND	0.0500	mg/L wet
Magnesium	ND	0.0500	"
Sodium	ND	0.0500	"

LCS (BHC0958-BS1)

Prepared: 03/25/24 Analyzed: 04/19/24

Calcium	5.68	0.0500	mg/L wet	5.00	114	70-130
Magnesium	5.36	0.0500	"	5.00	107	70-130
Sodium	5.46	0.0500	"	5.00	109	70-130

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control

Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD	
		Limit	Units		Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0519 - General Preparation

Duplicate (BHC0519-DUP1)

Source: 2403198-01

Prepared: 03/15/24 Analyzed: 03/19/24

% Solids	87.2	%	87.7	0.509	20

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction - Quality Control

Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD	
		Limit	Units		Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0960 - General Preparation

Blank (BHC0960-BLK1)

Prepared: 03/25/24 Analyzed: 03/29/24

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BHC0960-BS1)

Prepared: 03/25/24 Analyzed: 03/29/24

Specific Conductance (EC) 0.152 0.0100 mmhos/cm 0.150 102 95-105

Duplicate (BHC0960-DUP1)

Source: 2403195-01

Prepared: 03/25/24 Analyzed: 03/29/24

Specific Conductance (EC) 0.510 0.0100 mmhos/cm 0.518 1.58 20

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source Result	%REC		RPD		Notes
		Limit	Units			%REC	Limits	RPD	Limit	

Batch BHC0959 - General Preparation

LCS (BHC0959-BS1)

Prepared: 03/25/24 Analyzed: 03/29/24

pH	9.03	pH Units	9.18	98.4	95-105

Duplicate (BHC0959-DUP1)

Source: 2403195-01

Prepared: 03/25/24 Analyzed: 03/29/24

pH	7.82	pH Units	7.79	0.384	20

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/25/24 14:34

Notes and Definitions

QR-04	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QR-01	Analyses are not controlled on RPD values from sample concentrations less than 10 times the reporting limit. QC batch accepted based on LCS and/or LCSD QC results.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

May 20, 2024

Karen Olson

Tasman Geosciences

6855 W. 119th Ave.

Broomfield, CO 80020

RE: PDC - Merritt Combined Wellheads

Work Order #2403227

Enclosed are the results of analyses for samples received by Summit Scientific on 03/13/24 17:34. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Natalie Tessier". The signature is fluid and cursive, written in a professional style.

Natalie Tessier For Paul Shrewsbury

President



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FL04-01@4'	2403227-01	Soil	03/13/24 11:00	03/13/24 17:34
FL09-01@4'	2403227-02	Soil	03/13/24 11:05	03/13/24 17:34
COMP01-FL08-01@4'	2403227-03	Soil	03/13/24 11:10	03/13/24 17:34
FL06-01@4'	2403227-04	Soil	03/13/24 11:15	03/13/24 17:34
COMP01-FL04-01@4'	2403227-05	Soil	03/13/24 11:20	03/13/24 17:34
FL07-01@4'	2403227-06	Soil	03/13/24 11:21	03/13/24 17:34
FL08-01@4'	2403227-07	Soil	03/13/24 11:22	03/13/24 17:34
COMP01-FL06-01@4'	2403227-08	Soil	03/13/24 11:23	03/13/24 17:34
COMP01-FL07-01@4'	2403227-09	Soil	03/13/24 11:24	03/13/24 17:34
FL01-01@4'	2403227-10	Soil	03/13/24 11:30	03/13/24 17:34
COMP01-FL01-01@4'	2403227-11	Soil	03/13/24 11:31	03/13/24 17:34
FL02-01@4'	2403227-12	Soil	03/13/24 11:32	03/13/24 17:34
COMP01-FL02-01@4'	2403227-13	Soil	03/13/24 11:33	03/13/24 17:34
FL03-01@4'	2403227-14	Soil	03/13/24 11:34	03/13/24 17:34
COMP01-FL03-01@4'	2403227-15	Soil	03/13/24 11:45	03/13/24 17:34
FL05-01@4'	2403227-16	Soil	03/13/24 11:46	03/13/24 17:34
COMP01-FL05-01@4'	2403227-17	Soil	03/13/24 11:47	03/13/24 17:34
COMP01-FL09-01@4'	2403227-18	Soil	03/13/24 11:48	03/13/24 17:34
MAN01-DL01@4'	2403227-19	Soil	03/13/24 11:50	03/13/24 17:34
MAN01-DL02@4'	2403227-20	Soil	03/13/24 11:51	03/13/24 17:34
MAN01-DL03@4'	2403227-21	Soil	03/13/24 11:52	03/13/24 17:34
MAN01-DL04@4'	2403227-22	Soil	03/13/24 11:54	03/13/24 17:34
MAN02-FL01@4'	2403227-23	Soil	03/13/24 11:49	03/13/24 17:34
FLR05@4'	2403227-24	Soil	03/13/24 11:53	03/13/24 17:34
COMP01-FL05@4'	2403227-25	Soil	03/13/24 11:55	03/13/24 17:34
FL07-02@4'	2403227-26	Soil	03/13/24 13:40	03/13/24 17:34

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads
Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

A handwritten signature in black ink, appearing to read 'Natalie Bessin', is written over a light gray rectangular background.

Client: PDC PDC / Tasman				Send Data To:				Send Invoice To:			
Address: 6855 W 119th Ave				Project Manager: Karen Olson				Company: PDC Energy			
City/State/Zip: Broomfield / CO / 80220				E-Mail: karen.olson@chevron.com				Project Name/Location:			
Phone: 303-487-1228				Project Name: Merritt Combined Wellheads				AFE#:			
Sampler Name: Jordan Hestmark				Project Number:				PO/Billing Codes:			
Contact: Karen Olson											

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix		Air-Canister #	Other	Analysis Requested										Special Instructions
					HCl	HNO3	None	Other	Water	Soil			BTEXN - 8260B	TPH - (C6 - C36)	1,2,4 & 1,3,5 - TMB	Boron - HWS	pH, EC, SAR	PAHs - 9/5	Metals - 9/5	TDS, SO4, CI			
1	FLO4-01 @ 4'	3/13/24	1100	2			X			X			X	X	X	X	X	X					
2	FLO4-01 @ 4'		1105																				
3	COMP01-FLO8-01 @ 4'		1110																				
4	FLO6-01 @ 4'		1115																				
5	COMP01-FLO4-01 @ 4'		1120																				
6	FLO7-01 @ 4'		1121																				
7	FLO8-01 @ 4'		1122																				
8	COMP01-FLO6-01 @ 4'		1123																				
9	COMP01-FLO7-01 @ 4'		1124																				
10	FLO1-01 @ 4'		1130																				
11	COMP01-FLO1-01 @ 4'		1131																				
12	FLO2-01 @ 4'		1132																				
13	COMP01-FLO2-01 @ 4'		1133																				
14	FLO3-01 @ 4'		1134																				
15	COMP01-FLO3-01 @ 4'		1145																				

Relinquished by: Jordan Hestmark	Date/Time: 3/13/24 1630	Received by: Tasman Lockbox	Date/Time: 3/13/24 1630	TAT Business Days	Field DO	Notes:
				Same Day	Field EC	
Relinquished by: Tasman Lockbox	Date/Time: 3/13/24 1734	Received by: [Signature]	Date/Time: 3/13/24 1734	1 Day	Field ORP	
				2 Days	Field pH	
Relinquished by:	Date/Time:	Received by:	Date/Time:	3 Days	Field Temp.	
				Standard	Field Turb.	
Temperature Upon Receipt: 9.2	Corrected Temperature: 0	IR gun #: 1	HNO3 lot #:			

Client: PDC PDC / Tasman				Send Data To:				Send Invoice To:			
Address: 6855 W 119th Ave				Project Manager: Karen Olson				Company: PDC Energy			
City/State/Zip: Broomfield / CO / 80220				E-Mail: karen.olson@chevron.com				Project Name/Location:			
Phone: 303-487-1228				Project Name: Merritt Combined Wellheads				AFE#:			
Sampler Name: Jordan Hestmark				Project Number:				PO/Billing Codes:			
Contact: Karen Olson											

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix		Air-Canister #	Other	Analysis Requested										Special Instructions
					HCl	HNO3	None	Other	Water	Soil			BTEXN - 8260B	TPH - (C6 - C36)	1,2,4 & 1,3,5 - TMB	Boron - HWS	pH, EC, SAR	PAHs - 915	Metals - 915	TDS, SO4, CI			
1	FL05-01 @ 4'	3/13/24	1146	2			X			X			X	X	X	X	X	X					
2	COMP01-FL05-01 @ 4'		1147																				
3	COMP01-FL09-01 @ 4'		1148																				
4	MAN01-DL01 @ 4'		1150																				
5	MAN01-DL02 @ 4'		1151																				
6	MAN01-DL03 @ 4'		1152																				
7	MAN01-DL04 @ 4'		1154																				
8	MAN02-FL01 @ 4'		1149																				
9	FLR05 @ 4'		1153																				
10	COMP01-FL05 @ 4'		1155																				
11	FL07-02 @ 4'		1340																				
12																							
13																							
14																							
15																							

Relinquished by: Jordan Hestmark	Date/Time: 3/13/24 1630	Received by: Tasman Lockbox	Date/Time: 3/13/24 1630	TAT Business Days	Field DO	Notes:
				Same Day	Field EC	
Relinquished by: Tasman Lockbox	Date/Time: 3/13/24 1734	Received by: [Signature]	Date/Time: 3/13/24 1734	1 Day	Field ORP	
				2 Days	Field pH	
Relinquished by:	Date/Time:	Received by:	Date/Time:	3 Days	Field Temp.	
				Standard	X Field Turb.	
Temperature Upon Receipt: 9.2	Corrected Temperature: 9	IR gun #: 1	HNO3 lot #:			

S₂

2/2

Sample Receipt Checklist

S2 Work Order# 2403227Client: PortmanClient Project ID: Merritt Combined wellheadsShipped Via: H.D./P.U./FedEx/UPS/USPS/Other

Airbill #: _____

☐	☒	☐	☐	☐

Matrix (Check all that apply)

Air

☐

Soil/Solid

☐

Water

☐

Other

☐

Temp (°C)

9.2

Thermometer #

1

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	☒	☐	☐	
If custody seals are present, are they intact? ⁽¹⁾	☒	☐	☐	MZCE
Are samples due within 48 hours present?	☐	☒	☐	
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe ²⁺), Hexavalent Chromium (Cr ⁶⁺ , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	☐	☒	☐	
Is a chain-of-custody (COC) form present and filled out Completely? ⁽¹⁾	☒	☐	☐	
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	☒	☐	☐	
Were all samples received intact? ⁽¹⁾	☒	☐	☐	
Was adequate sample volume provided? ⁽¹⁾	☒	☐	☐	
Does the COC agree with the number and type of sample bottles received? ⁽¹⁾	☒	☐	☐	
Do the sample IDs on the bottle labels match the COC? ⁽¹⁾	☒	☐	☐	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	☐	☐	☒	
Are samples preserved that require preservation (excluding cooling)? ⁽¹⁾ Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	☐	☐	☒	
If samples are acid preserved for metals, is the pH ≤ 2? ⁽¹⁾ Record the pH in Comments.	☐	☐	☒	
If dissolved metals are requested, were samples field filtered?	☐	☐	☒	
Additional Comments (if any):				

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.AS
Custodian Printed Name3/13/24
Date/Time



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

FL04-01@4'
2403227-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/13/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHC0481	03/15/24	03/15/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0383	95.7 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0386	96.4 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0380	95.0 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/13/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0478	03/15/24	03/15/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	7.07	56.5 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

FL04-01@4'
2403227-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/13/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHC0691	03/19/24	03/20/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0340	102 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0277	83.2 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/13/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHC0553	03/16/24	04/07/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/13/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

FL04-01@4'
2403227-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	5.42	0.200	mg/kg dry	1	BHC0736	03/20/24	04/18/24	EPA 6020B
Barium	302	0.400	"	"	"	"	"	"
Cadmium	0.217	0.200	"	"	"	"	"	"
Copper	8.20	0.400	"	"	"	"	"	"
Lead	7.41	0.200	"	"	"	"	"	"
Nickel	9.58	0.400	"	"	"	"	"	"
Silver	0.0376	0.0200	"	"	"	"	"	"
Zinc	33.3	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/13/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0670	03/19/24	03/20/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **03/13/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	84.2	0.0500	mg/L dry	1	BHC1038	03/27/24	05/17/24	EPA 6020B	
Magnesium	20.5	0.0500	"	"	"	"	"	"	
Sodium	34.9	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/13/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.885	0.00100	units	1	BHE0618	05/20/24	05/20/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/13/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

FL04-01@4'
2403227-01 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	87.2	%	1	BHC0520	03/15/24	03/18/24	Calculation

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/13/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.634	0.0100	mmhos/cm	1	BHC1039	03/27/24	03/29/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **03/13/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.15		pH Units	1	BHC1040	03/27/24	03/29/24	EPA 9045D	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

FL09-01@4'
2403227-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/13/24 11:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHC0481	03/15/24	03/15/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0408	102 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0392	98.0 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0388	97.0 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/13/24 11:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0478	03/15/24	03/15/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	7.38	59.0 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

FL09-01@4'
2403227-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/13/24 11:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHC0691	03/19/24	03/20/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0208	62.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0196	58.7 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/13/24 11:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHC0553	03/16/24	04/07/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/13/24 11:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

FL09-01@4'
2403227-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	4.39	0.200	mg/kg dry	1	BHC0736	03/20/24	04/18/24	EPA 6020B
Barium	116	0.400	"	"	"	"	"	"
Cadmium	0.215	0.200	"	"	"	"	"	"
Copper	7.38	0.400	"	"	"	"	"	"
Lead	6.73	0.200	"	"	"	"	"	"
Nickel	11.8	0.400	"	"	"	"	"	"
Silver	0.0284	0.0200	"	"	"	"	"	"
Zinc	42.9	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/13/24 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0670	03/19/24	03/20/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **03/13/24 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	648	0.0500	mg/L dry	1	BHC1038	03/27/24	05/17/24	EPA 6020B	
Magnesium	69.2	0.0500	"	"	"	"	"	"	
Sodium	69.0	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/13/24 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.688	0.00100	units	1	BHE0618	05/20/24	05/20/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/13/24 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

FL09-01@4'
2403227-02 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	85.8	%	1	BHC0520	03/15/24	03/18/24	Calculation

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/13/24 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	2.95	0.0100	mmhos/cm	1	BHC1039	03/27/24	03/29/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **03/13/24 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.82		pH Units	1	BHC1040	03/27/24	03/29/24	EPA 9045D	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads
Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

COMP01-FL08-01@4'
2403227-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/13/24 11:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHC0481	03/15/24	03/15/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0413	103 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0397	99.2 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0397	99.2 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/13/24 11:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0478	03/15/24	03/15/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	6.88	55.0 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

COMP01-FL08-01@4'
2403227-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/13/24 11:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHC0691	03/19/24	03/20/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0272	81.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0242	72.6 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/13/24 11:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHC0553	03/16/24	04/07/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/13/24 11:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

COMP01-FL08-01@4'
2403227-03 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	3.70	0.200	mg/kg dry	1	BHC0736	03/20/24	04/18/24	EPA 6020B
Barium	497	0.400	"	"	"	"	"	"
Cadmium	0.213	0.200	"	"	"	"	"	"
Copper	9.36	0.400	"	"	"	"	"	"
Lead	5.97	0.200	"	"	"	"	"	"
Nickel	9.61	0.400	"	"	"	"	"	"
Silver	0.0324	0.0200	"	"	"	"	"	"
Zinc	55.1	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/13/24 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0670	03/19/24	03/20/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **03/13/24 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	511	0.0500	mg/L dry	1	BHC1038	03/27/24	05/17/24	EPA 6020B	
Magnesium	60.8	0.0500	"	"	"	"	"	"	
Sodium	54.2	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/13/24 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.604	0.00100	units	1	BHE0618	05/20/24	05/20/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/13/24 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

COMP01-FL08-01@4'
2403227-03 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	85.2	%	1	BHC0520	03/15/24	03/18/24	Calculation

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/13/24 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	2.38	0.0100	mmhos/cm	1	BHC1039	03/27/24	03/29/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **03/13/24 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.67		pH Units	1	BHC1040	03/27/24	03/29/24	EPA 9045D	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

FL06-01@4'
2403227-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/13/24 11:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHC0481	03/15/24	03/15/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0422	106 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0395	98.8 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0398	99.4 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/13/24 11:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0478	03/15/24	03/15/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	7.58	60.6 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

FL06-01@4'
2403227-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/13/24 11:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHC0691	03/19/24	03/20/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0294	88.2 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0256	76.9 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/13/24 11:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHC0553	03/16/24	04/07/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/13/24 11:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

FL06-01@4'
2403227-04 (Soil)

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Total Metals by EPA 6020B

Arsenic	5.43	0.200	mg/kg dry	1	BHC0736	03/20/24	04/18/24	EPA 6020B
Barium	198	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	7.83	0.400	"	"	"	"	"	"
Lead	6.72	0.200	"	"	"	"	"	"
Nickel	8.82	0.400	"	"	"	"	"	"
Silver	0.0300	0.0200	"	"	"	"	"	"
Zinc	38.9	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/13/24 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0670	03/19/24	03/20/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **03/13/24 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	62.0	0.0500	mg/L dry	1	BHC1038	03/27/24	05/17/24	EPA 6020B	
Magnesium	16.8	0.0500	"	"	"	"	"	"	
Sodium	44.4	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/13/24 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.29	0.00100	units	1	BHE0618	05/20/24	05/20/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

FL06-01@4'
2403227-04 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/13/24 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	88.0		%	1	BHC0520	03/15/24	03/18/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/13/24 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.558	0.0100	mmhos/cm	1	BHC1039	03/27/24	03/29/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **03/13/24 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.45		pH Units	1	BHC1040	03/27/24	03/29/24	EPA 9045D	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

COMP01-FL04-01@4'
2403227-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/13/24 11:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHC0481	03/15/24	03/15/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0386	96.5 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0385	96.3 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0391	97.8 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/13/24 11:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0478	03/15/24	03/15/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	7.38	59.1 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

COMP01-FL04-01@4'
2403227-05 (Soil)

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PAH by EPA Method 8270D SIM

Date Sampled: **03/13/24 11:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHC0691	03/19/24	03/20/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0311	93.2 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0263	78.9 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/13/24 11:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHC0553	03/16/24	04/07/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/13/24 11:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

COMP01-FL04-01@4'
2403227-05 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	4.60	0.200	mg/kg dry	1	BHC0736	03/20/24	04/18/24	EPA 6020B
Barium	182	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	7.30	0.400	"	"	"	"	"	"
Lead	6.66	0.200	"	"	"	"	"	"
Nickel	8.72	0.400	"	"	"	"	"	"
Silver	0.0289	0.0200	"	"	"	"	"	"
Zinc	33.4	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/13/24 11:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0670	03/19/24	03/20/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **03/13/24 11:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	80.4	0.0500	mg/L dry	1	BHC1038	03/27/24	05/17/24	EPA 6020B	
Magnesium	19.4	0.0500	"	"	"	"	"	"	
Sodium	29.7	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/13/24 11:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.771	0.00100	units	1	BHE0618	05/20/24	05/20/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads
Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

COMP01-FL04-01@4'
2403227-05 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/13/24 11:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	87.2		%	1	BHC0520	03/15/24	03/18/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/13/24 11:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.594	0.0100	mmhos/cm	1	BHC1039	03/27/24	03/29/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **03/13/24 11:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.22		pH Units	1	BHC1040	03/27/24	03/29/24	EPA 9045D	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

FL07-01@4'
2403227-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/13/24 11:21**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHC0481	03/15/24	03/15/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:21**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0420	105 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0408	102 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0384	95.9 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/13/24 11:21**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0478	03/15/24	03/15/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:21**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	7.12	57.0 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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6855 W. 119th Ave.
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Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

FL07-01@4'
2403227-06 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/13/24 11:21**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHC0691	03/19/24	03/20/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:21**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0277	83.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0218	65.3 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/13/24 11:21**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHC0553	03/16/24	04/07/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/13/24 11:21**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

FL07-01@4'
2403227-06 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	4.05	0.200	mg/kg dry	1	BHC0736	03/20/24	04/18/24	EPA 6020B
Barium	255	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	6.62	0.400	"	"	"	"	"	"
Lead	5.38	0.200	"	"	"	"	"	"
Nickel	7.45	0.400	"	"	"	"	"	"
Silver	0.0272	0.0200	"	"	"	"	"	"
Zinc	30.7	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/13/24 11:21**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0670	03/19/24	03/20/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **03/13/24 11:21**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	107	0.0500	mg/L dry	1	BHC1038	03/27/24	05/17/24	EPA 6020B	
Magnesium	22.9	0.0500	"	"	"	"	"	"	
Sodium	49.7	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/13/24 11:21**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.14	0.00100	units	1	BHE0618	05/20/24	05/20/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

FL07-01@4'
2403227-06 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/13/24 11:21**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	89.7		%	1	BHC0520	03/15/24	03/18/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/13/24 11:21**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.848	0.0100	mmhos/cm	1	BHC1039	03/27/24	03/29/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **03/13/24 11:21**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.25		pH Units	1	BHC1040	03/27/24	03/29/24	EPA 9045D	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads
Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

FL08-01@4'
2403227-07 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/13/24 11:22**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHC0481	03/15/24	03/15/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:22**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0437	109 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0391	97.8 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0408	102 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/13/24 11:22**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0478	03/15/24	03/15/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:22**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	7.73	61.8 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

FL08-01@4'
2403227-07 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/13/24 11:22**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHC0691	03/19/24	03/20/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:22**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0299	89.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0219	65.6 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/13/24 11:22**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHC0553	03/16/24	04/07/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/13/24 11:22**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

FL08-01@4'
2403227-07 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	6.45	0.200	mg/kg dry	1	BHC0736	03/20/24	04/18/24	EPA 6020B
Barium	144	0.400	"	"	"	"	"	"
Cadmium	0.205	0.200	"	"	"	"	"	"
Copper	8.09	0.400	"	"	"	"	"	"
Lead	7.50	0.200	"	"	"	"	"	"
Nickel	10.5	0.400	"	"	"	"	"	"
Silver	0.0345	0.0200	"	"	"	"	"	"
Zinc	43.1	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/13/24 11:22**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0670	03/19/24	03/20/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **03/13/24 11:22**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	107	0.0500	mg/L dry	1	BHC1038	03/27/24	05/17/24	EPA 6020B	
Magnesium	27.0	0.0500	"	"	"	"	"	"	
Sodium	54.8	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/13/24 11:22**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.23	0.00100	units	1	BHE0618	05/20/24	05/20/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/13/24 11:22**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

FL08-01@4'
2403227-07 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	85.9	%	1	BHC0520	03/15/24	03/18/24	Calculation

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/13/24 11:22**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.853	0.0100	mmhos/cm	1	BHC1039	03/27/24	03/29/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **03/13/24 11:22**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.23		pH Units	1	BHC1040	03/27/24	03/29/24	EPA 9045D	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

COMP01-FL06-01@4'
2403227-08 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/13/24 11:23**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHC0481	03/15/24	03/15/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:23**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0414	104 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0393	98.3 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0393	98.2 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/13/24 11:23**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0478	03/15/24	03/15/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:23**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	7.07	56.6 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

COMP01-FL06-01@4'
2403227-08 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/13/24 11:23**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHC0691	03/19/24	03/21/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:23**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0318	95.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0254	76.2 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/13/24 11:23**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHC0553	03/16/24	04/07/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/13/24 11:23**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

COMP01-FL06-01@4'
2403227-08 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	4.42	0.200	mg/kg dry	1	BHC0736	03/20/24	04/18/24	EPA 6020B
Barium	135	0.400	"	"	"	"	"	"
Cadmium	0.204	0.200	"	"	"	"	"	"
Copper	7.13	0.400	"	"	"	"	"	"
Lead	6.79	0.200	"	"	"	"	"	"
Nickel	8.94	0.400	"	"	"	"	"	"
Silver	0.0313	0.0200	"	"	"	"	"	"
Zinc	34.4	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/13/24 11:23**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0670	03/19/24	03/20/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **03/13/24 11:23**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	83.7	0.0500	mg/L dry	1	BHC1038	03/27/24	05/17/24	EPA 6020B	
Magnesium	16.8	0.0500	"	"	"	"	"	"	
Sodium	26.8	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/13/24 11:23**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.699	0.00100	units	1	BHE0618	05/20/24	05/20/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/13/24 11:23**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

COMP01-FL06-01@4'
2403227-08 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	87.0	%	1	BHC0520	03/15/24	03/18/24	Calculation

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/13/24 11:23**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.568	0.0100	mmhos/cm	1	BHC1039	03/27/24	03/29/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **03/13/24 11:23**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.33		pH Units	1	BHC1040	03/27/24	03/29/24	EPA 9045D	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

COMP01-FL07-01@4'
2403227-09 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/13/24 11:24**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHC0481	03/15/24	03/15/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:24**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0434	109 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0402	100 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0385	96.3 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/13/24 11:24**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0478	03/15/24	03/15/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:24**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	7.48	59.8 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
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Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

COMP01-FL07-01@4'
2403227-09 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/13/24 11:24**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Acenaphthene	ND	0.00500	mg/kg	1	BHC0691	03/19/24	03/21/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:24**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 2-Methylnaphthalene-d10	0.0326	97.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0230	69.0 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/13/24 11:24**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BHC0553	03/16/24	04/07/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/13/24 11:24**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

COMP01-FL07-01@4'
2403227-09 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	5.27	0.200	mg/kg dry	1	BHC0736	03/20/24	04/18/24	EPA 6020B
Barium	195	0.400	"	"	"	"	"	"
Cadmium	0.204	0.200	"	"	"	"	"	"
Copper	8.06	0.400	"	"	"	"	"	"
Lead	7.65	0.200	"	"	"	"	"	"
Nickel	10.3	0.400	"	"	"	"	"	"
Silver	0.0359	0.0200	"	"	"	"	"	"
Zinc	40.9	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/13/24 11:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0670	03/19/24	03/20/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **03/13/24 11:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	132	0.0500	mg/L dry	1	BHC1038	03/27/24	05/17/24	EPA 6020B	
Magnesium	30.3	0.0500	"	"	"	"	"	"	
Sodium	62.2	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/13/24 11:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.27	0.00100	units	1	BHE0618	05/20/24	05/20/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/13/24 11:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

COMP01-FL07-01@4'
2403227-09 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	87.0	%	1	BHC0520	03/15/24	03/18/24	Calculation

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/13/24 11:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.986	0.0100	mmhos/cm	1	BHC1039	03/27/24	03/29/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **03/13/24 11:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.19		pH Units	1	BHC1040	03/27/24	03/29/24	EPA 9045D	

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

FL01-01@4'
2403227-10 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/13/24 11:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHC0481	03/15/24	03/15/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0406	101 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0399	99.7 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0395	98.8 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/13/24 11:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0478	03/15/24	03/15/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	6.63	53.0 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

FL01-01@4'
2403227-10 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/13/24 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHC0691	03/19/24	03/21/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0240	72.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0203	60.8 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/13/24 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHC0553	03/16/24	04/07/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/13/24 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

FL01-01@4'
2403227-10 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	7.60	0.200	mg/kg dry	1	BHC0736	03/20/24	04/18/24	EPA 6020B
Barium	174	0.400	"	"	"	"	"	"
Cadmium	0.202	0.200	"	"	"	"	"	"
Copper	7.57	0.400	"	"	"	"	"	"
Lead	8.62	0.200	"	"	"	"	"	"
Nickel	8.05	0.400	"	"	"	"	"	"
Silver	0.0376	0.0200	"	"	"	"	"	"
Zinc	36.6	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/13/24 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0670	03/19/24	03/20/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **03/13/24 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	64.5	0.0500	mg/L dry	1	BHC1038	03/27/24	05/17/24	EPA 6020B	
Magnesium	15.7	0.0500	"	"	"	"	"	"	
Sodium	39.6	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/13/24 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.15	0.00100	units	1	BHE0618	05/20/24	05/20/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/13/24 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

FL01-01@4'
2403227-10 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	84.0	%	1	BHC0520	03/15/24	03/18/24	Calculation

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/13/24 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.549	0.0100	mmhos/cm	1	BHC1039	03/27/24	03/29/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **03/13/24 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.26		pH Units	1	BHC1040	03/27/24	03/29/24	EPA 9045D	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

COMP01-FL01-01@4'
2403227-11 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/13/24 11:31**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHC0481	03/15/24	03/16/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:31**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0406	102 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0398	99.4 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0389	97.4 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/13/24 11:31**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0478	03/15/24	03/16/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:31**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	8.08	64.6 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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6855 W. 119th Ave.
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Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

COMP01-FL01-01@4'
2403227-11 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/13/24 11:31**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHC0691	03/19/24	03/21/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:31**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0348	105 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0271	81.3 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/13/24 11:31**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHC0553	03/16/24	04/07/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/13/24 11:31**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

COMP01-FL01-01@4'
2403227-11 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	7.98	0.200	mg/kg dry	1	BHC0736	03/20/24	04/18/24	EPA 6020B
Barium	306	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	6.68	0.400	"	"	"	"	"	"
Lead	8.40	0.200	"	"	"	"	"	"
Nickel	6.98	0.400	"	"	"	"	"	"
Silver	0.0331	0.0200	"	"	"	"	"	"
Zinc	40.6	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/13/24 11:31**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0670	03/19/24	03/20/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **03/13/24 11:31**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	119	0.0500	mg/L dry	1	BHC1038	03/27/24	05/17/24	EPA 6020B	
Magnesium	34.0	0.0500	"	"	"	"	"	"	
Sodium	43.1	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/13/24 11:31**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.897	0.00100	units	1	BHE0618	05/20/24	05/20/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

COMP01-FL01-01@4'
2403227-11 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/13/24 11:31**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	85.8		%	1	BHC0520	03/15/24	03/18/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/13/24 11:31**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.951	0.0100	mmhos/cm	1	BHC1039	03/27/24	03/29/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **03/13/24 11:31**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.22		pH Units	1	BHC1040	03/27/24	03/29/24	EPA 9045D	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

FL02-01@4'
2403227-12 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/13/24 11:32**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHC0481	03/15/24	03/16/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:32**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0403	101 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0398	99.4 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0398	99.4 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/13/24 11:32**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0478	03/15/24	03/16/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:32**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	7.51	60.1 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

FL02-01@4'
2403227-12 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/13/24 11:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHC0691	03/19/24	03/21/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0328	98.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0240	72.0 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/13/24 11:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHC0553	03/16/24	04/07/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/13/24 11:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

FL02-01@4'
2403227-12 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	4.70	0.200	mg/kg dry	1	BHC0736	03/20/24	04/18/24	EPA 6020B
Barium	110	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	6.41	0.400	"	"	"	"	"	"
Lead	7.01	0.200	"	"	"	"	"	"
Nickel	8.02	0.400	"	"	"	"	"	"
Silver	0.0359	0.0200	"	"	"	"	"	"
Zinc	33.1	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/13/24 11:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0670	03/19/24	03/20/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **03/13/24 11:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	97.3	0.0500	mg/L dry	1	BHC1038	03/27/24	05/17/24	EPA 6020B	
Magnesium	24.5	0.0500	"	"	"	"	"	"	
Sodium	46.0	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/13/24 11:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.08	0.00100	units	1	BHE0618	05/20/24	05/20/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

FL02-01@4'
2403227-12 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/13/24 11:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	85.7		%	1	BHC0520	03/15/24	03/18/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/13/24 11:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.775	0.0100	mmhos/cm	1	BHC1039	03/27/24	03/29/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **03/13/24 11:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.27		pH Units	1	BHC1040	03/27/24	03/29/24	EPA 9045D	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

COMP01-FL02-01@4'
2403227-13 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/13/24 11:33**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHC0481	03/15/24	03/16/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:33**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0406	101 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0392	97.9 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0385	96.3 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/13/24 11:33**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0478	03/15/24	03/16/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:33**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	8.12	65.0 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

COMP01-FL02-01@4'
2403227-13 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/13/24 11:33**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHC0691	03/19/24	03/21/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:33**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0147	44.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0141	42.3 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/13/24 11:33**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHC0553	03/16/24	04/07/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/13/24 11:33**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

COMP01-FL02-01@4'
2403227-13 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	4.82	0.200	mg/kg dry	1	BHC0736	03/20/24	04/18/24	EPA 6020B
Barium	123	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	7.50	0.400	"	"	"	"	"	"
Lead	7.58	0.200	"	"	"	"	"	"
Nickel	8.73	0.400	"	"	"	"	"	"
Silver	0.0368	0.0200	"	"	"	"	"	"
Zinc	36.3	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/13/24 11:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0670	03/19/24	03/20/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **03/13/24 11:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	109	0.0500	mg/L dry	1	BHC1038	03/27/24	05/17/24	EPA 6020B	
Magnesium	28.2	0.0500	"	"	"	"	"	"	
Sodium	42.3	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/13/24 11:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.934	0.00100	units	1	BHE0618	05/20/24	05/20/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads
Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

COMP01-FL02-01@4'
2403227-13 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/13/24 11:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	85.9		%	1	BHC0520	03/15/24	03/18/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/13/24 11:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.868	0.0100	mmhos/cm	1	BHC1039	03/27/24	03/29/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **03/13/24 11:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.15		pH Units	1	BHC1040	03/27/24	03/29/24	EPA 9045D	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

FL03-01@4'
2403227-14 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/13/24 11:34**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHC0481	03/15/24	03/16/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:34**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0403	101 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0399	99.8 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0382	95.6 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/13/24 11:34**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0478	03/15/24	03/16/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:34**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	7.26	58.1 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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6855 W. 119th Ave.
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Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

FL03-01@4'
2403227-14 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/13/24 11:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHC0691	03/19/24	03/21/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0293	87.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0229	68.7 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/13/24 11:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHC0553	03/16/24	04/07/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/13/24 11:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

FL03-01@4'
2403227-14 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	5.92	0.200	mg/kg dry	1	BHC0736	03/20/24	04/18/24	EPA 6020B
Barium	168	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	7.60	0.400	"	"	"	"	"	"
Lead	8.40	0.200	"	"	"	"	"	"
Nickel	8.49	0.400	"	"	"	"	"	"
Silver	0.0323	0.0200	"	"	"	"	"	"
Zinc	37.9	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/13/24 11:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0670	03/19/24	03/20/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **03/13/24 11:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	61.9	0.0500	mg/L dry	1	BHC1038	03/27/24	05/17/24	EPA 6020B	
Magnesium	13.7	0.0500	"	"	"	"	"	"	
Sodium	29.6	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/13/24 11:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.887	0.00100	units	1	BHE0618	05/20/24	05/20/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

FL03-01@4'
2403227-14 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/13/24 11:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	85.5		%	1	BHC0520	03/15/24	03/18/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/13/24 11:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.465	0.0100	mmhos/cm	1	BHC1039	03/27/24	03/29/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **03/13/24 11:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.43		pH Units	1	BHC1040	03/27/24	03/29/24	EPA 9045D	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads
Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

COMP01-FL03-01@4'
2403227-15 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/13/24 11:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHC0481	03/15/24	03/16/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0405	101 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0383	95.7 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0382	95.6 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/13/24 11:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0478	03/15/24	03/16/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	7.97	63.8 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

COMP01-FL03-01@4'
2403227-15 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/13/24 11:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHC0691	03/19/24	03/21/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0274	82.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0227	68.0 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/13/24 11:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHC0553	03/16/24	04/07/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/13/24 11:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

COMP01-FL03-01@4'
2403227-15 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	5.55	0.200	mg/kg dry	1	BHC0736	03/20/24	04/18/24	EPA 6020B
Barium	143	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	7.68	0.400	"	"	"	"	"	"
Lead	8.03	0.200	"	"	"	"	"	"
Nickel	8.72	0.400	"	"	"	"	"	"
Silver	0.0361	0.0200	"	"	"	"	"	"
Zinc	38.2	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/13/24 11:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0670	03/19/24	03/20/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **03/13/24 11:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	65.7	0.0500	mg/L dry	1	BHC1038	03/27/24	05/17/24	EPA 6020B	
Magnesium	16.4	0.0500	"	"	"	"	"	"	
Sodium	25.1	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/13/24 11:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.718	0.00100	units	1	BHE0618	05/20/24	05/20/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads
Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

COMP01-FL03-01@4'
2403227-15 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/13/24 11:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	86.5		%	1	BHC0520	03/15/24	03/18/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/13/24 11:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.498	0.0100	mmhos/cm	1	BHC1039	03/27/24	03/29/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **03/13/24 11:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.29		pH Units	1	BHC1040	03/27/24	03/29/24	EPA 9045D	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

FL05-01@4'
2403227-16 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/13/24 11:46**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHC0481	03/15/24	03/16/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:46**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0410	103 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0396	99.1 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0382	95.6 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/13/24 11:46**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0478	03/15/24	03/16/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:46**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	7.56	60.5 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

FL05-01@4'
2403227-16 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/13/24 11:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHC0691	03/19/24	03/21/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0234	70.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0193	57.8 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/13/24 11:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHC0553	03/16/24	04/07/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/13/24 11:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

FL05-01@4'
2403227-16 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	4.81	0.200	mg/kg dry	1	BHC0736	03/20/24	04/18/24	EPA 6020B
Barium	122	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	6.99	0.400	"	"	"	"	"	"
Lead	7.84	0.200	"	"	"	"	"	"
Nickel	9.22	0.400	"	"	"	"	"	"
Silver	0.0369	0.0200	"	"	"	"	"	"
Zinc	36.0	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/13/24 11:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0671	03/19/24	03/23/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **03/13/24 11:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	71.9	0.0500	mg/L dry	1	BHC1038	03/27/24	05/17/24	EPA 6020B	
Magnesium	17.5	0.0500	"	"	"	"	"	"	
Sodium	27.7	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/13/24 11:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.760	0.00100	units	1	BHE0618	05/20/24	05/20/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

FL05-01@4'
2403227-16 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/13/24 11:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	85.7		%	1	BHC0520	03/15/24	03/18/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/13/24 11:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.549	0.0100	mmhos/cm	1	BHC1039	03/27/24	03/29/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **03/13/24 11:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.21		pH Units	1	BHC1040	03/27/24	03/29/24	EPA 9045D	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

COMP01-FL05-01@4'
2403227-17 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/13/24 11:47**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHC0481	03/15/24	03/16/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:47**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0389	97.2 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0389	97.3 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0395	98.8 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/13/24 11:47**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0478	03/15/24	03/16/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:47**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	6.81	54.5 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

COMP01-FL05-01@4'
2403227-17 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/13/24 11:47**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHC0691	03/19/24	03/21/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:47**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0298	89.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0221	66.2 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/13/24 11:47**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHC0553	03/16/24	04/07/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/13/24 11:47**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

COMP01-FL05-01@4'
2403227-17 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	4.39	0.200	mg/kg dry	1	BHC0736	03/20/24	04/18/24	EPA 6020B
Barium	462	0.400	"	"	"	"	"	"
Cadmium	0.213	0.200	"	"	"	"	"	"
Copper	7.82	0.400	"	"	"	"	"	"
Lead	6.76	0.200	"	"	"	"	"	"
Nickel	7.43	0.400	"	"	"	"	"	"
Silver	0.0294	0.0200	"	"	"	"	"	"
Zinc	35.6	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/13/24 11:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0671	03/19/24	03/23/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **03/13/24 11:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	101	0.0500	mg/L dry	1	BHC1038	03/27/24	05/17/24	EPA 6020B	
Magnesium	22.6	0.0500	"	"	"	"	"	"	
Sodium	52.6	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/13/24 11:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.23	0.00100	units	1	BHE0618	05/20/24	05/20/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/13/24 11:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

COMP01-FL05-01@4'
2403227-17 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	87.2	%	1	BHC0520	03/15/24	03/18/24	Calculation

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/13/24 11:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.823	0.0100	mmhos/cm	1	BHC1039	03/27/24	03/29/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **03/13/24 11:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.20		pH Units	1	BHC1040	03/27/24	03/29/24	EPA 9045D	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

COMP01-FL09-01@4'
2403227-18 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/13/24 11:48**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHC0481	03/15/24	03/16/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:48**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0419	105 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0400	100 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0397	99.2 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/13/24 11:48**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0478	03/15/24	03/16/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:48**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	8.84	70.8 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

COMP01-FL09-01@4'
2403227-18 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/13/24 11:48**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHC0691	03/19/24	03/21/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:48**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0295	88.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0230	69.0 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/13/24 11:48**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHC0553	03/16/24	04/07/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/13/24 11:48**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

COMP01-FL09-01@4'
2403227-18 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	3.21	0.200	mg/kg dry	1	BHC0736	03/20/24	04/18/24	EPA 6020B
Barium	28.4	0.400	"	"	"	"	"	"
Cadmium	0.321	0.200	"	"	"	"	"	"
Copper	6.95	0.400	"	"	"	"	"	"
Lead	6.61	0.200	"	"	"	"	"	"
Nickel	22.4	0.400	"	"	"	"	"	"
Silver	ND	0.0200	"	"	"	"	"	"
Zinc	70.2	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/13/24 11:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0671	03/19/24	03/23/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **03/13/24 11:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	672	0.0500	mg/L dry	1	BHC1038	03/27/24	05/17/24	EPA 6020B	
Magnesium	71.6	0.0500	"	"	"	"	"	"	
Sodium	83.6	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/13/24 11:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.819	0.00100	units	1	BHE0618	05/20/24	05/20/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads
Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

COMP01-FL09-01@4'
2403227-18 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/13/24 11:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	84.8		%	1	BHC0520	03/15/24	03/18/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/13/24 11:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	2.99	0.0100	mmhos/cm	1	BHC1039	03/27/24	03/29/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **03/13/24 11:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.84		pH Units	1	BHC1040	03/27/24	03/29/24	EPA 9045D	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

MAN01-DL01@4'
2403227-19 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/13/24 11:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHC0481	03/15/24	03/16/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0407	102 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0401	100 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0380	95.0 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/13/24 11:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0478	03/15/24	03/16/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	7.20	57.6 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

MAN01-DL01@4'
2403227-19 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/13/24 11:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHC0691	03/19/24	03/21/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0272	81.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0264	79.1 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/13/24 11:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHC0553	03/16/24	04/07/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/13/24 11:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

MAN01-DL01@4'
2403227-19 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	11.6	0.200	mg/kg dry	1	BHC0736	03/20/24	04/18/24	EPA 6020B
Barium	282	0.400	"	"	"	"	"	"
Cadmium	0.214	0.200	"	"	"	"	"	"
Copper	8.68	0.400	"	"	"	"	"	"
Lead	8.22	0.200	"	"	"	"	"	"
Nickel	8.36	0.400	"	"	"	"	"	"
Silver	0.0367	0.0200	"	"	"	"	"	"
Zinc	35.5	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/13/24 11:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0671	03/19/24	03/23/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **03/13/24 11:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	80.9	0.0500	mg/L dry	1	BHC1038	03/27/24	05/17/24	EPA 6020B	
Magnesium	8.69	0.0500	"	"	"	"	"	"	
Sodium	2.62	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/13/24 11:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0739	0.00100	units	1	BHE0618	05/20/24	05/20/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/13/24 11:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

MAN01-DL01@4'
2403227-19 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	83.9	%	1	BHC0520	03/15/24	03/18/24	Calculation

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/13/24 11:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.174	0.0100	mmhos/cm	1	BHC1039	03/27/24	03/29/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **03/13/24 11:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.66		pH Units	1	BHC1040	03/27/24	03/29/24	EPA 9045D	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

MAN01-DL02@4'
2403227-20 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/13/24 11:51**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHC0481	03/15/24	03/16/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:51**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0388	97.0 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0388	97.0 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0388	96.9 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/13/24 11:51**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0478	03/15/24	03/16/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:51**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	7.27	58.2 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
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Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

MAN01-DL02@4'
2403227-20 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/13/24 11:51**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHC0691	03/19/24	03/21/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:51**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0233	69.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0183	54.8 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/13/24 11:51**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHC0553	03/16/24	04/07/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/13/24 11:51**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

MAN01-DL02@4'
2403227-20 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	7.19	0.200	mg/kg dry	1	BHC0736	03/20/24	04/18/24	EPA 6020B
Barium	239	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	6.87	0.400	"	"	"	"	"	"
Lead	7.94	0.200	"	"	"	"	"	"
Nickel	7.11	0.400	"	"	"	"	"	"
Silver	0.0317	0.0200	"	"	"	"	"	"
Zinc	33.1	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/13/24 11:51**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0671	03/19/24	03/23/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **03/13/24 11:51**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	62.9	0.0500	mg/L dry	1	BHC1038	03/27/24	05/17/24	EPA 6020B	
Magnesium	11.4	0.0500	"	"	"	"	"	"	
Sodium	3.28	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/13/24 11:51**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0999	0.00100	units	1	BHE0618	05/20/24	05/20/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads
Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

MAN01-DL02@4'
2403227-20 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/13/24 11:51**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	84.5		%	1	BHC0520	03/15/24	03/18/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/13/24 11:51**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.230	0.0100	mmhos/cm	1	BHC1039	03/27/24	03/29/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **03/13/24 11:51**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.31		pH Units	1	BHC1040	03/27/24	03/29/24	EPA 9045D	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

MAN01-DL03@4'
2403227-21 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/13/24 11:52**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHC0483	03/15/24	03/16/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:52**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0397	99.3 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0387	96.7 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0391	97.7 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/13/24 11:52**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0480	03/15/24	03/15/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:52**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	5.69	45.5 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

MAN01-DL03@4'
2403227-21 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/13/24 11:52**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHC0622	03/18/24	03/18/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:52**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0412	123 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0243	73.0 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/13/24 11:52**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHC0554	03/16/24	05/16/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/13/24 11:52**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

MAN01-DL03@4'
2403227-21 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	6.12	0.200	mg/kg dry	1	BHC0737	03/20/24	04/06/24	EPA 6020B
Barium	168	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	4.75	0.400	"	"	"	"	"	"
Lead	7.52	0.200	"	"	"	"	"	"
Nickel	4.69	0.400	"	"	"	"	"	"
Silver	0.0348	0.0200	"	"	"	"	"	"
Zinc	20.9	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/13/24 11:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0671	03/19/24	03/23/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **03/13/24 11:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	120	0.0500	mg/L dry	1	BHC1038	03/27/24	05/17/24	EPA 6020B	
Magnesium	9.62	0.0500	"	"	"	"	"	"	
Sodium	1.66	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/13/24 11:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0392	0.00100	units	1	BHE0618	05/20/24	05/20/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads
Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

MAN01-DL03@4'
2403227-21 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/13/24 11:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	85.0		%	1	BHC0520	03/15/24	03/18/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/13/24 11:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.167	0.0100	mmhos/cm	1	BHC1039	03/27/24	03/29/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **03/13/24 11:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.45		pH Units	1	BHC1040	03/27/24	03/29/24	EPA 9045D	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

MAN01-DL04@4'
2403227-22 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/13/24 11:54**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHC0483	03/15/24	03/16/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:54**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0400	99.9 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0394	98.5 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0403	101 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/13/24 11:54**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0480	03/15/24	03/15/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:54**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	5.92	47.3 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

MAN01-DL04@4'
2403227-22 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/13/24 11:54**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHC0622	03/18/24	03/18/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:54**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0386	116 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0245	73.4 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/13/24 11:54**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHC0554	03/16/24	05/16/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/13/24 11:54**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

MAN01-DL04@4'
2403227-22 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	5.74	0.200	mg/kg dry	1	BHC0737	03/20/24	04/06/24	EPA 6020B
Barium	125	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	5.13	0.400	"	"	"	"	"	"
Lead	7.62	0.200	"	"	"	"	"	"
Nickel	5.59	0.400	"	"	"	"	"	"
Silver	0.0360	0.0200	"	"	"	"	"	"
Zinc	22.6	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/13/24 11:54**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0671	03/19/24	03/23/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **03/13/24 11:54**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	44.4	0.0500	mg/L dry	1	BHC1038	03/27/24	05/17/24	EPA 6020B	
Magnesium	8.43	0.0500	"	"	"	"	"	"	
Sodium	1.85	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/13/24 11:54**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0667	0.00100	units	1	BHE0618	05/20/24	05/20/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

MAN01-DL04@4'
2403227-22 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/13/24 11:54**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	81.0		%	1	BHC0520	03/15/24	03/18/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/13/24 11:54**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.157	0.0100	mmhos/cm	1	BHC1039	03/27/24	03/29/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **03/13/24 11:54**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.37		pH Units	1	BHC1040	03/27/24	03/29/24	EPA 9045D	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads
Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

MAN02-FL01@4'
2403227-23 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/13/24 11:49**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHC0483	03/15/24	03/16/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:49**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0400	100 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0394	98.6 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0384	96.0 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/13/24 11:49**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0480	03/15/24	03/15/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:49**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	5.42	43.4 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

MAN02-FL01@4'
2403227-23 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/13/24 11:49**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHC0622	03/18/24	03/19/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:49**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0449	135 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0254	76.1 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/13/24 11:49**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHC0554	03/16/24	05/16/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/13/24 11:49**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

MAN02-FL01@4'
2403227-23 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	5.46	0.200	mg/kg dry	1	BHC0737	03/20/24	04/06/24	EPA 6020B
Barium	237	0.400	"	"	"	"	"	"
Cadmium	0.232	0.200	"	"	"	"	"	"
Copper	5.68	0.400	"	"	"	"	"	"
Lead	9.10	0.200	"	"	"	"	"	"
Nickel	6.01	0.400	"	"	"	"	"	"
Silver	0.0498	0.0200	"	"	"	"	"	"
Zinc	25.5	0.400	"	"	"	"	"	"
Selenium	0.262	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/13/24 11:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0671	03/19/24	03/23/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **03/13/24 11:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	121	0.0500	mg/L dry	1	BHC1038	03/27/24	05/17/24	EPA 6020B	
Magnesium	10.2	0.0500	"	"	"	"	"	"	
Sodium	8.07	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/13/24 11:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.189	0.00100	units	1	BHE0618	05/20/24	05/20/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/13/24 11:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

MAN02-FL01@4'
2403227-23 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	83.6	%	1	BHC0520	03/15/24	03/18/24	Calculation

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/13/24 11:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.176	0.0100	mmhos/cm	1	BHC1039	03/27/24	03/29/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **03/13/24 11:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.58		pH Units	1	BHC1040	03/27/24	03/29/24	EPA 9045D	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

FLR05@4'
2403227-24 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/13/24 11:53**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHC0483	03/15/24	03/18/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	0.019	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	0.98	0.50	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:53**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0395	98.8 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0394	98.6 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0404	101 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/13/24 11:53**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0480	03/15/24	03/15/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:53**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	5.12	40.9 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

FLR05@4'
2403227-24 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/13/24 11:53**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHC0622	03/18/24	03/19/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	0.0709	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	0.00801	0.00500	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:53**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0400	120 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0215	64.5 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/13/24 11:53**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHC0554	03/16/24	05/16/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/13/24 11:53**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

FLR05@4'
2403227-24 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	7.68	0.200	mg/kg dry	1	BHC0737	03/20/24	04/06/24	EPA 6020B
Barium	1480	0.400	"	"	"	"	"	"
Cadmium	0.406	0.200	"	"	"	"	"	"
Copper	15.3	0.400	"	"	"	"	"	"
Lead	9.37	0.200	"	"	"	"	"	"
Nickel	6.31	0.400	"	"	"	"	"	"
Silver	0.121	0.0200	"	"	"	"	"	"
Zinc	45.0	0.400	"	"	"	"	"	"
Selenium	0.286	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/13/24 11:53**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0671	03/19/24	03/23/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **03/13/24 11:53**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	141	0.0500	mg/L dry	1	BHC1038	03/27/24	05/17/24	EPA 6020B	
Magnesium	13.2	0.0500	"	"	"	"	"	"	
Sodium	13.9	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/13/24 11:53**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Sodium Adsorption Ratio	0.300	0.00100	units	1	BHE0618	05/20/24	05/20/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/13/24 11:53**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

FLR05@4'
2403227-24 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	83.5	%	1	BHC0520	03/15/24	03/18/24	Calculation

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/13/24 11:53**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.167	0.0100	mmhos/cm	1	BHC1039	03/27/24	03/29/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **03/13/24 11:53**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.36		pH Units	1	BHC1040	03/27/24	03/29/24	EPA 9045D	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads
Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

COMP01-FL05@4'
2403227-25 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/13/24 11:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHC0483	03/15/24	03/18/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0402	101 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0400	100 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0388	97.0 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/13/24 11:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0480	03/15/24	03/15/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	5.09	40.7 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
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Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

COMP01-FL05@4'
2403227-25 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/13/24 11:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHC0622	03/18/24	03/19/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/13/24 11:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0370	111 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0222	66.6 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/13/24 11:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHC0554	03/16/24	05/16/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/13/24 11:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Summit Scientific

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

COMP01-FL05@4'
2403227-25 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	6.13	0.200	mg/kg dry	1	BHC0737	03/20/24	04/06/24	EPA 6020B
Barium	107	0.400	"	"	"	"	"	"
Cadmium	0.352	0.200	"	"	"	"	"	"
Copper	5.91	0.400	"	"	"	"	"	"
Lead	8.47	0.200	"	"	"	"	"	"
Nickel	7.05	0.400	"	"	"	"	"	"
Silver	0.0466	0.0200	"	"	"	"	"	"
Zinc	27.4	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/13/24 11:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0671	03/19/24	03/23/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **03/13/24 11:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	54.0	0.0500	mg/L dry	1	BHC1038	03/27/24	05/17/24	EPA 6020B	
Magnesium	10.8	0.0500	"	"	"	"	"	"	
Sodium	7.46	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/13/24 11:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.242	0.00100	units	1	BHE0618	05/20/24	05/20/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/13/24 11:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

COMP01-FL05@4'
2403227-25 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	84.1	%	1	BHC0520	03/15/24	03/18/24	Calculation

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/13/24 11:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.258	0.0100	mmhos/cm	1	BHC1039	03/27/24	03/29/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **03/13/24 11:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.16		pH Units	1	BHC1040	03/27/24	03/29/24	EPA 9045D	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

FL07-02@4'
2403227-26 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/13/24 13:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHC0483	03/15/24	03/18/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/13/24 13:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0382	95.5 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0389	97.3 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0381	95.3 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/13/24 13:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0480	03/15/24	03/15/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/13/24 13:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	7.08	56.6 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

FL07-02@4'
2403227-26 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/13/24 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHC0622	03/18/24	03/19/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/13/24 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0406	122 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0224	67.1 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/13/24 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHC0554	03/16/24	05/16/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/13/24 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

FL07-02@4'
2403227-26 (Soil)

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Total Metals by EPA 6020B

Arsenic	5.97	0.200	mg/kg dry	1	BHC0737	03/20/24	04/06/24	EPA 6020B
Barium	151	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	4.87	0.400	"	"	"	"	"	"
Lead	7.58	0.200	"	"	"	"	"	"
Nickel	5.16	0.400	"	"	"	"	"	"
Silver	0.0337	0.0200	"	"	"	"	"	"
Zinc	21.6	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/13/24 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0671	03/19/24	03/23/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **03/13/24 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	74.3	0.0500	mg/L dry	1	BHC1038	03/27/24	05/17/24	EPA 6020B	
Magnesium	9.64	0.0500	"	"	"	"	"	"	
Sodium	4.03	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/13/24 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.117	0.00100	units	1	BHE0618	05/20/24	05/20/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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6855 W. 119th Ave.
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Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

FL07-02@4'
2403227-26 (Soil)

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Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/13/24 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	83.1		%	1	BHC0520	03/15/24	03/18/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/13/24 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.217	0.0100	mmhos/cm	1	BHC1039	03/27/24	03/29/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **03/13/24 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.37		pH Units	1	BHC1040	03/27/24	03/29/24	EPA 9045D	

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Project: PDC - Merritt Combined Wellheads
Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0481 - EPA 5030 Soil MS

Blank (BHC0481-BLK1)

Prepared & Analyzed: 03/15/24

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0402		"	0.0400		101	50-150			
Surrogate: Toluene-d8	0.0390		"	0.0400		97.5	50-150			
Surrogate: 4-Bromofluorobenzene	0.0389		"	0.0400		97.2	50-150			

LCS (BHC0481-BS1)

Prepared & Analyzed: 03/15/24

Benzene	0.106	0.0020	mg/kg	0.100		106	70-130			
Toluene	0.102	0.0050	"	0.100		102	70-130			
Ethylbenzene	0.105	0.0050	"	0.100		105	70-130			
m,p-Xylene	0.213	0.010	"	0.200		106	70-130			
o-Xylene	0.100	0.0050	"	0.100		100	70-130			
1,2,4-Trimethylbenzene	0.0995	0.0050	"	0.100		99.5	70-130			
1,3,5-Trimethylbenzene	0.0986	0.0050	"	0.100		98.6	70-130			
Naphthalene	0.0802	0.0038	"	0.100		80.2	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0396		"	0.0400		98.9	50-150			
Surrogate: Toluene-d8	0.0392		"	0.0400		97.9	50-150			
Surrogate: 4-Bromofluorobenzene	0.0383		"	0.0400		95.8	50-150			

Matrix Spike (BHC0481-MS1)

Source: 2403227-01

Prepared & Analyzed: 03/15/24

Benzene	0.0835	0.0020	mg/kg	0.100	ND	83.5	70-130			
Toluene	0.0812	0.0050	"	0.100	ND	81.2	70-130			
Ethylbenzene	0.0754	0.0050	"	0.100	ND	75.4	70-130			
m,p-Xylene	0.153	0.010	"	0.200	ND	76.7	70-130			
o-Xylene	0.0716	0.0050	"	0.100	ND	71.6	70-130			
1,2,4-Trimethylbenzene	0.0661	0.0050	"	0.100	ND	66.1	70-130			QM-07
1,3,5-Trimethylbenzene	0.0678	0.0050	"	0.100	ND	67.8	70-130			QM-07
Naphthalene	0.0566	0.0038	"	0.100	ND	56.6	70-130			QM-07
Surrogate: 1,2-Dichloroethane-d4	0.0418		"	0.0400		104	50-150			
Surrogate: Toluene-d8	0.0395		"	0.0400		98.8	50-150			
Surrogate: 4-Bromofluorobenzene	0.0384		"	0.0400		96.0	50-150			

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0481 - EPA 5030 Soil MS

Matrix Spike Dup (BHC0481-MSD1)			Source: 2403227-01		Prepared & Analyzed: 03/15/24					
Benzene	0.0900	0.0020	mg/kg	0.100	ND	90.0	70-130	7.50	30	
Toluene	0.0862	0.0050	"	0.100	ND	86.2	70-130	6.02	30	
Ethylbenzene	0.0836	0.0050	"	0.100	ND	83.6	70-130	10.2	30	
m,p-Xylene	0.167	0.010	"	0.200	ND	83.7	70-130	8.76	30	
o-Xylene	0.0788	0.0050	"	0.100	ND	78.8	70-130	9.57	30	
1,2,4-Trimethylbenzene	0.0721	0.0050	"	0.100	ND	72.1	70-130	8.68	30	
1,3,5-Trimethylbenzene	0.0735	0.0050	"	0.100	ND	73.5	70-130	8.03	30	
Naphthalene	0.0558	0.0038	"	0.100	ND	55.8	70-130	1.33	30	QM-07
<i>Surrogate: 1,2-Dichloroethane-d4</i>										
	0.0427		"	0.0400		107	50-150			
<i>Surrogate: Toluene-d8</i>										
	0.0400		"	0.0400		100	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>										
	0.0378		"	0.0400		94.6	50-150			

Batch BHC0483 - EPA 5030 Soil MS

Blank (BHC0483-BLK1)			Prepared: 03/15/24 Analyzed: 03/16/24							
Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>										
	0.0393		"	0.0400		98.3	50-150			
<i>Surrogate: Toluene-d8</i>										
	0.0385		"	0.0400		96.3	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>										
	0.0380		"	0.0400		94.9	50-150			

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Tasman Geosciences
6855 W. 119th Ave.
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Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0483 - EPA 5030 Soil MS

LCS (BHC0483-BS1)

Prepared: 03/15/24 Analyzed: 03/16/24

Benzene	0.104	0.0020	mg/kg	0.100		104	70-130			
Toluene	0.102	0.0050	"	0.100		102	70-130			
Ethylbenzene	0.0979	0.0050	"	0.100		97.9	70-130			
m,p-Xylene	0.196	0.010	"	0.200		98.0	70-130			
o-Xylene	0.0961	0.0050	"	0.100		96.1	70-130			
1,2,4-Trimethylbenzene	0.0905	0.0050	"	0.100		90.5	70-130			
1,3,5-Trimethylbenzene	0.0920	0.0050	"	0.100		92.0	70-130			
Naphthalene	0.0739	0.0038	"	0.100		73.9	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0412		"	0.0400		103	50-150			
Surrogate: Toluene-d8	0.0407		"	0.0400		102	50-150			
Surrogate: 4-Bromofluorobenzene	0.0382		"	0.0400		95.5	50-150			

Matrix Spike (BHC0483-MS1)

Source: 2403222-01

Prepared: 03/15/24 Analyzed: 03/16/24

Benzene	0.0860	0.0020	mg/kg	0.100	ND	86.0	70-130			
Toluene	0.0826	0.0050	"	0.100	ND	82.6	70-130			
Ethylbenzene	0.0836	0.0050	"	0.100	ND	83.6	70-130			
m,p-Xylene	0.171	0.010	"	0.200	ND	85.7	70-130			
o-Xylene	0.0826	0.0050	"	0.100	ND	82.6	70-130			
1,2,4-Trimethylbenzene	0.0784	0.0050	"	0.100	ND	78.4	70-130			
1,3,5-Trimethylbenzene	0.0791	0.0050	"	0.100	ND	79.1	70-130			
Naphthalene	0.0670	0.0038	"	0.100	ND	67.0	70-130			QM-07
Surrogate: 1,2-Dichloroethane-d4	0.0408		"	0.0400		102	50-150			
Surrogate: Toluene-d8	0.0387		"	0.0400		96.8	50-150			
Surrogate: 4-Bromofluorobenzene	0.0386		"	0.0400		96.6	50-150			

Matrix Spike Dup (BHC0483-MSD1)

Source: 2403222-01

Prepared: 03/15/24 Analyzed: 03/16/24

Benzene	0.0881	0.0020	mg/kg	0.100	ND	88.1	70-130	2.38	30	
Toluene	0.0869	0.0050	"	0.100	ND	86.9	70-130	5.10	30	
Ethylbenzene	0.0849	0.0050	"	0.100	ND	84.9	70-130	1.53	30	
m,p-Xylene	0.172	0.010	"	0.200	ND	86.2	70-130	0.489	30	
o-Xylene	0.0814	0.0050	"	0.100	ND	81.4	70-130	1.50	30	
1,2,4-Trimethylbenzene	0.0804	0.0050	"	0.100	ND	80.4	70-130	2.49	30	
1,3,5-Trimethylbenzene	0.0814	0.0050	"	0.100	ND	81.4	70-130	2.88	30	
Naphthalene	0.0701	0.0038	"	0.100	ND	70.1	70-130	4.51	30	
Surrogate: 1,2-Dichloroethane-d4	0.0414		"	0.0400		104	50-150			
Surrogate: Toluene-d8	0.0401		"	0.0400		100	50-150			
Surrogate: 4-Bromofluorobenzene	0.0399		"	0.0400		99.8	50-150			

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads
Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0478 - EPA 3550A

Blank (BHC0478-BLK1)

Prepared & Analyzed: 03/15/24

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: o-Terphenyl	11.9		"	12.5		94.9	30-150			

LCS (BHC0478-BS1)

Prepared & Analyzed: 03/15/24

C10-C28 (DRO)	412	50	mg/kg	500		82.3	70-130			
Surrogate: o-Terphenyl	10.9		"	12.5		87.5	30-150			

Matrix Spike (BHC0478-MS1)

Source: 2403227-01

Prepared & Analyzed: 03/15/24

C10-C28 (DRO)	419	50	mg/kg	500	24.6	79.0	70-130			
Surrogate: o-Terphenyl	10.5		"	12.5		84.2	30-150			

Matrix Spike Dup (BHC0478-MSD1)

Source: 2403227-01

Prepared & Analyzed: 03/15/24

C10-C28 (DRO)	393	50	mg/kg	500	24.6	73.8	70-130	6.41	20	
Surrogate: o-Terphenyl	9.79		"	12.5		78.3	30-150			

Batch BHC0480 - EPA 3550A

Blank (BHC0480-BLK1)

Prepared & Analyzed: 03/15/24

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: o-Terphenyl	11.7		"	12.5		93.4	30-150			

LCS (BHC0480-BS1)

Prepared & Analyzed: 03/15/24

C10-C28 (DRO)	412	50	mg/kg	500		82.4	70-130			
Surrogate: o-Terphenyl	10.1		"	12.5		80.5	30-150			

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Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD	
		Limit	Units		Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0480 - EPA 3550A

Matrix Spike (BHC0480-MS1)		Source: 2403222-01			Prepared & Analyzed: 03/15/24					
C10-C28 (DRO)	391	50	mg/kg	500	15.9	75.0	70-130			
Surrogate: o-Terphenyl	7.23		"	12.5		57.8	30-150			
Matrix Spike Dup (BHC0480-MSD1)		Source: 2403222-01			Prepared & Analyzed: 03/15/24					
C10-C28 (DRO)	406	50	mg/kg	500	15.9	78.0	70-130	3.67	20	
Surrogate: o-Terphenyl	7.69		"	12.5		61.5	30-150			

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Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Reporting			Spike		Source		%REC		RPD	
	Result	Limit	Units	Level		Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0622 - EPA 5030 Soil MS

Blank (BHC0622-BLK1)

Prepared & Analyzed: 03/18/24

Acenaphthene	ND	0.00500	mg/kg								
Anthracene	ND	0.00500	"								
Benzo (a) anthracene	ND	0.00500	"								
Benzo (a) pyrene	ND	0.00500	"								
Benzo (b) fluoranthene	ND	0.00500	"								
Benzo (k) fluoranthene	ND	0.00500	"								
Chrysene	ND	0.00500	"								
Dibenz (a,h) anthracene	ND	0.00500	"								
Fluoranthene	ND	0.00500	"								
Fluorene	ND	0.00500	"								
Indeno (1,2,3-cd) pyrene	ND	0.00500	"								
Pyrene	ND	0.00500	"								
1-Methylnaphthalene	ND	0.00500	"								
2-Methylnaphthalene	ND	0.00500	"								
Surrogate: 2-Methylnaphthalene-d10	0.0186		"	0.0333		55.9		40-150			
Surrogate: Fluoranthene-d10	0.0279		"	0.0333		83.8		40-150			

LCS (BHC0622-BS1)

Prepared & Analyzed: 03/18/24

Acenaphthene	0.0307	0.00500	mg/kg	0.0333		92.2		31-137			
Anthracene	0.0318	0.00500	"	0.0333		95.3		30-120			
Benzo (a) anthracene	0.0299	0.00500	"	0.0333		89.6		30-120			
Benzo (a) pyrene	0.0280	0.00500	"	0.0333		83.9		30-120			
Benzo (b) fluoranthene	0.0293	0.00500	"	0.0333		87.8		30-120			
Benzo (k) fluoranthene	0.0324	0.00500	"	0.0333		97.2		30-120			
Chrysene	0.0322	0.00500	"	0.0333		96.6		30-120			
Dibenz (a,h) anthracene	0.0272	0.00500	"	0.0333		81.7		30-120			
Fluoranthene	0.0302	0.00500	"	0.0333		90.5		30-120			
Fluorene	0.0309	0.00500	"	0.0333		92.7		30-120			
Indeno (1,2,3-cd) pyrene	0.0251	0.00500	"	0.0333		75.2		30-120			
Pyrene	0.0346	0.00500	"	0.0333		104		35-142			
1-Methylnaphthalene	0.0376	0.00500	"	0.0333		113		35-142			
2-Methylnaphthalene	0.0169	0.00500	"	0.0333		50.6		35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0299		"	0.0333		89.6		40-150			
Surrogate: Fluoranthene-d10	0.0310		"	0.0333		92.9		40-150			

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Reporting			Spike		Source		%REC		RPD	
	Result	Limit	Units	Level		Result		%REC	Limits	RPD	Limit
Notes											

Batch BHC0622 - EPA 5030 Soil MS

Matrix Spike (BHC0622-MS1)

Source: 2403201-02

Prepared & Analyzed: 03/18/24

Acenaphthene	0.0184	0.00500	mg/kg	0.0333	ND	55.2	31-137				
Anthracene	0.0194	0.00500	"	0.0333	ND	58.1	30-120				
Benzo (a) anthracene	0.0188	0.00500	"	0.0333	ND	56.3	30-120				
Benzo (a) pyrene	0.0185	0.00500	"	0.0333	ND	55.6	30-120				
Benzo (b) fluoranthene	0.0206	0.00500	"	0.0333	ND	61.7	30-120				
Benzo (k) fluoranthene	0.0209	0.00500	"	0.0333	ND	62.6	30-120				
Chrysene	0.0190	0.00500	"	0.0333	ND	56.9	30-120				
Dibenz (a,h) anthracene	0.0243	0.00500	"	0.0333	ND	72.9	30-120				
Fluoranthene	0.0191	0.00500	"	0.0333	ND	57.4	30-120				
Fluorene	0.0191	0.00500	"	0.0333	ND	57.2	30-120				
Indeno (1,2,3-cd) pyrene	0.0217	0.00500	"	0.0333	ND	65.0	30-120				
Pyrene	0.0205	0.00500	"	0.0333	ND	61.4	35-142				
1-Methylnaphthalene	0.0347	0.00500	"	0.0333	ND	104	15-130				
2-Methylnaphthalene	0.0320	0.00500	"	0.0333	ND	95.9	15-130				
Surrogate: 2-Methylnaphthalene-d10	0.0278		"	0.0333		83.4	40-150				
Surrogate: Fluoranthene-d10	0.0202		"	0.0333		60.6	40-150				

Matrix Spike Dup (BHC0622-MSD1)

Source: 2403201-02

Prepared & Analyzed: 03/18/24

Acenaphthene	0.0197	0.00500	mg/kg	0.0333	ND	59.1	31-137	6.93	30
Anthracene	0.0208	0.00500	"	0.0333	ND	62.5	30-120	7.16	30
Benzo (a) anthracene	0.0209	0.00500	"	0.0333	ND	62.8	30-120	11.0	30
Benzo (a) pyrene	0.0205	0.00500	"	0.0333	ND	61.5	30-120	10.1	30
Benzo (b) fluoranthene	0.0231	0.00500	"	0.0333	ND	69.4	30-120	11.8	30
Benzo (k) fluoranthene	0.0221	0.00500	"	0.0333	ND	66.3	30-120	5.73	30
Chrysene	0.0206	0.00500	"	0.0333	ND	61.8	30-120	8.17	30
Dibenz (a,h) anthracene	0.0255	0.00500	"	0.0333	ND	76.6	30-120	4.98	30
Fluoranthene	0.0209	0.00500	"	0.0333	ND	62.6	30-120	8.78	30
Fluorene	0.0202	0.00500	"	0.0333	ND	60.7	30-120	5.97	30
Indeno (1,2,3-cd) pyrene	0.0229	0.00500	"	0.0333	ND	68.8	30-120	5.66	30
Pyrene	0.0220	0.00500	"	0.0333	ND	66.1	35-142	7.36	30
1-Methylnaphthalene	0.0318	0.00500	"	0.0333	ND	95.5	15-130	8.59	50
2-Methylnaphthalene	0.0393	0.00500	"	0.0333	ND	118	15-130	20.6	50
Surrogate: 2-Methylnaphthalene-d10	0.0352		"	0.0333		106	40-150		
Surrogate: Fluoranthene-d10	0.0218		"	0.0333		65.4	40-150		

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads
Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0691 - EPA 5030 Soil MS

Blank (BHC0691-BLK1)

Prepared: 03/19/24 Analyzed: 03/20/24

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
Surrogate: 2-Methylnaphthalene-d10	0.0331		"	0.0333		99.2	40-150			
Surrogate: Fluoranthene-d10	0.0304		"	0.0333		91.3	40-150			

LCS (BHC0691-BS1)

Prepared: 03/19/24 Analyzed: 03/20/24

Acenaphthene	0.0321	0.00500	mg/kg	0.0333	96.4	31-137
Anthracene	0.0382	0.00500	"	0.0333	115	30-120
Benzo (a) anthracene	0.0211	0.00500	"	0.0333	63.4	30-120
Benzo (a) pyrene	0.0286	0.00500	"	0.0333	85.9	30-120
Benzo (b) fluoranthene	0.0253	0.00500	"	0.0333	75.9	30-120
Benzo (k) fluoranthene	0.0313	0.00500	"	0.0333	93.8	30-120
Chrysene	0.0286	0.00500	"	0.0333	85.8	30-120
Dibenz (a,h) anthracene	0.0270	0.00500	"	0.0333	81.1	30-120
Fluoranthene	0.0352	0.00500	"	0.0333	105	30-120
Fluorene	0.0319	0.00500	"	0.0333	95.6	30-120
Indeno (1,2,3-cd) pyrene	0.0217	0.00500	"	0.0333	65.0	30-120
Pyrene	0.0342	0.00500	"	0.0333	103	35-142
1-Methylnaphthalene	0.0305	0.00500	"	0.0333	91.6	35-142
2-Methylnaphthalene	0.0256	0.00500	"	0.0333	76.8	35-142
Surrogate: 2-Methylnaphthalene-d10	0.0330		"	0.0333	99.1	40-150
Surrogate: Fluoranthene-d10	0.0356		"	0.0333	107	40-150

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0691 - EPA 5030 Soil MS

Matrix Spike (BHC0691-MS1)			Source: 2403227-01		Prepared: 03/19/24 Analyzed: 03/20/24						
Acenaphthene	0.0200	0.00500	mg/kg	0.0333	ND	60.0	31-137				
Anthracene	0.0259	0.00500	"	0.0333	ND	77.7	30-120				
Benzo (a) anthracene	0.0136	0.00500	"	0.0333	ND	40.7	30-120				
Benzo (a) pyrene	0.0189	0.00500	"	0.0333	ND	56.8	30-120				
Benzo (b) fluoranthene	0.0165	0.00500	"	0.0333	ND	49.4	30-120				
Benzo (k) fluoranthene	0.0201	0.00500	"	0.0333	ND	60.4	30-120				
Chrysene	0.0161	0.00500	"	0.0333	ND	48.4	30-120				
Dibenz (a,h) anthracene	0.0191	0.00500	"	0.0333	ND	57.4	30-120				
Fluoranthene	0.0224	0.00500	"	0.0333	ND	67.3	30-120				
Fluorene	0.0196	0.00500	"	0.0333	ND	58.7	30-120				
Indeno (1,2,3-cd) pyrene	0.0188	0.00500	"	0.0333	ND	56.3	30-120				
Pyrene	0.0218	0.00500	"	0.0333	ND	65.5	35-142				
1-Methylnaphthalene	0.0182	0.00500	"	0.0333	ND	54.6	15-130				
2-Methylnaphthalene	0.0144	0.00500	"	0.0333	ND	43.1	15-130				
Surrogate: 2-Methylnaphthalene-d10	0.0217		"	0.0333		65.2	40-150				
Surrogate: Fluoranthene-d10	0.0218		"	0.0333		65.4	40-150				

Matrix Spike Dup (BHC0691-MSD1)			Source: 2403227-01		Prepared: 03/19/24 Analyzed: 03/20/24						
Acenaphthene	0.0165	0.00500	mg/kg	0.0333	ND	49.5	31-137	19.2	30		
Anthracene	0.0260	0.00500	"	0.0333	ND	78.0	30-120	0.373	30		
Benzo (a) anthracene	0.0169	0.00500	"	0.0333	ND	50.6	30-120	21.6	30		
Benzo (a) pyrene	0.0152	0.00500	"	0.0333	ND	45.7	30-120	21.5	30		
Benzo (b) fluoranthene	0.0186	0.00500	"	0.0333	ND	55.9	30-120	12.4	30		
Benzo (k) fluoranthene	0.0163	0.00500	"	0.0333	ND	49.0	30-120	20.8	30		
Chrysene	0.0184	0.00500	"	0.0333	ND	55.2	30-120	13.0	30		
Dibenz (a,h) anthracene	0.0173	0.00500	"	0.0333	ND	51.9	30-120	10.0	30		
Fluoranthene	0.0183	0.00500	"	0.0333	ND	55.0	30-120	20.0	30		
Fluorene	0.0157	0.00500	"	0.0333	ND	47.0	30-120	22.1	30		
Indeno (1,2,3-cd) pyrene	0.0213	0.00500	"	0.0333	ND	64.0	30-120	12.8	30		
Pyrene	0.0190	0.00500	"	0.0333	ND	56.9	35-142	14.1	30		
1-Methylnaphthalene	0.0140	0.00500	"	0.0333	ND	42.1	15-130	25.9	50		
2-Methylnaphthalene	0.0251	0.00500	"	0.0333	ND	75.2	15-130	54.3	50		QR-02
Surrogate: 2-Methylnaphthalene-d10	0.0178		"	0.0333		53.3	40-150				
Surrogate: Fluoranthene-d10	0.0180		"	0.0333		53.9	40-150				

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

Total Metals by EPA 6020B Hot Water Soluble Extraction - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0553 - EPA 3050B

Blank (BHC0553-BLK1)

Prepared: 03/16/24 Analyzed: 04/07/24

Boron ND 2.00 mg/L

LCS (BHC0553-BS1)

Prepared: 03/16/24 Analyzed: 04/07/24

Boron 4.88 2.00 mg/L 5.00 97.6 80-120

Duplicate (BHC0553-DUP1)

Source: 2403227-01

Prepared: 03/16/24 Analyzed: 04/07/24

Boron 0.0811 2.00 mg/L 0.0954 16.2 20

Matrix Spike (BHC0553-MS1)

Source: 2403227-01

Prepared: 03/16/24 Analyzed: 04/07/24

Boron 4.68 2.00 mg/L 5.00 0.0954 91.8 75-125

Matrix Spike Dup (BHC0553-MSD1)

Source: 2403227-01

Prepared: 03/16/24 Analyzed: 04/07/24

Boron 4.76 2.00 mg/L 5.00 0.0954 93.3 75-125 1.68 25

Batch BHC0554 - EPA 3050B

Blank (BHC0554-BLK1)

Prepared: 03/16/24 Analyzed: 05/16/24

Boron ND 2.00 mg/L

LCS (BHC0554-BS1)

Prepared: 03/16/24 Analyzed: 05/16/24

Boron 4.61 2.00 mg/L 5.00 92.2 80-120

Duplicate (BHC0554-DUP1)

Source: 2403227-21

Prepared: 03/16/24 Analyzed: 05/16/24

Boron 0.0456 2.00 mg/L 0.0808 55.6 20 QR-01

Matrix Spike (BHC0554-MS1)

Source: 2403227-21

Prepared: 03/16/24 Analyzed: 05/16/24

Boron 5.12 2.00 mg/L 5.00 0.0808 101 75-125

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

Total Metals by EPA 6020B Hot Water Soluble Extraction - Quality Control

Summit Scientific

Analyte	Result	Reporting			Spike	Source	%REC		RPD	
		Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0554 - EPA 3050B

Matrix Spike Dup (BHC0554-MSD1)

Source: 2403227-21

Prepared: 03/16/24 Analyzed: 05/16/24

Boron	5.02	2.00	mg/L	5.00	0.0808	98.9	75-125	1.83	25

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

Total Metals by EPA 6020B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0736 - EPA 3050B

Blank (BHC0736-BLK1)

Prepared: 03/20/24 Analyzed: 04/18/24

Arsenic	ND	0.200	mg/kg wet
Barium	ND	0.400	"
Cadmium	ND	0.200	"
Copper	ND	0.400	"
Lead	ND	0.200	"
Nickel	ND	0.400	"
Silver	ND	0.0200	"
Zinc	ND	0.400	"
Selenium	ND	0.260	"

LCS (BHC0736-BS1)

Prepared: 03/20/24 Analyzed: 04/18/24

Arsenic	41.5	0.200	mg/kg wet	40.0	104	80-120
Barium	41.8	0.400	"	40.0	104	80-120
Cadmium	2.10	0.200	"	2.00	105	80-120
Copper	41.7	0.400	"	40.0	104	80-120
Lead	20.6	0.200	"	20.0	103	80-120
Nickel	41.5	0.400	"	40.0	104	80-120
Silver	2.06	0.0200	"	2.00	103	80-120
Zinc	41.4	0.400	"	40.0	103	80-120
Selenium	4.24	0.260	"	4.00	106	80-120

Duplicate (BHC0736-DUP1)

Source: 2403227-01

Prepared: 03/20/24 Analyzed: 04/18/24

Arsenic	5.67	0.200	mg/kg dry	5.42	4.50	20	
Barium	491	0.400	"	302	47.8	20	QR-04
Cadmium	0.241	0.200	"	0.217	10.4	20	
Copper	9.03	0.400	"	8.20	9.71	20	
Lead	7.66	0.200	"	7.41	3.32	20	
Nickel	9.82	0.400	"	9.58	2.44	20	
Silver	0.0395	0.0200	"	0.0376	4.76	20	
Zinc	35.4	0.400	"	33.3	5.92	20	
Selenium	0.180	0.260	"	ND	200	20	QR-01

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

Total Metals by EPA 6020B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0736 - EPA 3050B

Matrix Spike (BHC0736-MS1)		Source: 2403227-01			Prepared: 03/20/24 Analyzed: 04/18/24					
Arsenic	52.3	0.200	mg/kg dry	45.9	5.42	102	75-125			
Barium	354	0.400	"	45.9	302	114	75-125			
Cadmium	2.65	0.200	"	2.29	0.217	106	75-125			
Copper	55.4	0.400	"	45.9	8.20	103	75-125			
Lead	30.5	0.200	"	22.9	7.41	101	75-125			
Nickel	57.1	0.400	"	45.9	9.58	104	75-125			
Silver	2.42	0.0200	"	2.29	0.0376	104	75-125			
Zinc	81.2	0.400	"	45.9	33.3	104	75-125			
Selenium	4.08	0.260	"	4.59	ND	89.0	75-125			

Matrix Spike Dup (BHC0736-MSD1)		Source: 2403227-01			Prepared: 03/20/24 Analyzed: 04/18/24					
Arsenic	51.4	0.200	mg/kg dry	45.9	5.42	100	75-125	1.77	25	
Barium	349	0.400	"	45.9	302	102	75-125	1.56	25	
Cadmium	2.57	0.200	"	2.29	0.217	103	75-125	2.94	25	
Copper	54.4	0.400	"	45.9	8.20	101	75-125	1.88	25	
Lead	29.8	0.200	"	22.9	7.41	97.8	75-125	2.19	25	
Nickel	56.6	0.400	"	45.9	9.58	102	75-125	0.940	25	
Silver	2.37	0.0200	"	2.29	0.0376	102	75-125	2.21	25	
Zinc	79.4	0.400	"	45.9	33.3	100	75-125	2.31	25	
Selenium	4.05	0.260	"	4.59	ND	88.2	75-125	0.892	25	

Post Spike (BHC0736-PS1)		Source: 2403227-01			Prepared: 03/20/24 Analyzed: 04/18/24					
Arsenic	109		ug/l	100	11.8	97.3	75-125			
Barium	1130		"	100	658	476	75-125			QM-01
Cadmium	5.38		"	5.00	0.474	98.0	75-125			
Copper	114		"	100	17.9	96.4	75-125			
Lead	63.7		"	50.0	16.2	95.0	75-125			
Nickel	116		"	100	20.9	94.7	75-125			
Silver	4.95		"	5.00	0.0820	97.3	75-125			
Zinc	177		"	100	72.6	104	75-125			
Selenium	8.67		"	10.0	0.291	83.8	75-125			

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

Total Metals by EPA 6020B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0737 - EPA 3050B

Blank (BHC0737-BLK1)

Prepared: 03/20/24 Analyzed: 04/06/24

Arsenic	ND	0.200	mg/kg wet
Barium	ND	0.400	"
Cadmium	ND	0.200	"
Copper	ND	0.400	"
Lead	ND	0.200	"
Nickel	ND	0.400	"
Silver	ND	0.0200	"
Zinc	ND	0.400	"
Selenium	ND	0.260	"

LCS (BHC0737-BS1)

Prepared: 03/20/24 Analyzed: 04/06/24

Arsenic	37.9	0.200	mg/kg wet	40.0	94.8	80-120
Barium	40.2	0.400	"	40.0	101	80-120
Cadmium	2.04	0.200	"	2.00	102	80-120
Copper	44.6	0.400	"	40.0	112	80-120
Lead	20.2	0.200	"	20.0	101	80-120
Nickel	43.8	0.400	"	40.0	109	80-120
Silver	2.06	0.0200	"	2.00	103	80-120
Zinc	44.3	0.400	"	40.0	111	80-120
Selenium	4.66	0.260	"	4.00	117	80-120

Duplicate (BHC0737-DUP1)

Source: 2312528-04

Prepared: 03/20/24 Analyzed: 04/06/24

Arsenic	5.97	0.200	mg/kg dry	6.46	8.01	20
Barium	55.0	0.400	"	51.3	6.92	20
Cadmium	0.162	0.200	"	0.158	2.04	20
Copper	4.60	0.400	"	5.07	9.67	20
Lead	10.0	0.200	"	10.6	5.73	20
Nickel	5.62	0.400	"	5.83	3.73	20
Silver	0.0556	0.0200	"	0.0565	1.67	20
Zinc	28.2	0.400	"	29.5	4.38	20
Selenium	0.199	0.260	"	0.261	27.0	20

QR-01

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

Total Metals by EPA 6020B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0737 - EPA 3050B

Matrix Spike (BHC0737-MS1)

Source: 2312528-04

Prepared: 03/20/24 Analyzed: 04/06/24

Arsenic	48.8	0.200	mg/kg dry	46.7	6.46	90.6	75-125			
Barium	82.4	0.400	"	46.7	51.3	66.6	75-125			QM-07
Cadmium	2.55	0.200	"	2.34	0.158	102	75-125			
Copper	35.3	0.400	"	46.7	5.07	64.7	75-125			QM-07
Lead	32.3	0.200	"	23.4	10.6	93.1	75-125			
Nickel	36.3	0.400	"	46.7	5.83	65.2	75-125			QM-07
Silver	2.37	0.0200	"	2.34	0.0565	99.2	75-125			
Zinc	59.1	0.400	"	46.7	29.5	63.4	75-125			QM-07
Selenium	5.30	0.260	"	4.67	0.261	108	75-125			

Matrix Spike Dup (BHC0737-MSD1)

Source: 2312528-04

Prepared: 03/20/24 Analyzed: 04/06/24

Arsenic	47.9	0.200	mg/kg dry	46.7	6.46	88.7	75-125	1.75	25	
Barium	81.4	0.400	"	46.7	51.3	64.4	75-125	1.23	25	QM-07
Cadmium	2.54	0.200	"	2.34	0.158	102	75-125	0.422	25	
Copper	34.2	0.400	"	46.7	5.07	62.3	75-125	3.17	25	QM-07
Lead	32.0	0.200	"	23.4	10.6	91.6	75-125	1.11	25	
Nickel	34.9	0.400	"	46.7	5.83	62.3	75-125	3.88	25	QM-07
Silver	2.37	0.0200	"	2.34	0.0565	98.9	75-125	0.315	25	
Zinc	56.9	0.400	"	46.7	29.5	58.8	75-125	3.74	25	QM-07
Selenium	5.25	0.260	"	4.67	0.261	107	75-125	0.974	25	

Post Spike (BHC0737-PS1)

Source: 2312528-04

Prepared: 03/20/24 Analyzed: 04/06/24

Arsenic	109		ug/l	100	13.8	95.1	75-125			
Barium	198		"	100	110	88.0	75-125			
Cadmium	5.49		"	5.00	0.339	103	75-125			
Copper	72.3		"	100	10.8	61.4	75-125			QM-07
Lead	72.2		"	50.0	22.7	99.0	75-125			
Nickel	74.0		"	100	12.5	61.5	75-125			QM-07
Silver	5.21		"	5.00	0.121	102	75-125			
Zinc	127		"	100	63.1	63.9	75-125			QM-07
Selenium	12.5		"	10.0	0.559	119	75-125			

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

Hexavalent Chromium by EPA Method 7196 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0670 - 3060A Mod

Blank (BHC0670-BLK1)

Prepared: 03/19/24 Analyzed: 03/20/24

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BHC0670-BS1)

Prepared: 03/19/24 Analyzed: 03/20/24

Chromium, Hexavalent 25.0 0.30 mg/kg wet 25.0 100 80-120

Duplicate (BHC0670-DUP1)

Source: 2402491-02

Prepared: 03/19/24 Analyzed: 03/20/24

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BHC0670-MS1)

Source: 2402491-02

Prepared: 03/19/24 Analyzed: 03/20/24

Chromium, Hexavalent 30.3 0.30 mg/kg dry 31.7 ND 95.4 75-125

Matrix Spike Dup (BHC0670-MSD1)

Source: 2402491-02

Prepared: 03/19/24 Analyzed: 03/20/24

Chromium, Hexavalent 29.9 0.30 mg/kg dry 31.7 ND 94.4 75-125 1.05 20

Batch BHC0671 - 3060A Mod

Blank (BHC0671-BLK1)

Prepared: 03/19/24 Analyzed: 03/23/24

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BHC0671-BS1)

Prepared: 03/19/24 Analyzed: 03/23/24

Chromium, Hexavalent 24.8 0.30 mg/kg wet 25.0 99.4 80-120

Duplicate (BHC0671-DUP1)

Source: 2403227-16

Prepared: 03/19/24 Analyzed: 03/23/24

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BHC0671-MS1)

Source: 2403227-16

Prepared: 03/19/24 Analyzed: 03/23/24

Chromium, Hexavalent 31.1 0.30 mg/kg dry 29.2 ND 107 75-125

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

Hexavalent Chromium by EPA Method 7196 - Quality Control
Summit Scientific

Reporting				Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0671 - 3060A Mod

Matrix Spike Dup (BHC0671-MSD1)		Source: 2403227-16			Prepared: 03/19/24 Analyzed: 03/23/24						
Chromium, Hexavalent		30.8	0.30	mg/kg dry	29.2	ND	106	75-125	0.943	20	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD	
		Limit	Units		Result	%REC	Limits	RPD	Limit	Notes

Batch BHC1038 - General Preparation

Blank (BHC1038-BLK1)

Prepared: 03/27/24 Analyzed: 05/17/24

Calcium	ND	0.0500	mg/L wet
Magnesium	ND	0.0500	"
Sodium	ND	0.0500	"

LCS (BHC1038-BS1)

Prepared: 03/27/24 Analyzed: 05/17/24

Calcium	6.27	0.0500	mg/L wet	5.00	125	70-130
Magnesium	5.34	0.0500	"	5.00	107	70-130
Sodium	5.63	0.0500	"	5.00	113	70-130

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control
Summit Scientific

Reporting				Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0520 - General Preparation

Duplicate (BHC0520-DUP1)		Source: 2403203-01			Prepared: 03/15/24 Analyzed: 03/18/24						
% Solids	90.0		%		89.4			0.695		20	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD	
		Limit	Units		Result	%REC	Limits	RPD	Limit	Notes

Batch BHC1039 - General Preparation

Blank (BHC1039-BLK1)

Prepared: 03/27/24 Analyzed: 03/29/24

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BHC1039-BS1)

Prepared: 03/27/24 Analyzed: 03/29/24

Specific Conductance (EC) 0.150 0.0100 mmhos/cm 0.150 99.7 95-105

Duplicate (BHC1039-DUP1)

Source: 2403227-01

Prepared: 03/27/24 Analyzed: 03/29/24

Specific Conductance (EC) 0.626 0.0100 mmhos/cm 0.634 1.25 20

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction - Quality Control

Summit Scientific

Analyte	Result	Reporting		Spike Level	Source Result	%REC		RPD		Notes
		Limit	Units			%REC	Limits	RPD	Limit	

Batch BHC1040 - General Preparation

LCS (BHC1040-BS1)

Prepared: 03/27/24 Analyzed: 03/29/24

pH	9.00	pH Units	9.18	98.0	95-105

Duplicate (BHC1040-DUP1)

Source: 2403227-01

Prepared: 03/27/24 Analyzed: 03/29/24

pH	8.11	pH Units	8.15	0.492	20

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/20/24 12:35

Notes and Definitions

QR-04	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QR-02	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
QR-01	Analyses are not controlled on RPD values from sample concentrations less than 10 times the reporting limit. QC batch accepted based on LCS and/or LCSD QC results.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
QM-01	The spike recovery for this QC sample is outside of established control limits due to sample matrix interference.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

May 08, 2024

Karen Olson

Tasman Geosciences

6855 W. 119th Ave.

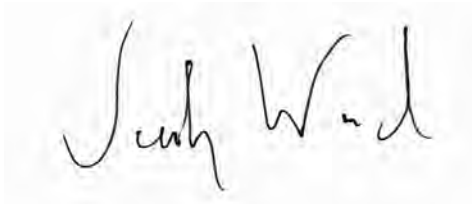
Broomfield, CO 80020

RE: PDC - Merritt Combined Wellheads

Work Order #2403319

Enclosed are the results of analyses for samples received by Summit Scientific on 03/20/24 17:46. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Jacob Wood". The signature is written in a cursive, flowing style.

Jacob Wood For Paul Shrewsbury

President



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/08/24 15:21

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FL01-03@4'	2403319-01	Soil	03/20/24 11:05	03/20/24 17:46
FL01-04@4'	2403319-02	Soil	03/20/24 11:55	03/20/24 17:46
FL01-05@6'	2403319-03	Soil	03/20/24 14:10	03/20/24 17:46
FL01-06@7'	2403319-04	Soil	03/20/24 14:40	03/20/24 17:46
FL01-08@4'	2403319-05	Soil	03/20/24 13:10	03/20/24 17:46
GL02-02@4'	2403319-06	Soil	03/20/24 13:25	03/20/24 17:46

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client: PDC PDC / Tasman		Send Data To: Project Manager: Karen Olson		Send Invoice To: Company: PDC Energy	
Address: 6855 W 119th Ave		E-Mail: karen.olson@chevron.com		Project Name/Location:	
City/State/Zip: Broomfield / CO / 80220				AFE#:	
Phone: 303-487-1228		Project Name: Merritt Combined Wellheads		PO/Billing Codes:	
Sampler Name: Jordan Hestmark		Project Number:		Contact: Karen Olson	

					Preservative				Matrix			Analysis Requested								Special Instructions	
ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEXN - 8260B	TPH - (C6 - C36)	1,2,4 & 1,3,5 - TMB	Boron - HWS	pH, EC, SAR	PAHs - 915	Metals - 915	TDS, SO4, Cl	
1	FL01-03 @ 4'	3/20/24	1105	2			X			X			X	X	X	X	X	X	X		
2	FL01-04 @ 4'		1155	1																	
3	FL01-05 @ 6'		1410	1																	
4	FL01-06 @ 7'		1440	1																	
5	FL01-08 @ 4'		1310	1																	
6	GL02-02 @ 4'		1325	1																	
7																					
8																					
9																					
10																					
11																					
12																					
13																					
14																					
15																					

Relinquished by: Jordan Hestmark	Date/Time: 3/20/24 1620	Received by: Tasman Lockbox	Date/Time: 3/20/24 1620	TAT Business Days	Field DO	Notes:
				Same Day	Field EC	
Relinquished by: Tasman Lockbox	Date/Time: 3/20/24 1740	Received by: [Signature]	Date/Time: 3/20/24 1740	1 Day	Field ORP	
				2 Days	Field pH	
Relinquished by:	Date/Time:	Received by:	Date/Time:	3 Days	Field Temp.	
				Standard	X Field Turb.	
Temperature Upon Receipt: 9.1	Corrected Temperature: 9	IR gun #: 1	HNO3 lot #:			

S2

Sample Receipt Checklist

S2 Work Order# 2403319

Client: Procterman Client Project ID: Merritt Combined wellheadShipped Via: H.D./P.U./FedEx/UPS/USPS/Other ☐ Airbill #:

☐	☐	☐	☐	☐

Matrix (Check all that apply) Air ☐ Soil ☒ Solid ☐ Water ☐ Other ☐Temp (°C) 9.1 Thermometer # 1

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	☒	☐	☐	
If custody seals are present, are they intact? ⁽¹⁾	☒	☐	☐	AMZCE
Are samples due within 48 hours present?	☐	☒	☐	
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe ²⁺), Hexavalent Chromium (Cr ⁶⁺ , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	☐	☒	☐	
Is a chain-of-custody (COC) form present and filled out completely? ⁽¹⁾	☒	☐	☐	
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	☒	☐	☐	
Were all samples received intact? ⁽¹⁾	☒	☐	☐	
Was adequate sample volume provided? ⁽¹⁾	☒	☐	☐	
Does the COC agree with the number and type of sample bottles received? ⁽¹⁾	☒	☒	☐	1 extra sample
Do the sample IDs on the bottle labels match the COC? ⁽¹⁾	☒	☐	☐	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	☐	☐	☒	
Are samples preserved that require preservation (excluding cooling)? ⁽¹⁾ Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	☐	☐	☒	
If samples are acid preserved for metals, is the pH ≤ 2? ⁽¹⁾ Record the pH in Comments.	☐	☐	☒	
If dissolved metals are requested, were samples field filtered?	☐	☐	☒	
Additional Comments (if any):				

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.

AS

Custodian Printed Name

3/20/24
Date/Time



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/08/24 15:21

FL01-03@4'
2403319-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/20/24 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHC0825	03/21/24	03/23/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/20/24 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0427	107 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0409	102 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0407	102 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/20/24 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0827	03/21/24	03/22/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/20/24 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	12.0	95.7 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/08/24 15:21

FL01-03@4'
2403319-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/20/24 11:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHC0900	03/25/24	03/25/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/20/24 11:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0433	130 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0240	71.9 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/20/24 11:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHC0803	03/21/24	05/08/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/20/24 11:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/08/24 15:21

FL01-03@4'
2403319-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	4.38	0.200	mg/kg dry	1	BHC0813	03/21/24	04/06/24	EPA 6020B
Barium	85.3	0.400	"	"	"	"	"	"
Cadmium	0.267	0.200	"	"	"	"	"	"
Copper	5.50	0.400	"	"	"	"	"	"
Lead	8.68	0.200	"	"	"	"	"	"
Nickel	6.03	0.400	"	"	"	"	"	"
Silver	0.0466	0.0200	"	"	"	"	"	"
Zinc	25.1	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/20/24 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0794	03/21/24	03/25/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **03/20/24 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	96.9	0.0500	mg/L dry	1	BHD0059	04/02/24	05/03/24	EPA 6020B	
Magnesium	57.8	0.0500	"	"	"	"	"	"	
Sodium	67.9	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/20/24 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.35	0.00100	units	1	BHE0135	05/04/24	05/04/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/20/24 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/08/24 15:21

FL01-03@4'
2403319-01 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	79.9	%	1	BHC0848	03/22/24	03/26/24	Calculation

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/20/24 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.28	0.0100	mmhos/cm	1	BHD0060	04/02/24	04/03/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **03/20/24 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.85		pH Units	1	BHD0061	04/02/24	04/03/24	EPA 9045D	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/08/24 15:21

FL01-04@4'
2403319-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/20/24 11:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHC0825	03/21/24	03/23/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/20/24 11:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0495	124 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0468	117 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0417	104 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/20/24 11:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0827	03/21/24	03/22/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/20/24 11:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	12.4	99.4 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/08/24 15:21

FL01-04@4'
2403319-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/20/24 11:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHC0900	03/25/24	03/25/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/20/24 11:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0490	147 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0244	73.2 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/20/24 11:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHC0803	03/21/24	05/08/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/20/24 11:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/08/24 15:21

FL01-04@4'
2403319-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	5.27	0.200	mg/kg dry	1	BHC0813	03/21/24	04/06/24	EPA 6020B
Barium	93.4	0.400	"	"	"	"	"	"
Cadmium	0.222	0.200	"	"	"	"	"	"
Copper	5.17	0.400	"	"	"	"	"	"
Lead	8.07	0.200	"	"	"	"	"	"
Nickel	6.27	0.400	"	"	"	"	"	"
Silver	0.0379	0.0200	"	"	"	"	"	"
Zinc	23.1	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/20/24 11:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0794	03/21/24	03/25/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **03/20/24 11:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	66.4	0.0500	mg/L dry	1	BHD0059	04/02/24	05/03/24	EPA 6020B	
Magnesium	36.3	0.0500	"	"	"	"	"	"	
Sodium	44.2	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/20/24 11:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.08	0.00100	units	1	BHE0135	05/04/24	05/04/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/20/24 11:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/08/24 15:21

FL01-04@4'
2403319-02 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	80.3	%	1	BHC0848	03/22/24	03/26/24	Calculation

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/20/24 11:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.903	0.0100	mmhos/cm	1	BHD0060	04/02/24	04/03/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **03/20/24 11:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.92		pH Units	1	BHD0061	04/02/24	04/03/24	EPA 9045D	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/08/24 15:21

FL01-05@6'
2403319-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/20/24 14:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHC0825	03/21/24	03/24/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/20/24 14:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0444	111 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0415	104 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0402	100 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/20/24 14:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0827	03/21/24	03/22/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/20/24 14:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	13.1	105 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/08/24 15:21

FL01-05@6'
2403319-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/20/24 14:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHC0900	03/25/24	03/25/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/20/24 14:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0362	108 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0270	81.1 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/20/24 14:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHC0803	03/21/24	05/08/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/20/24 14:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/08/24 15:21

FL01-05@6'
2403319-03 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	7.78	0.200	mg/kg dry	1	BHC0813	03/21/24	04/06/24	EPA 6020B
Barium	84.4	0.400	"	"	"	"	"	"
Cadmium	0.309	0.200	"	"	"	"	"	"
Copper	5.44	0.400	"	"	"	"	"	"
Lead	9.85	0.200	"	"	"	"	"	"
Nickel	6.23	0.400	"	"	"	"	"	"
Silver	0.0414	0.0200	"	"	"	"	"	"
Zinc	29.0	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/20/24 14:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0794	03/21/24	03/25/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **03/20/24 14:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	113	0.0500	mg/L dry	1	BHD0059	04/02/24	05/03/24	EPA 6020B	
Magnesium	67.5	0.0500	"	"	"	"	"	"	
Sodium	65.3	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/20/24 14:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.20	0.00100	units	1	BHE0135	05/04/24	05/04/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/20/24 14:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/08/24 15:21

FL01-05@6'
2403319-03 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	80.2	%	1	BHC0848	03/22/24	03/26/24	Calculation

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/20/24 14:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.37	0.0100	mmhos/cm	1	BHD0060	04/02/24	04/03/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **03/20/24 14:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.70		pH Units	1	BHD0061	04/02/24	04/03/24	EPA 9045D	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/08/24 15:21

FL01-06@7'
2403319-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/20/24 14:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHC0825	03/21/24	03/24/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/20/24 14:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0471	118 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0430	107 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0420	105 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/20/24 14:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0827	03/21/24	03/22/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/20/24 14:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	12.6	101 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/08/24 15:21

FL01-06@7'
2403319-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/20/24 14:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHC0900	03/25/24	03/26/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/20/24 14:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0456	137 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0267	80.0 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/20/24 14:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHC0803	03/21/24	05/08/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/20/24 14:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/08/24 15:21

FL01-06@7'
2403319-04 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	3.80	0.200	mg/kg dry	1	BHC0813	03/21/24	04/06/24	EPA 6020B
Barium	55.8	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	3.64	0.400	"	"	"	"	"	"
Lead	5.56	0.200	"	"	"	"	"	"
Nickel	4.30	0.400	"	"	"	"	"	"
Silver	0.0237	0.0200	"	"	"	"	"	"
Zinc	18.1	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/20/24 14:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0794	03/21/24	03/25/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **03/20/24 14:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	109	0.0500	mg/L dry	1	BHD0059	04/02/24	05/03/24	EPA 6020B	
Magnesium	70.7	0.0500	"	"	"	"	"	"	
Sodium	65.6	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/20/24 14:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.20	0.00100	units	1	BHE0135	05/04/24	05/04/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/08/24 15:21

FL01-06@7'
2403319-04 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/20/24 14:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	79.4		%	1	BHC0848	03/22/24	03/26/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/20/24 14:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.40	0.0100	mmhos/cm	1	BHD0060	04/02/24	04/03/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **03/20/24 14:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.72		pH Units	1	BHD0061	04/02/24	04/03/24	EPA 9045D	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/08/24 15:21

FL01-08@4'
2403319-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/20/24 13:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHC0825	03/21/24	03/24/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/20/24 13:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0396	99.0 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0399	99.8 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0410	102 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/20/24 13:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0827	03/21/24	03/22/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/20/24 13:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	10.6	84.5 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/08/24 15:21

FL01-08@4'
2403319-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/20/24 13:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHC0900	03/25/24	03/26/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/20/24 13:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0396	119 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0223	66.8 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/20/24 13:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHC0803	03/21/24	05/08/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/20/24 13:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/08/24 15:21

FL01-08@4'
2403319-05 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	5.93	0.200	mg/kg dry	1	BHC0813	03/21/24	04/06/24	EPA 6020B
Barium	98.2	0.400	"	"	"	"	"	"
Cadmium	0.271	0.200	"	"	"	"	"	"
Copper	5.43	0.400	"	"	"	"	"	"
Lead	8.88	0.200	"	"	"	"	"	"
Nickel	6.40	0.400	"	"	"	"	"	"
Silver	0.0476	0.0200	"	"	"	"	"	"
Zinc	24.9	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/20/24 13:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0794	03/21/24	03/25/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **03/20/24 13:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	64.4	0.0500	mg/L dry	1	BHD0059	04/02/24	05/03/24	EPA 6020B	
Magnesium	35.9	0.0500	"	"	"	"	"	"	
Sodium	53.4	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/20/24 13:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.32	0.00100	units	1	BHE0135	05/04/24	05/04/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/20/24 13:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/08/24 15:21

FL01-08@4'
2403319-05 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	84.1	%	1	BHC0848	03/22/24	03/26/24	Calculation

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/20/24 13:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.942	0.0100	mmhos/cm	1	BHD0060	04/02/24	04/03/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **03/20/24 13:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.24		pH Units	1	BHD0061	04/02/24	04/03/24	EPA 9045D	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/08/24 15:21

GL02-02@4'
2403319-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/20/24 13:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHC0825	03/21/24	03/24/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/20/24 13:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0449	112 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0416	104 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0410	102 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/20/24 13:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0827	03/21/24	03/22/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/20/24 13:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	10.6	84.7 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/08/24 15:21

GL02-02@4'
2403319-06 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/20/24 13:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHC0900	03/25/24	03/26/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/20/24 13:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0394	118 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0247	74.1 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/20/24 13:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHC0803	03/21/24	05/08/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/20/24 13:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/08/24 15:21

GL02-02@4'
2403319-06 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	5.73	0.200	mg/kg dry	1	BHC0813	03/21/24	04/06/24	EPA 6020B
Barium	82.8	0.400	"	"	"	"	"	"
Cadmium	0.268	0.200	"	"	"	"	"	"
Copper	5.06	0.400	"	"	"	"	"	"
Lead	8.18	0.200	"	"	"	"	"	"
Nickel	6.22	0.400	"	"	"	"	"	"
Silver	0.0366	0.0200	"	"	"	"	"	"
Zinc	24.0	0.400	"	"	"	"	"	"
Selenium	0.270	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/20/24 13:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0794	03/21/24	03/25/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **03/20/24 13:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	253	0.0500	mg/L dry	1	BHD0059	04/02/24	05/03/24	EPA 6020B	
Magnesium	121	0.0500	"	"	"	"	"	"	
Sodium	46.3	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/20/24 13:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.599	0.00100	units	1	BHE0135	05/04/24	05/04/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/20/24 13:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/08/24 15:21

GL02-02@4'
2403319-06 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	83.0	%	1	BHC0848	03/22/24	03/26/24	Calculation

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/20/24 13:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	2.20	0.0100	mmhos/cm	1	BHD0060	04/02/24	04/03/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **03/20/24 13:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.11		pH Units	1	BHD0061	04/02/24	04/03/24	EPA 9045D	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/08/24 15:21

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0825 - EPA 5030 Soil MS

Blank (BHC0825-BLK1)

Prepared: 03/21/24 Analyzed: 03/23/24

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0433		"	0.0400		108	50-150			
Surrogate: Toluene-d8	0.0409		"	0.0400		102	50-150			
Surrogate: 4-Bromofluorobenzene	0.0408		"	0.0400		102	50-150			

LCS (BHC0825-BS1)

Prepared: 03/21/24 Analyzed: 03/23/24

Benzene	0.0919	0.0020	mg/kg	0.100		91.9	70-130			
Toluene	0.103	0.0050	"	0.100		103	70-130			
Ethylbenzene	0.0897	0.0050	"	0.100		89.7	70-130			
m,p-Xylene	0.183	0.010	"	0.200		91.4	70-130			
o-Xylene	0.0921	0.0050	"	0.100		92.1	70-130			
1,2,4-Trimethylbenzene	0.0801	0.0050	"	0.100		80.1	70-130			
1,3,5-Trimethylbenzene	0.0813	0.0050	"	0.100		81.3	70-130			
Naphthalene	0.0955	0.0038	"	0.100		95.5	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0416		"	0.0400		104	50-150			
Surrogate: Toluene-d8	0.0430		"	0.0400		107	50-150			
Surrogate: 4-Bromofluorobenzene	0.0406		"	0.0400		101	50-150			

Matrix Spike (BHC0825-MS1)

Source: 2403305-01

Prepared: 03/21/24 Analyzed: 03/23/24

Benzene	0.104	0.0020	mg/kg	0.100	ND	104	70-130			
Toluene	0.0850	0.0050	"	0.100	ND	85.0	70-130			
Ethylbenzene	0.101	0.0050	"	0.100	ND	101	70-130			
m,p-Xylene	0.192	0.010	"	0.200	ND	95.9	70-130			
o-Xylene	0.0887	0.0050	"	0.100	ND	88.7	70-130			
1,2,4-Trimethylbenzene	0.108	0.0050	"	0.100	ND	108	70-130			
1,3,5-Trimethylbenzene	0.103	0.0050	"	0.100	ND	103	70-130			
Naphthalene	0.0955	0.0038	"	0.100	ND	95.5	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0446		"	0.0400		111	50-150			
Surrogate: Toluene-d8	0.0423		"	0.0400		106	50-150			
Surrogate: 4-Bromofluorobenzene	0.0401		"	0.0400		100	50-150			

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/08/24 15:21

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0825 - EPA 5030 Soil MS

Matrix Spike Dup (BHC0825-MSD1)	Source: 2403305-01			Prepared: 03/21/24 Analyzed: 03/23/24						
Benzene	0.0999	0.0020	mg/kg	0.100	ND	99.9	70-130	3.89	30	
Toluene	0.107	0.0050	"	0.100	ND	107	70-130	22.7	30	
Ethylbenzene	0.0964	0.0050	"	0.100	ND	96.4	70-130	4.80	30	
m,p-Xylene	0.181	0.010	"	0.200	ND	90.7	70-130	5.64	30	
o-Xylene	0.109	0.0050	"	0.100	ND	109	70-130	20.7	30	
1,2,4-Trimethylbenzene	0.104	0.0050	"	0.100	ND	104	70-130	3.48	30	
1,3,5-Trimethylbenzene	0.0937	0.0050	"	0.100	ND	93.7	70-130	9.05	30	
Naphthalene	0.0900	0.0038	"	0.100	ND	90.0	70-130	5.89	30	
Surrogate: 1,2-Dichloroethane-d4	0.0438		"	0.0400		110	50-150			
Surrogate: Toluene-d8	0.0427		"	0.0400		107	50-150			
Surrogate: 4-Bromofluorobenzene	0.0415		"	0.0400		104	50-150			

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads
Project Number: [none]
Project Manager: Karen Olson

Reported:
05/08/24 15:21

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0827 - EPA 3550A

Blank (BHC0827-BLK1)

Prepared: 03/21/24 Analyzed: 03/22/24

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: o-Terphenyl	16.3		"	12.5		130	30-150			

LCS (BHC0827-BS1)

Prepared: 03/21/24 Analyzed: 03/22/24

C10-C28 (DRO)	618	50	mg/kg	500		124	70-130			
Surrogate: o-Terphenyl	14.5		"	12.5		116	30-150			

Matrix Spike (BHC0827-MS1)

Source: 2403305-01

Prepared: 03/21/24 Analyzed: 03/22/24

C10-C28 (DRO)	623	50	mg/kg	500	43.1	116	70-130			
Surrogate: o-Terphenyl	10.3		"	12.5		82.7	30-150			

Matrix Spike Dup (BHC0827-MSD1)

Source: 2403305-01

Prepared: 03/21/24 Analyzed: 03/22/24

C10-C28 (DRO)	486	50	mg/kg	500	43.1	88.6	70-130	24.6	20	QR-02
Surrogate: o-Terphenyl	9.28		"	12.5		74.2	30-150			

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/08/24 15:21

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0900 - EPA 5030 Soil MS

Blank (BHC0900-BLK1)

Prepared & Analyzed: 03/25/24

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
Surrogate: 2-Methylnaphthalene-d10	0.0214		"	0.0333		64.1	40-150			
Surrogate: Fluoranthene-d10	0.0215		"	0.0333		64.6	40-150			

LCS (BHC0900-BS1)

Prepared & Analyzed: 03/25/24

Acenaphthene	0.0261	0.00500	mg/kg	0.0333		78.3	31-137			
Anthracene	0.0244	0.00500	"	0.0333		73.3	30-120			
Benzo (a) anthracene	0.0234	0.00500	"	0.0333		70.3	30-120			
Benzo (a) pyrene	0.0216	0.00500	"	0.0333		64.8	30-120			
Benzo (b) fluoranthene	0.0205	0.00500	"	0.0333		61.4	30-120			
Benzo (k) fluoranthene	0.0240	0.00500	"	0.0333		71.9	30-120			
Chrysene	0.0251	0.00500	"	0.0333		75.2	30-120			
Dibenz (a,h) anthracene	0.0208	0.00500	"	0.0333		62.3	30-120			
Fluoranthene	0.0242	0.00500	"	0.0333		72.7	30-120			
Fluorene	0.0258	0.00500	"	0.0333		77.4	30-120			
Indeno (1,2,3-cd) pyrene	0.0210	0.00500	"	0.0333		63.0	30-120			
Pyrene	0.0267	0.00500	"	0.0333		80.0	35-142			
1-Methylnaphthalene	0.0278	0.00500	"	0.0333		83.3	35-142			
2-Methylnaphthalene	0.0281	0.00500	"	0.0333		84.2	35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0290		"	0.0333		87.1	40-150			
Surrogate: Fluoranthene-d10	0.0241		"	0.0333		72.2	40-150			

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/08/24 15:21

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Reporting			Spike Level	Source		%REC		RPD	
	Result	Limit	Units		Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0900 - EPA 5030 Soil MS

Matrix Spike (BHC0900-MS1)

Source: 2403315-01

Prepared & Analyzed: 03/25/24

Acenaphthene	0.0151	0.00500	mg/kg	0.0333	ND	45.3	31-137		
Anthracene	0.0159	0.00500	"	0.0333	ND	47.8	30-120		
Benzo (a) anthracene	0.0153	0.00500	"	0.0333	ND	45.8	30-120		
Benzo (a) pyrene	0.0172	0.00500	"	0.0333	ND	51.6	30-120		
Benzo (b) fluoranthene	0.0143	0.00500	"	0.0333	ND	42.9	30-120		
Benzo (k) fluoranthene	0.0138	0.00500	"	0.0333	ND	41.4	30-120		
Chrysene	0.0151	0.00500	"	0.0333	ND	45.3	30-120		
Dibenz (a,h) anthracene	0.0166	0.00500	"	0.0333	ND	49.9	30-120		
Fluoranthene	0.0158	0.00500	"	0.0333	ND	47.5	30-120		
Fluorene	0.0158	0.00500	"	0.0333	ND	47.3	30-120		
Indeno (1,2,3-cd) pyrene	0.0169	0.00500	"	0.0333	ND	50.6	30-120		
Pyrene	0.0170	0.00500	"	0.0333	ND	50.9	35-142		
1-Methylnaphthalene	0.0222	0.00500	"	0.0333	ND	66.7	15-130		
2-Methylnaphthalene	0.0227	0.00500	"	0.0333	ND	68.0	15-130		
Surrogate: 2-Methylnaphthalene-d10	0.0196		"	0.0333		58.9	40-150		
Surrogate: Fluoranthene-d10	0.0158		"	0.0333		47.5	40-150		

Matrix Spike Dup (BHC0900-MSD1)

Source: 2403315-01

Prepared & Analyzed: 03/25/24

Acenaphthene	0.0138	0.00500	mg/kg	0.0333	ND	41.5	31-137	8.62	30
Anthracene	0.0138	0.00500	"	0.0333	ND	41.4	30-120	14.4	30
Benzo (a) anthracene	0.0141	0.00500	"	0.0333	ND	42.4	30-120	7.80	30
Benzo (a) pyrene	0.0139	0.00500	"	0.0333	ND	41.8	30-120	20.9	30
Benzo (b) fluoranthene	0.0146	0.00500	"	0.0333	ND	43.8	30-120	2.16	30
Benzo (k) fluoranthene	0.0152	0.00500	"	0.0333	ND	45.6	30-120	9.61	30
Chrysene	0.0134	0.00500	"	0.0333	ND	40.1	30-120	12.2	30
Dibenz (a,h) anthracene	0.0160	0.00500	"	0.0333	ND	48.0	30-120	3.88	30
Fluoranthene	0.0142	0.00500	"	0.0333	ND	42.6	30-120	11.0	30
Fluorene	0.0147	0.00500	"	0.0333	ND	44.2	30-120	6.74	30
Indeno (1,2,3-cd) pyrene	0.0162	0.00500	"	0.0333	ND	48.7	30-120	3.87	30
Pyrene	0.0142	0.00500	"	0.0333	ND	42.6	35-142	17.7	30
1-Methylnaphthalene	0.0209	0.00500	"	0.0333	ND	62.7	15-130	6.16	50
2-Methylnaphthalene	0.0216	0.00500	"	0.0333	ND	64.7	15-130	5.04	50
Surrogate: 2-Methylnaphthalene-d10	0.0177		"	0.0333		53.0	40-150		
Surrogate: Fluoranthene-d10	0.0141		"	0.0333		42.3	40-150		

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/08/24 15:21

Total Metals by EPA 6020B Hot Water Soluble Extraction - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0803 - EPA 3050B

Blank (BHC0803-BLK1)

Prepared: 03/21/24 Analyzed: 05/07/24

Boron ND 2.00 mg/L

LCS (BHC0803-BS1)

Prepared: 03/21/24 Analyzed: 05/07/24

Boron 5.11 2.00 mg/L 5.00 102 80-120

Matrix Spike (BHC0803-MS1)

Source: 2403277-01

Prepared: 03/21/24 Analyzed: 05/07/24

Boron 6.25 2.00 mg/L 5.00 0.816 109 75-125

Matrix Spike Dup (BHC0803-MSD1)

Source: 2403277-01

Prepared: 03/21/24 Analyzed: 05/07/24

Boron 6.54 2.00 mg/L 5.00 0.816 115 75-125 4.68 25

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/08/24 15:21

Total Metals by EPA 6020B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0813 - EPA 3050B

Blank (BHC0813-BLK1)

Prepared: 03/21/24 Analyzed: 04/06/24

Arsenic	ND	0.200	mg/kg wet
Barium	ND	0.400	"
Cadmium	ND	0.200	"
Copper	ND	0.400	"
Lead	ND	0.200	"
Nickel	ND	0.400	"
Silver	ND	0.0200	"
Zinc	ND	0.400	"
Selenium	ND	0.260	"

LCS (BHC0813-BS1)

Prepared: 03/21/24 Analyzed: 04/06/24

Arsenic	40.4	0.200	mg/kg wet	40.0	101	80-120
Barium	40.8	0.400	"	40.0	102	80-120
Cadmium	1.96	0.200	"	2.00	97.9	80-120
Copper	41.4	0.400	"	40.0	104	80-120
Lead	19.7	0.200	"	20.0	98.6	80-120
Nickel	40.4	0.400	"	40.0	101	80-120
Silver	1.96	0.0200	"	2.00	98.2	80-120
Zinc	40.7	0.400	"	40.0	102	80-120
Selenium	4.59	0.260	"	4.00	115	80-120

Duplicate (BHC0813-DUP1)

Source: 2402324-01

Prepared: 03/21/24 Analyzed: 04/06/24

Arsenic	1.91	0.200	mg/kg dry	1.52	23.0	20	QR-01
Barium	61.5	0.400	"	55.1	11.0	20	
Cadmium	0.139	0.200	"	0.114	19.2	20	
Copper	3.25	0.400	"	2.99	8.47	20	
Lead	4.50	0.200	"	3.98	12.1	20	
Nickel	2.77	0.400	"	2.40	14.3	20	
Silver	0.0186	0.0200	"	0.0163	12.7	20	
Zinc	13.9	0.400	"	12.3	11.8	20	
Selenium	ND	0.260	"	ND		20	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/08/24 15:21

Total Metals by EPA 6020B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0813 - EPA 3050B

Matrix Spike (BHC0813-MS1)		Source: 2402324-01			Prepared: 03/21/24 Analyzed: 04/06/24					
Arsenic	45.0	0.200	mg/kg dry	44.2	1.52	98.4	75-125			
Barium	94.7	0.400	"	44.2	55.1	89.6	75-125			
Cadmium	2.31	0.200	"	2.21	0.114	99.6	75-125			
Copper	36.0	0.400	"	44.2	2.99	74.7	75-125			QM-07
Lead	25.6	0.200	"	22.1	3.98	97.9	75-125			
Nickel	35.6	0.400	"	44.2	2.40	75.3	75-125			
Silver	2.18	0.0200	"	2.21	0.0163	98.0	75-125			
Zinc	45.8	0.400	"	44.2	12.3	75.7	75-125			
Selenium	4.71	0.260	"	4.42	ND	107	75-125			

Matrix Spike Dup (BHC0813-MSD1)		Source: 2402324-01			Prepared: 03/21/24 Analyzed: 04/06/24					
Arsenic	45.6	0.200	mg/kg dry	44.2	1.52	99.9	75-125	1.48	25	
Barium	96.2	0.400	"	44.2	55.1	93.0	75-125	1.57	25	
Cadmium	2.30	0.200	"	2.21	0.114	98.9	75-125	0.690	25	
Copper	37.0	0.400	"	44.2	2.99	77.1	75-125	2.87	25	
Lead	25.8	0.200	"	22.1	3.98	98.8	75-125	0.725	25	
Nickel	36.7	0.400	"	44.2	2.40	77.6	75-125	2.85	25	
Silver	2.16	0.0200	"	2.21	0.0163	97.1	75-125	0.936	25	
Zinc	47.4	0.400	"	44.2	12.3	79.4	75-125	3.55	25	
Selenium	4.75	0.260	"	4.42	ND	108	75-125	0.934	25	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/08/24 15:21

Hexavalent Chromium by EPA Method 7196 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0794 - 3060A Mod

Blank (BHC0794-BLK1)

Prepared: 03/21/24 Analyzed: 03/25/24

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BHC0794-BS1)

Prepared: 03/21/24 Analyzed: 03/25/24

Chromium, Hexavalent 23.9 0.30 mg/kg wet 25.0 95.6 80-120

Duplicate (BHC0794-DUP1)

Source: 2403308-01

Prepared: 03/21/24 Analyzed: 03/25/24

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BHC0794-MS1)

Source: 2403308-01

Prepared: 03/21/24 Analyzed: 03/25/24

Chromium, Hexavalent 26.2 0.30 mg/kg dry 26.4 ND 99.0 75-125

Matrix Spike Dup (BHC0794-MSD1)

Source: 2403308-01

Prepared: 03/21/24 Analyzed: 03/25/24

Chromium, Hexavalent 26.1 0.30 mg/kg dry 26.4 ND 98.6 75-125 0.405 20

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/08/24 15:21

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD	
		Limit	Units		Result	%REC	Limits	RPD	Limit	Notes

Batch BHD0059 - General Preparation

Blank (BHD0059-BLK1)

Prepared: 04/02/24 Analyzed: 05/03/24

Calcium	ND	0.0500	mg/L wet
Magnesium	ND	0.0500	"
Sodium	ND	0.0500	"

LCS (BHD0059-BS1)

Prepared: 04/02/24 Analyzed: 05/03/24

Calcium	5.24	0.0500	mg/L wet	5.00	105	70-130
Magnesium	4.64	0.0500	"	5.00	92.9	70-130
Sodium	4.67	0.0500	"	5.00	93.5	70-130

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/08/24 15:21

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control

Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD	
		Limit	Units		Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0848 - General Preparation

Duplicate (BHC0848-DUP1)

Source: 2403304-01

Prepared: 03/22/24 Analyzed: 03/26/24

% Solids	93.7	%	94.0	0.306	20

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/08/24 15:21

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD	
		Limit	Units		Result	%REC	Limits	RPD	Limit	Notes

Batch BHD0060 - General Preparation

Blank (BHD0060-BLK1)

Prepared: 04/02/24 Analyzed: 04/03/24

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BHD0060-BS1)

Prepared: 04/02/24 Analyzed: 04/03/24

Specific Conductance (EC) 0.154 0.0100 mmhos/cm 0.150 102 95-105

Duplicate (BHD0060-DUP1)

Source: 2403319-01

Prepared: 04/02/24 Analyzed: 04/03/24

Specific Conductance (EC) 1.27 0.0100 mmhos/cm 1.28 1.02 20

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/08/24 15:21

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source Result	%REC		RPD		Notes
		Limit	Units			%REC	Limits	RPD	Limit	

Batch BHD0061 - General Preparation

LCS (BHD0061-BS1)

Prepared: 04/02/24 Analyzed: 04/03/24

pH	9.26	pH Units	9.18	101	95-105

Duplicate (BHD0061-DUP1)

Source: 2403319-01

Prepared: 04/02/24 Analyzed: 04/03/24

pH	7.82	pH Units	7.85	0.383	20

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/08/24 15:21

Notes and Definitions

QR-02	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
QR-01	Analyses are not controlled on RPD values from sample concentrations less than 10 times the reporting limit. QC batch accepted based on LCS and/or LCSD QC results.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

May 14, 2024

Karen Olson

Tasman Geosciences

6855 W. 119th Ave.

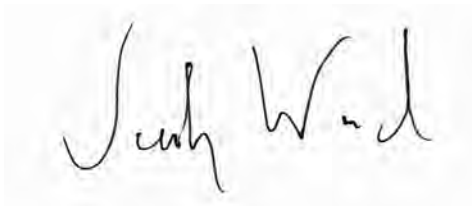
Broomfield, CO 80020

RE: PDC - Merritt Combined Wellheads

Work Order #2403346

Enclosed are the results of analyses for samples received by Summit Scientific on 03/21/24 17:45. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Jacob Wood". The signature is written in a cursive, flowing style.

Jacob Wood For Paul Shrewsbury

President



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

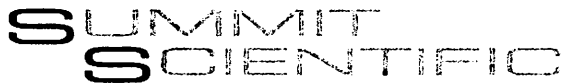
Reported:
05/14/24 17:05

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
GL02-01@7'	2403346-01	Soil	03/21/24 10:30	03/21/24 17:45
FL02-02@7'	2403346-02	Soil	03/21/24 10:35	03/21/24 17:45
GL01-01@7'	2403346-03	Soil	03/21/24 10:40	03/21/24 17:45

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



4653 Table Mountain Drive
Golden, CO 80403
303-277-9310

Lab ID	Page 1 of 1
24033467	

Client: PDC PDC / Tasman					Send Data To: Project Manager: Karen Olson					Send Invoice To: Company: PDC Energy											
Address: 6855 W 119th Ave					E-Mail: karen.olson@chevron.com					Project Name/Location:											
City/State/Zip: Broomfield / CO / 80220										AFE#:											
Phone: 303-487-1228					Project Name: Merritt combined Wellheads					PO/Billing Codes:											
Sampler Name: Jordan Hestmark					Project Number:					Contact: Karen Olson											
					Preservative				Matrix				Analysis Requested							Special Instructions	
ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEXN - 8260B	TPH - (C6 - C36)	1,2,4 & 1,3,5 - TMB	Boron - HWS	pH, EC, SAR	PAHs - 9/15	Metals - 9/15	TDS, SO4, Cl	
1	GL02-01 @ 7'	3/21/24	1030	2			X			X			X	X	X	X	X	X	X	X	
2	FL02-02 @ 7'	1	1035	1			1			1			1	1	1	1	1	1	1	1	
3	GL01-01 @ 7'	1	1040	1			1			1			1	1	1	1	1	1	1	1	
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					
13																					
14																					
15																					
Relinquished by: Jordan Hestmark		Date/Time: 3/21/24 1509		Received by: Tasman Lockbox		Date/Time: 3/21/24 1509		TAT Business Days		Field DO		Notes:									
								Same Day		Field EC											
								1 Day		Field ORP											
								2 Days		Field pH											
								3 Days		Field Temp.											
Relinquished by: Tasman Lockbox		Date/Time: 3/21/24 1745		Received by: [Signature]		Date/Time: 3/21/24 1745		Standard		X Field Turb.											
Temperature Upon Receipt: 7.9				Corrected Temperature: 6				IR gun #: 1				HNO3 lot #:									

S₂

Sample Receipt Checklist

S2 Work Order# 2403346Client: PotrasmanClient Project ID: Meritt Combined WellheadsShipped Via: H.D./P.U./FedEx/UPS/USPS/Other

Airbill #: _____

☐	☒	☐	☐	☐

Matrix (Check all that apply)

Air

☐

Soil/Solid

☒

Water

☐

Other

☐

Temp (°C)

7.9

Thermometer #

1

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	☒	☐	☐	
If custody seals are present, are they intact? ⁽¹⁾	☒	☐	☐	ANCE
Are samples due within 48 hours present?	☐	☒	☐	
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe ²⁺), Hexavalent Chromium (Cr ⁶⁺ , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	☐	☒	☐	
Is a chain-of-custody (COC) form present and filled out Completely? ⁽¹⁾	☒	☐	☐	
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	☒	☐	☐	
Were all samples received intact? ⁽¹⁾	☒	☐	☐	
Was adequate sample volume provided? ⁽¹⁾	☒	☐	☐	
Does the COC agree with the number and type of sample bottles received? ⁽¹⁾	☒	☐	☐	
Do the sample IDs on the bottle labels match the COC? ⁽¹⁾	☒	☐	☐	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	☐	☐	☒	
Are samples preserved that require preservation (excluding cooling)? ⁽¹⁾ Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	☐	☐	☒	
If samples are acid preserved for metals, is the pH ≤ 2? ⁽¹⁾ Record the pH in Comments.	☐	☐	☒	
If dissolved metals are requested, were samples field filtered?	☐	☐	☒	
Additional Comments (if any):				
⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.				

Custodian Printed Name

AS

Date/Time

3/21/24

B&B



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/14/24 17:05

GL02-01@7'
2403346-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/21/24 10:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHC0940	03/25/24	03/25/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/21/24 10:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0433	108 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0406	101 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0401	100 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/21/24 10:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0943	03/25/24	03/26/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/21/24 10:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	3.84	30.8 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/14/24 17:05

GL02-01@7'
2403346-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/21/24 10:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHC0975	03/26/24	03/27/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/21/24 10:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0239	71.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0220	65.9 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/21/24 10:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHC0868	03/22/24	05/14/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/21/24 10:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/14/24 17:05

GL02-01@7'
2403346-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	4.07	0.200	mg/kg dry	1	BHC0863	03/22/24	04/19/24	EPA 6020B
Barium	71.4	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	3.38	0.400	"	"	"	"	"	"
Lead	5.68	0.200	"	"	"	"	"	"
Nickel	ND	0.400	"	"	"	"	"	"
Silver	0.0241	0.0200	"	"	"	"	"	"
Zinc	17.1	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/21/24 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0855	03/22/24	03/29/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **03/21/24 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	161	0.0500	mg/L dry	1	BHD0103	04/03/24	04/25/24	EPA 6020B	
Magnesium	103	0.0500	"	"	"	"	"	"	
Sodium	108	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/21/24 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.64	0.00100	units	1	BHD0977	04/26/24	04/26/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/14/24 17:05

GL02-01@7'
2403346-01 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/21/24 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	86.2		%	1	BHC0851	03/22/24	03/27/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/21/24 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	2.28	0.0100	mmhos/cm	1	BHD0105	04/03/24	04/04/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **03/21/24 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.47		pH Units	1	BHD0104	04/03/24	04/04/24	EPA 9045D	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/14/24 17:05

FL02-02@7'
2403346-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/21/24 10:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHC0940	03/25/24	03/25/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/21/24 10:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0407	102 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0404	101 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0394	98.5 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/21/24 10:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0943	03/25/24	03/26/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/21/24 10:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	5.36	42.9 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/14/24 17:05

FL02-02@7'
2403346-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/21/24 10:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHC0975	03/26/24	03/27/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/21/24 10:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0277	83.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0225	67.4 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/21/24 10:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHC0868	03/22/24	05/14/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/21/24 10:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/14/24 17:05

FL02-02@7'
2403346-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	4.59	0.200	mg/kg dry	1	BHC0863	03/22/24	04/19/24	EPA 6020B
Barium	75.8	0.400	"	"	"	"	"	"
Cadmium	0.241	0.200	"	"	"	"	"	"
Copper	4.37	0.400	"	"	"	"	"	"
Lead	7.01	0.200	"	"	"	"	"	"
Nickel	ND	0.400	"	"	"	"	"	"
Silver	0.0333	0.0200	"	"	"	"	"	"
Zinc	20.0	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/21/24 10:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0855	03/22/24	03/29/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **03/21/24 10:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	146	0.0500	mg/L dry	1	BHD0103	04/03/24	04/25/24	EPA 6020B	
Magnesium	123	0.0500	"	"	"	"	"	"	
Sodium	108	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/21/24 10:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.59	0.00100	units	1	BHD0977	04/26/24	04/26/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/14/24 17:05

FL02-02@7'
2403346-02 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/21/24 10:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	91.4		%	1	BHC0851	03/22/24	03/27/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/21/24 10:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	2.36	0.0100	mmhos/cm	1	BHD0105	04/03/24	04/04/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **03/21/24 10:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.77		pH Units	1	BHD0104	04/03/24	04/04/24	EPA 9045D	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/14/24 17:05

GL01-01@7'
2403346-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/21/24 10:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHC0940	03/25/24	03/25/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/21/24 10:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0424	106 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0405	101 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0412	103 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/21/24 10:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0943	03/25/24	03/26/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/21/24 10:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	4.04	32.3 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/14/24 17:05

GL01-01@7'
2403346-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/21/24 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHC0975	03/26/24	03/27/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/21/24 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0224	67.2 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0199	59.6 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/21/24 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHC0868	03/22/24	05/14/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/21/24 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/14/24 17:05

GL01-01@7'
2403346-03 (Soil)

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Total Metals by EPA 6020B

Arsenic	3.60	0.200	mg/kg dry	1	BHC0863	03/22/24	04/19/24	EPA 6020B
Barium	49.1	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	2.67	0.400	"	"	"	"	"	"
Lead	4.77	0.200	"	"	"	"	"	"
Nickel	ND	0.400	"	"	"	"	"	"
Silver	ND	0.0200	"	"	"	"	"	"
Zinc	14.4	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/21/24 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHC0855	03/22/24	03/29/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **03/21/24 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	120	0.0500	mg/L dry	1	BHD0103	04/03/24	04/25/24	EPA 6020B	
Magnesium	82.1	0.0500	"	"	"	"	"	"	
Sodium	70.3	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/21/24 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.21	0.00100	units	1	BHD0977	04/26/24	04/26/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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6855 W. 119th Ave.
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Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/14/24 17:05

GL01-01@7'
2403346-03 (Soil)

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Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/21/24 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	84.7		%	1	BHC0851	03/22/24	03/27/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/21/24 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.58	0.0100	mmhos/cm	1	BHD0105	04/03/24	04/04/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **03/21/24 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.47		pH Units	1	BHD0104	04/03/24	04/04/24	EPA 9045D	

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Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/14/24 17:05

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0940 - EPA 5030 Soil MS

Blank (BHC0940-BLK1)

Prepared & Analyzed: 03/25/24

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0388		"	0.0400		97.0	50-150			
Surrogate: Toluene-d8	0.0401		"	0.0400		100	50-150			
Surrogate: 4-Bromofluorobenzene	0.0400		"	0.0400		100	50-150			

LCS (BHC0940-BS1)

Prepared & Analyzed: 03/25/24

Benzene	0.116	0.0020	mg/kg	0.100		116	70-130			
Toluene	0.108	0.0050	"	0.100		108	70-130			
Ethylbenzene	0.112	0.0050	"	0.100		112	70-130			
m,p-Xylene	0.214	0.010	"	0.200		107	70-130			
o-Xylene	0.0903	0.0050	"	0.100		90.3	70-130			
1,2,4-Trimethylbenzene	0.0911	0.0050	"	0.100		91.1	70-130			
1,3,5-Trimethylbenzene	0.0958	0.0050	"	0.100		95.8	70-130			
Naphthalene	0.0837	0.0038	"	0.100		83.7	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0411		"	0.0400		103	50-150			
Surrogate: Toluene-d8	0.0409		"	0.0400		102	50-150			
Surrogate: 4-Bromofluorobenzene	0.0392		"	0.0400		97.9	50-150			

Matrix Spike (BHC0940-MS1)

Source: 2403346-01

Prepared & Analyzed: 03/25/24

Benzene	0.0952	0.0020	mg/kg	0.100	ND	95.2	70-130			
Toluene	0.0862	0.0050	"	0.100	ND	86.2	70-130			
Ethylbenzene	0.0910	0.0050	"	0.100	ND	91.0	70-130			
m,p-Xylene	0.174	0.010	"	0.200	ND	87.0	70-130			
o-Xylene	0.0787	0.0050	"	0.100	ND	78.7	70-130			
1,2,4-Trimethylbenzene	0.0757	0.0050	"	0.100	ND	75.7	70-130			
1,3,5-Trimethylbenzene	0.0794	0.0050	"	0.100	ND	79.4	70-130			
Naphthalene	0.0756	0.0038	"	0.100	ND	75.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0413		"	0.0400		103	50-150			
Surrogate: Toluene-d8	0.0413		"	0.0400		103	50-150			
Surrogate: 4-Bromofluorobenzene	0.0381		"	0.0400		95.3	50-150			

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Tasman Geosciences
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Project: PDC - Merritt Combined Wellheads
Project Number: [none]
Project Manager: Karen Olson

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05/14/24 17:05

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0940 - EPA 5030 Soil MS

Matrix Spike Dup (BHC0940-MSD1)	Source: 2403346-01			Prepared & Analyzed: 03/25/24						
Benzene	0.0916	0.0020	mg/kg	0.100	ND	91.6	70-130	3.76	30	
Toluene	0.0815	0.0050	"	0.100	ND	81.5	70-130	5.54	30	
Ethylbenzene	0.0870	0.0050	"	0.100	ND	87.0	70-130	4.55	30	
m,p-Xylene	0.167	0.010	"	0.200	ND	83.4	70-130	4.24	30	
o-Xylene	0.0738	0.0050	"	0.100	ND	73.8	70-130	6.42	30	
1,2,4-Trimethylbenzene	0.0697	0.0050	"	0.100	ND	69.7	70-130	8.21	30	QM-07
1,3,5-Trimethylbenzene	0.0734	0.0050	"	0.100	ND	73.4	70-130	7.89	30	
Naphthalene	0.0653	0.0038	"	0.100	ND	65.3	70-130	14.6	30	QM-07
Surrogate: 1,2-Dichloroethane-d4	0.0417		"	0.0400		104	50-150			
Surrogate: Toluene-d8	0.0408		"	0.0400		102	50-150			
Surrogate: 4-Bromofluorobenzene	0.0383		"	0.0400		95.8	50-150			

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Project: PDC - Merritt Combined Wellheads
Project Number: [none]
Project Manager: Karen Olson

Reported:
05/14/24 17:05

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0943 - EPA 3550A

Blank (BHC0943-BLK1)

Prepared: 03/25/24 Analyzed: 03/26/24

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: o-Terphenyl	6.02		"	12.5		48.1	30-150			

LCS (BHC0943-BS1)

Prepared: 03/25/24 Analyzed: 03/26/24

C10-C28 (DRO)	474	50	mg/kg	500		94.8	70-130			
Surrogate: o-Terphenyl	5.49		"	12.5		43.9	30-150			

Matrix Spike (BHC0943-MS1)

Source: 2403346-01

Prepared: 03/25/24 Analyzed: 03/26/24

C10-C28 (DRO)	412	50	mg/kg	500	25.5	77.3	70-130			
Surrogate: o-Terphenyl	4.65		"	12.5		37.2	30-150			

Matrix Spike Dup (BHC0943-MSD1)

Source: 2403346-01

Prepared: 03/25/24 Analyzed: 03/26/24

C10-C28 (DRO)	391	50	mg/kg	500	25.5	73.1	70-130	5.30	20	
Surrogate: o-Terphenyl	5.03		"	12.5		40.2	30-150			

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Project: PDC - Merritt Combined Wellheads
Project Number: [none]
Project Manager: Karen Olson

Reported:
05/14/24 17:05

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Reporting				Spike	Source	%REC			RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0975 - EPA 5030 Soil MS

Blank (BHC0975-BLK1)

Prepared: 03/26/24 Analyzed: 03/27/24

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
Surrogate: 2-Methylnaphthalene-d10	0.0356		"	0.0333		107	40-150			
Surrogate: Fluoranthene-d10	0.0353		"	0.0333		106	40-150			

LCS (BHC0975-BS1)

Prepared: 03/26/24 Analyzed: 03/27/24

Acenaphthene	0.0260	0.00500	mg/kg	0.0333		77.9	31-137			
Anthracene	0.0258	0.00500	"	0.0333		77.3	30-120			
Benzo (a) anthracene	0.0246	0.00500	"	0.0333		73.7	30-120			
Benzo (a) pyrene	0.0225	0.00500	"	0.0333		67.6	30-120			
Benzo (b) fluoranthene	0.0237	0.00500	"	0.0333		71.2	30-120			
Benzo (k) fluoranthene	0.0243	0.00500	"	0.0333		73.0	30-120			
Chrysene	0.0252	0.00500	"	0.0333		75.6	30-120			
Dibenz (a,h) anthracene	0.0215	0.00500	"	0.0333		64.5	30-120			
Fluoranthene	0.0249	0.00500	"	0.0333		74.7	30-120			
Fluorene	0.0188	0.00500	"	0.0333		56.5	30-120			
Indeno (1,2,3-cd) pyrene	0.0164	0.00500	"	0.0333		49.3	30-120			
Pyrene	0.0271	0.00500	"	0.0333		81.4	35-142			
1-Methylnaphthalene	0.0257	0.00500	"	0.0333		77.1	35-142			
2-Methylnaphthalene	0.0229	0.00500	"	0.0333		68.6	35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0286		"	0.0333		85.8	40-150			
Surrogate: Fluoranthene-d10	0.0240		"	0.0333		72.1	40-150			

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Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/14/24 17:05

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Reporting			Spike Level	Source		%REC		RPD	
	Result	Limit	Units		Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0975 - EPA 5030 Soil MS

Matrix Spike (BHC0975-MS1)			Source: 2403340-01		Prepared: 03/26/24 Analyzed: 03/27/24					
Acenaphthene	0.0262	0.00500	mg/kg	0.0333	ND	78.5	31-137			
Anthracene	0.0263	0.00500	"	0.0333	ND	79.0	30-120			
Benzo (a) anthracene	0.0259	0.00500	"	0.0333	ND	77.7	30-120			
Benzo (a) pyrene	0.0238	0.00500	"	0.0333	ND	71.4	30-120			
Benzo (b) fluoranthene	0.0245	0.00500	"	0.0333	ND	73.6	30-120			
Benzo (k) fluoranthene	0.0246	0.00500	"	0.0333	ND	73.9	30-120			
Chrysene	0.0265	0.00500	"	0.0333	ND	79.6	30-120			
Dibenz (a,h) anthracene	0.0221	0.00500	"	0.0333	ND	66.2	30-120			
Fluoranthene	0.0261	0.00500	"	0.0333	ND	78.4	30-120			
Fluorene	0.0218	0.00500	"	0.0333	ND	65.4	30-120			
Indeno (1,2,3-cd) pyrene	0.0158	0.00500	"	0.0333	ND	47.3	30-120			
Pyrene	0.0278	0.00500	"	0.0333	ND	83.5	35-142			
1-Methylnaphthalene	0.0242	0.00500	"	0.0333	ND	72.6	15-130			
2-Methylnaphthalene	0.0282	0.00500	"	0.0333	ND	84.5	15-130			
Surrogate: 2-Methylnaphthalene-d10	0.0262		"	0.0333		78.6	40-150			
Surrogate: Fluoranthene-d10	0.0252		"	0.0333		75.5	40-150			

Matrix Spike Dup (BHC0975-MSD1)			Source: 2403340-01		Prepared: 03/26/24 Analyzed: 03/27/24					
Acenaphthene	0.0214	0.00500	mg/kg	0.0333	ND	64.2	31-137	20.0	30	
Anthracene	0.0220	0.00500	"	0.0333	ND	65.9	30-120	18.1	30	
Benzo (a) anthracene	0.0223	0.00500	"	0.0333	ND	66.9	30-120	14.9	30	
Benzo (a) pyrene	0.0205	0.00500	"	0.0333	ND	61.4	30-120	15.0	30	
Benzo (b) fluoranthene	0.0214	0.00500	"	0.0333	ND	64.1	30-120	13.8	30	
Benzo (k) fluoranthene	0.0212	0.00500	"	0.0333	ND	63.6	30-120	15.0	30	
Chrysene	0.0224	0.00500	"	0.0333	ND	67.3	30-120	16.7	30	
Dibenz (a,h) anthracene	0.0189	0.00500	"	0.0333	ND	56.7	30-120	15.4	30	
Fluoranthene	0.0222	0.00500	"	0.0333	ND	66.6	30-120	16.2	30	
Fluorene	0.0181	0.00500	"	0.0333	ND	54.3	30-120	18.5	30	
Indeno (1,2,3-cd) pyrene	0.0137	0.00500	"	0.0333	ND	41.0	30-120	14.1	30	
Pyrene	0.0231	0.00500	"	0.0333	ND	69.4	35-142	18.5	30	
1-Methylnaphthalene	0.0219	0.00500	"	0.0333	ND	65.6	15-130	10.2	50	
2-Methylnaphthalene	0.0244	0.00500	"	0.0333	ND	73.3	15-130	14.2	50	
Surrogate: 2-Methylnaphthalene-d10	0.0212		"	0.0333		63.7	40-150			
Surrogate: Fluoranthene-d10	0.0223		"	0.0333		66.8	40-150			

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/14/24 17:05

Total Metals by EPA 6020B Hot Water Soluble Extraction - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0868 - EPA 3050B

Blank (BHC0868-BLK1)

Prepared: 03/22/24 Analyzed: 05/13/24

Boron ND 2.00 mg/L

LCS (BHC0868-BS1)

Prepared: 03/22/24 Analyzed: 05/13/24

Boron 5.19 2.00 mg/L 5.00 104 80-120

Duplicate (BHC0868-DUP1)

Source: 2403326-01

Prepared: 03/22/24 Analyzed: 05/13/24

Boron 0.214 2.00 mg/L 0.294 31.9 20 QR-01

Matrix Spike (BHC0868-MS1)

Source: 2403326-01

Prepared: 03/22/24 Analyzed: 05/13/24

Boron 5.59 2.00 mg/L 5.00 0.294 106 75-125

Matrix Spike Dup (BHC0868-MSD1)

Source: 2403326-01

Prepared: 03/22/24 Analyzed: 05/13/24

Boron 5.80 2.00 mg/L 5.00 0.294 110 75-125 3.79 25

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/14/24 17:05

Total Metals by EPA 6020B - Quality Control

Summit Scientific

Analyte	Reporting			Spike Level	Source		%REC		RPD	
	Result	Limit	Units		Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0863 - EPA 3050B

Blank (BHC0863-BLK1)

Prepared: 03/22/24 Analyzed: 04/19/24

Arsenic	ND	0.200	mg/kg wet
Barium	ND	0.400	"
Cadmium	ND	0.200	"
Copper	ND	0.400	"
Lead	ND	0.200	"
Nickel	ND	0.400	"
Silver	ND	0.0200	"
Zinc	ND	0.400	"
Selenium	ND	0.260	"

LCS (BHC0863-BS1)

Prepared: 03/22/24 Analyzed: 04/19/24

Arsenic	43.1	0.200	mg/kg wet	40.0	108	80-120
Barium	40.5	0.400	"	40.0	101	80-120
Cadmium	1.89	0.200	"	2.00	94.6	80-120
Copper	38.8	0.400	"	40.0	97.1	80-120
Lead	19.2	0.200	"	20.0	96.2	80-120
Nickel	38.3	0.400	"	40.0	95.7	80-120
Silver	1.93	0.0200	"	2.00	96.5	80-120
Zinc	36.6	0.400	"	40.0	91.5	80-120
Selenium	4.54	0.260	"	4.00	114	80-120

Duplicate (BHC0863-DUP1)

Source: 2403338-01

Prepared: 03/22/24 Analyzed: 04/19/24

Arsenic	2.15	0.200	mg/kg dry	2.11	1.98	20
Barium	226	0.400	"	222	1.88	20
Cadmium	0.229	0.200	"	0.229	0.368	20
Copper	9.72	0.400	"	9.30	4.43	20
Lead	86.3	0.200	"	86.1	0.196	20
Nickel	ND	0.400	"	ND		20
Silver	0.0409	0.0200	"	0.0367	10.9	20
Zinc	33.0	0.400	"	28.7	13.7	20
Selenium	ND	0.260	"	ND		20

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/14/24 17:05

Total Metals by EPA 6020B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0863 - EPA 3050B

Matrix Spike (BHC0863-MS1)

Source: 2403338-01

Prepared: 03/22/24 Analyzed: 04/19/24

Arsenic	47.7	0.200	mg/kg dry	42.2	2.11	108	75-125			
Barium	243	0.400	"	42.2	222	48.7	75-125			QM-07
Cadmium	2.11	0.200	"	2.11	0.229	89.3	75-125			
Copper	36.7	0.400	"	42.2	9.30	65.0	75-125			QM-07
Lead	82.7	0.200	"	21.1	86.1	NR	75-125			QM-07
Nickel	41.3	0.400	"	42.2	ND	97.9	75-125			
Silver	1.92	0.0200	"	2.11	0.0367	89.5	75-125			
Zinc	51.7	0.400	"	42.2	28.7	54.3	75-125			QM-07
Selenium	4.71	0.260	"	4.22	ND	112	75-125			

Matrix Spike Dup (BHC0863-MSD1)

Source: 2403338-01

Prepared: 03/22/24 Analyzed: 04/19/24

Arsenic	48.0	0.200	mg/kg dry	42.2	2.11	109	75-125	0.712	25	
Barium	248	0.400	"	42.2	222	62.1	75-125	2.29	25	QM-07
Cadmium	2.18	0.200	"	2.11	0.229	92.4	75-125	3.11	25	
Copper	36.3	0.400	"	42.2	9.30	64.0	75-125	1.05	25	QM-07
Lead	84.1	0.200	"	21.1	86.1	NR	75-125	1.68	25	QM-07
Nickel	41.2	0.400	"	42.2	ND	97.8	75-125	0.112	25	
Silver	2.00	0.0200	"	2.11	0.0367	93.1	75-125	3.93	25	
Zinc	51.4	0.400	"	42.2	28.7	53.7	75-125	0.529	25	QM-07
Selenium	4.59	0.260	"	4.22	ND	109	75-125	2.44	25	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/14/24 17:05

Hexavalent Chromium by EPA Method 7196 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0855 - 3060A Mod

Blank (BHC0855-BLK1)

Prepared: 03/22/24 Analyzed: 03/29/24

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BHC0855-BS1)

Prepared: 03/22/24 Analyzed: 03/29/24

Chromium, Hexavalent 24.6 0.30 mg/kg wet 25.0 98.4 80-120

Duplicate (BHC0855-DUP1)

Source: 2403341-01

Prepared: 03/22/24 Analyzed: 03/29/24

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BHC0855-MS1)

Source: 2403341-01

Prepared: 03/22/24 Analyzed: 03/29/24

Chromium, Hexavalent 26.8 0.30 mg/kg dry 26.7 ND 101 75-125

Matrix Spike Dup (BHC0855-MSD1)

Source: 2403341-01

Prepared: 03/22/24 Analyzed: 03/29/24

Chromium, Hexavalent 26.8 0.30 mg/kg dry 26.7 ND 101 75-125 0.00 20

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/14/24 17:05

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD	
		Limit	Units		Result	%REC	Limits	RPD	Limit	Notes

Batch BHD0103 - General Preparation

Blank (BHD0103-BLK1)

Prepared: 04/03/24 Analyzed: 04/25/24

Calcium	ND	0.0500	mg/L wet
Magnesium	ND	0.0500	"
Sodium	ND	0.0500	"

LCS (BHD0103-BS1)

Prepared: 04/03/24 Analyzed: 04/25/24

Calcium	5.56	0.0500	mg/L wet	5.00	111	70-130
Magnesium	4.75	0.0500	"	5.00	94.9	70-130
Sodium	4.78	0.0500	"	5.00	95.6	70-130

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/14/24 17:05

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control

Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD	
		Limit	Units		Result	%REC	Limits	RPD	Limit	Notes

Batch BHC0851 - General Preparation

Duplicate (BHC0851-DUP1)		Source: 2403341-01			Prepared: 03/22/24 Analyzed: 03/27/24					
% Solids	92.4		%		93.8		1.43		20	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/14/24 17:05

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction - Quality Control

Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD	
		Limit	Units		Result	%REC	Limits	RPD	Limit	Notes

Batch BHD0105 - General Preparation

Blank (BHD0105-BLK1)

Prepared: 04/03/24 Analyzed: 04/04/24

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BHD0105-BS1)

Prepared: 04/03/24 Analyzed: 04/04/24

Specific Conductance (EC) 0.158 0.0100 mmhos/cm 0.150 105 95-105

Duplicate (BHD0105-DUP1)

Source: 2403346-01

Prepared: 04/03/24 Analyzed: 04/04/24

Specific Conductance (EC) 2.26 0.0100 mmhos/cm 2.28 1.06 20

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/14/24 17:05

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD	
		Limit	Units		Result	%REC	Limits	RPD	Limit	Notes

Batch BHD0104 - General Preparation

LCS (BHD0104-BS1)

Prepared: 04/03/24 Analyzed: 04/04/24

pH	9.24	pH Units	9.18	101	95-105

Duplicate (BHD0104-DUP1)

Source: 2403346-01

Prepared: 04/03/24 Analyzed: 04/04/24

pH	7.41	pH Units	7.47	0.806	20

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/14/24 17:05

Notes and Definitions

QR-01	Analyses are not controlled on RPD values from sample concentrations less than 10 times the reporting limit. QC batch accepted based on LCS and/or LCSD QC results.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

April 26, 2024

Karen Olson

Tasman Geosciences

6855 W. 119th Ave.

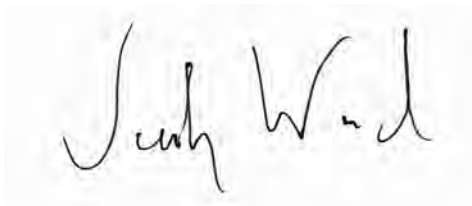
Broomfield, CO 80020

RE: PDC - Merritt Sec 9 Tank Battery

Work Order #2403449

Enclosed are the results of analyses for samples received by Summit Scientific on 03/28/24 17:55. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Jacob Wood", is displayed on a light gray background.

Jacob Wood For Paul Shrewsbury

President



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Sec 9 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/26/24 11:53

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MAN04-FL01-02-B@5.5'	2403449-01	Soil	03/27/24 11:00	03/28/24 17:55
MAN04-FL01-02-N@4'	2403449-02	Soil	03/27/24 11:05	03/28/24 17:55
MAN04-FL01-02-W@4'	2403449-03	Soil	03/27/24 11:10	03/28/24 17:55
MAN04-FL01-02-S@4'	2403449-04	Soil	03/27/24 11:15	03/28/24 17:55
MAN04-FL01-02-E@4'	2403449-05	Soil	03/27/24 11:20	03/28/24 17:55
GW03	2403449-06	Water	03/28/24 10:45	03/28/24 17:55

Summit Scientific

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4653 Table Mountain Drive
Golden, CO 80403
303-277-9310

Lab ID	Page 1 of 1
2403449	

Client: PDC PDC / Tasman					Send Data To: Project Manager: Karen Olson					Send Invoice To: Company: PDC Energy											
Address: 6855 W 119th Ave					E-Mail: karen.olson@chevron.com					Project Name/Location:											
City/State/Zip: Broomfield / CO / 80220					Project Name: Merritt Sec 9 Tank Battery					AFE#:											
Phone: 303-487-1228					Project Number:					PO/Billing Codes:											
Sampler Name: Jordan Hestmark										Contact: Karen Olson											
					Preservative				Matrix				Analysis Requested							Special Instructions	
ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEXN - 8260B	TPH - (C6 - C36)	1,2,4 & 1,3,5 - TMB	Boron - HWS	pH, EC, SAR	PAHs - 9/5	Metals - 9/5	TDS, SO4, Cl	
1	MANO4-FLOI-02-B @ 5.5'	3/28/24	1100	2			X			X			X	X	X	X	X	X	X	X	
2	MANO4-FLOI-02-N @ 4'		1105	1																	
3	MANO4-FLOI-02-W @ 4'		1110	1																	
4	MANO4-FLOI-02-S @ 4'		1115	1																	
5	MANO4-FLOI-02-E @ 4'		1120	1																	
6	GW03		1045	5	3		2						X		X						X
7																					
8																					
9																					
10																					
11																					
12																					
13																					
14																					
15																					
Relinquished by: Jordan Hestmark		Date/Time: 3/28/24 1724		Received by: Tasman Lockbox		Date/Time: 3/28/24 1724		TAT Business Days		Field DO		Notes: Base organics on same day, All other constituents on 48 hr turn									
Relinquished by: Tasman Lockbox		Date/Time: 3/28/24 0730		Received by: [Signature]		Date/Time: 3/28/24 1735		Same Day		Field EC											
Relinquished by:		Date/Time:		Received by:		Date/Time:		1 Day		Field ORP											
Relinquished by:		Date/Time:		Received by:		Date/Time:		2 Days		Field pH											
Relinquished by:		Date/Time:		Received by:		Date/Time:		3 Days		Field Temp.											
Temperature Upon Receipt: 9.2		Corrected Temperature: 0		IR gun #:		HNO3 lot #:															

S₂

Sample Receipt Checklist

S2 Work Order# 2403449Client: PortasmanClient Project ID: Mamitt Sec 9 Tank BatteryShipped Via: H.D./P.U./FedEx/UPS/USPS/Other

Airbill #:

	-			

Matrix (Check all that apply)

Air

☐

Soil/Solid

☐

Water

☒

Other

☐

Temp (°C)

9.2

Thermometer #

1

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	☒	☐	☐	
If custody seals are present, are they intact? ⁽¹⁾	☒	☐	☐	<u>on DOE</u>
Are samples due within 48 hours present?	☒	☐	☐	<u>Same day</u>
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe ²⁺), Hexavalent Chromium (Cr ⁶⁺ , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	☐	☒	☐	
Is a chain-of-custody (COC) form present and filled out Completely? ⁽¹⁾	☒	☐	☐	
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	☒	☐	☐	
Were all samples received intact? ⁽¹⁾	☒	☐	☐	
Was adequate sample volume provided? ⁽¹⁾	☒	☐	☐	
Does the COC agree with the number and type of sample bottles received? ⁽¹⁾	☒	☐	☐	
Do the sample IDs on the bottle labels match the COC? ⁽¹⁾	☒	☐	☐	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	☐	☒	☒	
Are samples preserved that require preservation (excluding cooling)? ⁽¹⁾ Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	☒	☐	☒	<u>HCl</u>
If samples are acid preserved for metals, is the pH ≤ 2? ⁽¹⁾ Record the pH in Comments.	☐	☐	☒	
If dissolved metals are requested, were samples field filtered?	☐	☐	☒	
Additional Comments (if any):				
⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.				

AS
Custodian Printed Name

3/28/24
Date/Time

E411



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Sec 9 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/26/24 11:53

MAN04-FL01-02-B@5.5'
2403449-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/27/24 11:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHC1063	03/28/24	03/29/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **03/27/24 11:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0406	102 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0429	107 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0405	101 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/27/24 11:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHC1068	03/28/24	03/29/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **03/27/24 11:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	4.11	32.9 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Sec 9 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/26/24 11:53

MAN04-FL01-02-B@5.5'
2403449-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/27/24 11:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHC1073	03/29/24	03/30/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/27/24 11:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0390	117 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0243	72.9 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/27/24 11:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHD0118	04/03/24	04/10/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/27/24 11:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Sec 9 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/26/24 11:53

MAN04-FL01-02-B@5.5'
2403449-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	4.57	0.200	mg/kg dry	1	BHD0554	04/17/24	04/23/24	EPA 6020B
Barium	91.6	0.400	"	"	"	"	"	"
Cadmium	0.230	0.200	"	"	"	"	"	"
Copper	6.36	0.400	"	"	"	"	"	"
Lead	7.26	0.200	"	"	"	"	"	"
Nickel	8.93	0.400	"	"	"	"	"	"
Silver	0.0336	0.0200	"	"	"	"	"	"
Zinc	30.6	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/27/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHD0019	04/01/24	04/11/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **03/27/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	79.0	0.0500	mg/L dry	1	BHD0253	04/08/24	04/26/24	EPA 6020B	
Magnesium	53.0	0.0500	"	"	"	"	"	"	
Sodium	67.5	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/27/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.44	0.00100	units	1	BHD0987	04/26/24	04/26/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/27/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Sec 9 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/26/24 11:53

MAN04-FL01-02-B@5.5'
2403449-01 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	78.2	%	1	BHD0126	04/04/24	04/04/24	Calculation

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/27/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.868	0.0100	mmhos/cm	1	BHD0255	04/08/24	04/09/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **03/27/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.93		pH Units	1	BHD0254	04/08/24	04/09/24	EPA 9045D	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Sec 9 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/26/24 11:53

MAN04-FL01-02-N@4'
2403449-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/27/24 11:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHC1063	03/28/24	03/29/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/27/24 11:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0394	98.4 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0455	114 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0404	101 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/27/24 11:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHC1068	03/28/24	03/29/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/27/24 11:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	3.98	31.8 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Sec 9 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/26/24 11:53

MAN04-FL01-02-N@4'
2403449-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/27/24 11:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHC1073	03/29/24	03/30/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/27/24 11:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0477	143 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0214	64.3 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/27/24 11:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHD0118	04/03/24	04/10/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/27/24 11:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Sec 9 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/26/24 11:53

MAN04-FL01-02-N@4'
2403449-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	6.30	0.200	mg/kg dry	1	BHD0554	04/17/24	04/23/24	EPA 6020B
Barium	79.0	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	6.88	0.400	"	"	"	"	"	"
Lead	6.87	0.200	"	"	"	"	"	"
Nickel	8.89	0.400	"	"	"	"	"	"
Silver	0.0442	0.0200	"	"	"	"	"	"
Zinc	29.6	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/27/24 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHD0019	04/01/24	04/11/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **03/27/24 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	32.6	0.0500	mg/L dry	1	BHD0253	04/08/24	04/26/24	EPA 6020B	
Magnesium	28.7	0.0500	"	"	"	"	"	"	
Sodium	66.9	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/27/24 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.06	0.00100	units	1	BHD0987	04/26/24	04/26/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Sec 9 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/26/24 11:53

MAN04-FL01-02-N@4'
2403449-02 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/27/24 11:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	81.6			%	1	BHD0126	04/04/24	04/04/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/27/24 11:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	0.564	0.0100		mmhos/cm	1	BHD0255	04/08/24	04/09/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **03/27/24 11:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	8.10			pH Units	1	BHD0254	04/08/24	04/09/24	EPA 9045D	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Sec 9 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/26/24 11:53

MAN04-FL01-02-W@4'
2403449-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/27/24 11:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHC1063	03/28/24	03/29/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/27/24 11:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0384	95.9 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0422	105 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0396	98.9 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/27/24 11:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHC1068	03/28/24	03/29/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/27/24 11:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	4.22	33.8 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Sec 9 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/26/24 11:53

MAN04-FL01-02-W@4'
2403449-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/27/24 11:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHC1073	03/29/24	03/30/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/27/24 11:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0280	84.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0189	56.8 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/27/24 11:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHD0118	04/03/24	04/10/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/27/24 11:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Sec 9 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/26/24 11:53

MAN04-FL01-02-W@4'
2403449-03 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	4.88	0.200	mg/kg dry	1	BHD0554	04/17/24	04/23/24	EPA 6020B
Barium	79.1	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	6.44	0.400	"	"	"	"	"	"
Lead	6.57	0.200	"	"	"	"	"	"
Nickel	8.76	0.400	"	"	"	"	"	"
Silver	0.0361	0.0200	"	"	"	"	"	"
Zinc	28.0	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/27/24 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHD0019	04/01/24	04/11/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **03/27/24 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	28.4	0.0500	mg/L dry	1	BHD0253	04/08/24	04/26/24	EPA 6020B	
Magnesium	32.7	0.0500	"	"	"	"	"	"	
Sodium	83.7	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/27/24 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.54	0.00100	units	1	BHD0987	04/26/24	04/26/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Sec 9 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/26/24 11:53

MAN04-FL01-02-W@4'
2403449-03 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/27/24 11:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	83.3			%	1	BHD0126	04/04/24	04/04/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/27/24 11:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	0.624	0.0100		mmhos/cm	1	BHD0255	04/08/24	04/09/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **03/27/24 11:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	8.31			pH Units	1	BHD0254	04/08/24	04/09/24	EPA 9045D	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Sec 9 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/26/24 11:53

MAN04-FL01-02-S@4'
2403449-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/27/24 11:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHC1063	03/28/24	03/29/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/27/24 11:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0406	102 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0458	114 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0409	102 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/27/24 11:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHC1068	03/28/24	03/29/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/27/24 11:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	4.55	36.4 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Sec 9 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/26/24 11:53

MAN04-FL01-02-S@4'
2403449-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/27/24 11:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHC1073	03/29/24	03/30/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/27/24 11:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0366	110 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0217	65.1 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/27/24 11:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHD0118	04/03/24	04/10/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/27/24 11:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Sec 9 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/26/24 11:53

MAN04-FL01-02-S@4'
2403449-04 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	4.41	0.200	mg/kg dry	1	BHD0554	04/17/24	04/23/24	EPA 6020B
Barium	80.5	0.400	"	"	"	"	"	"
Cadmium	0.211	0.200	"	"	"	"	"	"
Copper	6.63	0.400	"	"	"	"	"	"
Lead	6.81	0.200	"	"	"	"	"	"
Nickel	8.82	0.400	"	"	"	"	"	"
Silver	0.0374	0.0200	"	"	"	"	"	"
Zinc	29.6	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/27/24 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHD0019	04/01/24	04/11/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **03/27/24 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	84.2	0.0500	mg/L dry	1	BHD0253	04/08/24	04/26/24	EPA 6020B	
Magnesium	59.9	0.0500	"	"	"	"	"	"	
Sodium	77.5	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/27/24 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.58	0.00100	units	1	BHD0987	04/26/24	04/26/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/27/24 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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Project: PDC - Merritt Sec 9 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/26/24 11:53

MAN04-FL01-02-S@4'
2403449-04 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	80.2	%	1	BHD0126	04/04/24	04/04/24	Calculation

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/27/24 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.983	0.0100	mmhos/cm	1	BHD0255	04/08/24	04/09/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **03/27/24 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.72		pH Units	1	BHD0254	04/08/24	04/09/24	EPA 9045D	

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Project: PDC - Merritt Sec 9 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/26/24 11:53

MAN04-FL01-02-E@4'
2403449-05 (Soil)

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Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/27/24 11:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHC1063	03/28/24	03/29/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/27/24 11:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0378	94.5 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0424	106 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0385	96.2 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/27/24 11:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHC1068	03/28/24	03/29/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/27/24 11:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	3.93	31.4 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Reported:
04/26/24 11:53

MAN04-FL01-02-E@4'
2403449-05 (Soil)

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PAH by EPA Method 8270D SIM

Date Sampled: **03/27/24 11:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHC1073	03/29/24	03/30/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/27/24 11:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0467	140 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0243	72.8 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/27/24 11:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHD0118	04/03/24	04/10/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/27/24 11:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

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Tasman Geosciences
6855 W. 119th Ave.
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Project: PDC - Merritt Sec 9 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/26/24 11:53

MAN04-FL01-02-E@4'
2403449-05 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	5.45	0.200	mg/kg dry	1	BHD0554	04/17/24	04/23/24	EPA 6020B
Barium	73.4	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	6.49	0.400	"	"	"	"	"	"
Lead	6.63	0.200	"	"	"	"	"	"
Nickel	8.85	0.400	"	"	"	"	"	"
Silver	0.0354	0.0200	"	"	"	"	"	"
Zinc	29.9	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/27/24 11:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHD0019	04/01/24	04/11/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **03/27/24 11:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	65.5	0.0500	mg/L dry	1	BHD0253	04/08/24	04/26/24	EPA 6020B	
Magnesium	53.2	0.0500	"	"	"	"	"	"	
Sodium	61.7	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/27/24 11:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.37	0.00100	units	1	BHD0987	04/26/24	04/26/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Project: PDC - Merritt Sec 9 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/26/24 11:53

MAN04-FL01-02-E@4'
2403449-05 (Soil)

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Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/27/24 11:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	82.5			%	1	BHD0126	04/04/24	04/04/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/27/24 11:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	0.820	0.0100		mmhos/cm	1	BHD0255	04/08/24	04/09/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **03/27/24 11:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	7.90			pH Units	1	BHD0254	04/08/24	04/09/24	EPA 9045D	

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Project: PDC - Merritt Sec 9 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/26/24 11:53

GW03
2403449-06 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/28/24 10:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BHC1070	03/28/24	03/28/24	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	

Date Sampled: **03/28/24 10:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	11.3	84.8 %	23-173		"	"	"	"	
Surrogate: Toluene-d8	14.0	105 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	13.5	101 %	21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **03/28/24 10:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chloride	51.0	12.0	mg/L	200	BHD0181	04/05/24	04/05/24	EPA 300.0	
Sulfate	1140	60.0	"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **03/28/24 10:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Total Dissolved Solids	1920	10.0	mg/L	1	BHD0045	04/02/24	04/02/24	SM2540C	

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Project: PDC - Merritt Sec 9 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/26/24 11:53

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC1063 - EPA 5030 Soil MS

Blank (BHC1063-BLK1)

Prepared: 03/28/24 Analyzed: 03/29/24

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0337		"	0.0400		84.2	50-150			
Surrogate: Toluene-d8	0.0434		"	0.0400		109	50-150			
Surrogate: 4-Bromofluorobenzene	0.0404		"	0.0400		101	50-150			

LCS (BHC1063-BS1)

Prepared: 03/28/24 Analyzed: 03/29/24

Benzene	0.0954	0.0020	mg/kg	0.100		95.4	70-130			
Toluene	0.0937	0.0050	"	0.100		93.7	70-130			
Ethylbenzene	0.107	0.0050	"	0.100		107	70-130			
m,p-Xylene	0.210	0.010	"	0.200		105	70-130			
o-Xylene	0.102	0.0050	"	0.100		102	70-130			
1,2,4-Trimethylbenzene	0.101	0.0050	"	0.100		101	70-130			
1,3,5-Trimethylbenzene	0.104	0.0050	"	0.100		104	70-130			
Naphthalene	0.0851	0.0038	"	0.100		85.1	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0368		"	0.0400		92.0	50-150			
Surrogate: Toluene-d8	0.0416		"	0.0400		104	50-150			
Surrogate: 4-Bromofluorobenzene	0.0384		"	0.0400		95.9	50-150			

Matrix Spike (BHC1063-MS1)

Source: 2403448-01

Prepared: 03/28/24 Analyzed: 03/29/24

Benzene	0.0795	0.0020	mg/kg	0.100	ND	79.5	70-130			
Toluene	0.100	0.0050	"	0.100	0.0220	78.0	70-130			
Ethylbenzene	0.0859	0.0050	"	0.100	ND	85.9	70-130			
m,p-Xylene	0.198	0.010	"	0.200	0.0503	74.0	70-130			
o-Xylene	0.0846	0.0050	"	0.100	ND	84.6	70-130			
1,2,4-Trimethylbenzene	0.0852	0.0050	"	0.100	ND	85.2	70-130			
1,3,5-Trimethylbenzene	0.0863	0.0050	"	0.100	ND	86.3	70-130			
Naphthalene	0.0776	0.0038	"	0.100	ND	77.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0358		"	0.0400		89.6	50-150			
Surrogate: Toluene-d8	0.0417		"	0.0400		104	50-150			
Surrogate: 4-Bromofluorobenzene	0.0404		"	0.0400		101	50-150			

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Project: PDC - Merritt Sec 9 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/26/24 11:53

Volatile Organic Compounds by EPA Method 8260B - Quality Control

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Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC1063 - EPA 5030 Soil MS

Matrix Spike Dup (BHC1063-MSD1)

Source: 2403448-01

Prepared: 03/28/24 Analyzed: 03/29/24

Benzene	0.0818	0.0020	mg/kg	0.100	ND	81.8	70-130	2.86	30	
Toluene	0.0942	0.0050	"	0.100	0.0220	72.2	70-130	6.00	30	
Ethylbenzene	0.0892	0.0050	"	0.100	ND	89.2	70-130	3.70	30	
m,p-Xylene	0.226	0.010	"	0.200	0.0503	88.0	70-130	13.2	30	
o-Xylene	0.0911	0.0050	"	0.100	ND	91.1	70-130	7.44	30	
1,2,4-Trimethylbenzene	0.105	0.0050	"	0.100	ND	105	70-130	21.1	30	
1,3,5-Trimethylbenzene	0.0985	0.0050	"	0.100	ND	98.5	70-130	13.1	30	
Naphthalene	0.0794	0.0038	"	0.100	ND	79.4	70-130	2.37	30	
Surrogate: 1,2-Dichloroethane-d4	0.0354		"	0.0400		88.4	50-150			
Surrogate: Toluene-d8	0.0403		"	0.0400		101	50-150			
Surrogate: 4-Bromofluorobenzene	0.0413		"	0.0400		103	50-150			

Batch BHC1070 - EPA 5030 Water MS

Blank (BHC1070-BLK1)

Prepared: 03/28/24 Analyzed: 03/29/24

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	2.0	"							
Naphthalene	ND	1.0	"							
1,2,4-Trimethylbenzene	ND	1.0	"							
1,3,5-Trimethylbenzene	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	9.43		"	13.3		70.7	23-173			
Surrogate: Toluene-d8	14.1		"	13.3		106	20-170			
Surrogate: 4-Bromofluorobenzene	12.9		"	13.3		96.8	21-167			

LCS (BHC1070-BS1)

Prepared: 03/28/24 Analyzed: 03/29/24

Benzene	38.2	1.0	ug/l	33.3		115	51-132			
Toluene	34.2	1.0	"	33.3		103	51-138			
Ethylbenzene	37.1	1.0	"	33.3		111	58-146			
m,p-Xylene	73.4	2.0	"	66.7		110	57-144			
o-Xylene	34.6	1.0	"	33.3		104	53-146			
Naphthalene	30.0	1.0	"	33.3		90.2	70-130			
1,2,4-Trimethylbenzene	29.6	1.0	"	33.3		88.9	70-130			
1,3,5-Trimethylbenzene	31.3	1.0	"	33.3		94.0	70-130			
Surrogate: 1,2-Dichloroethane-d4	9.80		"	13.3		73.5	23-173			
Surrogate: Toluene-d8	14.4		"	13.3		108	20-170			
Surrogate: 4-Bromofluorobenzene	13.4		"	13.3		100	21-167			

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Sec 9 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/26/24 11:53

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC1070 - EPA 5030 Water MS

LCS Dup (BHC1070-BSD1)

Prepared: 03/28/24 Analyzed: 03/29/24

Benzene	34.4	1.0	ug/l	33.3		103	51-132	10.4	20	
Toluene	30.4	1.0	"	33.3		91.4	51-138	11.6	20	
Ethylbenzene	33.8	1.0	"	33.3		101	58-146	9.28	20	
m,p-Xylene	67.2	2.0	"	66.7		101	57-144	8.69	20	
o-Xylene	31.5	1.0	"	33.3		94.5	53-146	9.29	20	
Naphthalene	32.2	1.0	"	33.3		96.5	70-130	6.78	20	
1,2,4-Trimethylbenzene	27.0	1.0	"	33.3		81.1	70-130	9.25	20	
1,3,5-Trimethylbenzene	28.9	1.0	"	33.3		86.6	70-130	8.20	20	
Surrogate: 1,2-Dichloroethane-d4	9.59		"	13.3		71.9	23-173			
Surrogate: Toluene-d8	14.2		"	13.3		107	20-170			
Surrogate: 4-Bromofluorobenzene	13.2		"	13.3		99.1	21-167			

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Sec 9 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/26/24 11:53

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC1068 - EPA 3550A

Blank (BHC1068-BLK1)

Prepared: 03/28/24 Analyzed: 03/29/24

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: o-Terphenyl	5.24		"	12.5		41.9	30-150			

LCS (BHC1068-BS1)

Prepared: 03/28/24 Analyzed: 03/29/24

C10-C28 (DRO)	526	50	mg/kg	500		105	70-130			
Surrogate: o-Terphenyl	10.0		"	12.5		80.1	30-150			

Matrix Spike (BHC1068-MS1)

Source: 2403448-01

Prepared: 03/28/24 Analyzed: 03/29/24

C10-C28 (DRO)	504	50	mg/kg	500	13.9	98.0	70-130			
Surrogate: o-Terphenyl	7.14		"	12.5		57.1	30-150			

Matrix Spike Dup (BHC1068-MSD1)

Source: 2403448-01

Prepared: 03/28/24 Analyzed: 03/29/24

C10-C28 (DRO)	450	50	mg/kg	500	13.9	87.2	70-130	11.4	20	
Surrogate: o-Terphenyl	6.15		"	12.5		49.2	30-150			

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Sec 9 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/26/24 11:53

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Reporting				Spike	Source	%REC			RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHC1073 - EPA 5030 Soil MS

Blank (BHC1073-BLK1)

Prepared: 03/29/24 Analyzed: 03/30/24

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
Surrogate: 2-Methylnaphthalene-d10	0.0341		"	0.0333		102	40-150			
Surrogate: Fluoranthene-d10	0.0309		"	0.0333		92.8	40-150			

LCS (BHC1073-BS1)

Prepared: 03/29/24 Analyzed: 03/30/24

Acenaphthene	0.0323	0.00500	mg/kg	0.0333	97.0	31-137
Anthracene	0.0346	0.00500	"	0.0333	104	30-120
Benzo (a) anthracene	0.0326	0.00500	"	0.0333	97.7	30-120
Benzo (a) pyrene	0.0289	0.00500	"	0.0333	86.7	30-120
Benzo (b) fluoranthene	0.0285	0.00500	"	0.0333	85.6	30-120
Benzo (k) fluoranthene	0.0319	0.00500	"	0.0333	95.8	30-120
Chrysene	0.0345	0.00500	"	0.0333	104	30-120
Dibenz (a,h) anthracene	0.0290	0.00500	"	0.0333	86.9	30-120
Fluoranthene	0.0331	0.00500	"	0.0333	99.2	30-120
Fluorene	0.0323	0.00500	"	0.0333	97.0	30-120
Indeno (1,2,3-cd) pyrene	0.0259	0.00500	"	0.0333	77.7	30-120
Pyrene	0.0413	0.00500	"	0.0333	124	35-142
1-Methylnaphthalene	0.0361	0.00500	"	0.0333	108	35-142
2-Methylnaphthalene	0.0426	0.00500	"	0.0333	128	35-142
Surrogate: 2-Methylnaphthalene-d10	0.0396		"	0.0333	119	40-150
Surrogate: Fluoranthene-d10	0.0332		"	0.0333	99.6	40-150

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Project Number: [none]
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Reported:
04/26/24 11:53

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Reporting			Spike		Source		%REC		RPD	
	Result	Limit	Units	Level		Result	%REC	Limits	RPD	Limit	Notes

Batch BHC1073 - EPA 5030 Soil MS

Matrix Spike (BHC1073-MS1)

Source: 2403443-21

Prepared: 03/29/24 Analyzed: 03/30/24

Acenaphthene	0.0146	0.00500	mg/kg	0.0333	ND	43.8	31-137				
Anthracene	0.0142	0.00500	"	0.0333	ND	42.6	30-120				
Benzo (a) anthracene	0.0152	0.00500	"	0.0333	ND	45.5	30-120				
Benzo (a) pyrene	0.0158	0.00500	"	0.0333	ND	47.3	30-120				
Benzo (b) fluoranthene	0.0141	0.00500	"	0.0333	ND	42.3	30-120				
Benzo (k) fluoranthene	0.0137	0.00500	"	0.0333	ND	41.2	30-120				
Chrysene	0.0147	0.00500	"	0.0333	ND	44.2	30-120				
Dibenz (a,h) anthracene	0.0198	0.00500	"	0.0333	ND	59.4	30-120				
Fluoranthene	0.0135	0.00500	"	0.0333	ND	40.4	30-120				
Fluorene	0.0139	0.00500	"	0.0333	ND	41.7	30-120				
Indeno (1,2,3-cd) pyrene	0.0146	0.00500	"	0.0333	ND	43.7	30-120				
Pyrene	0.0143	0.00500	"	0.0333	ND	43.0	35-142				
1-Methylnaphthalene	0.0204	0.00500	"	0.0333	ND	61.0	15-130				
2-Methylnaphthalene	0.0410	0.00500	"	0.0333	ND	123	15-130				
Surrogate: 2-Methylnaphthalene-d10	0.0160		"	0.0333		48.0	40-150				
Surrogate: Fluoranthene-d10	0.0136		"	0.0333		40.7	40-150				

Matrix Spike Dup (BHC1073-MSD1)

Source: 2403443-21

Prepared: 03/29/24 Analyzed: 03/30/24

Acenaphthene	0.0185	0.00500	mg/kg	0.0333	ND	55.4	31-137	23.4	30		
Anthracene	0.0211	0.00500	"	0.0333	ND	63.3	30-120	39.1	30		QR-02
Benzo (a) anthracene	0.0235	0.00500	"	0.0333	ND	70.6	30-120	43.1	30		QR-02
Benzo (a) pyrene	0.0186	0.00500	"	0.0333	ND	55.8	30-120	16.5	30		
Benzo (b) fluoranthene	0.0176	0.00500	"	0.0333	ND	52.9	30-120	22.3	30		
Benzo (k) fluoranthene	0.0161	0.00500	"	0.0333	ND	48.2	30-120	15.6	30		
Chrysene	0.0229	0.00500	"	0.0333	ND	68.8	30-120	43.6	30		QR-02
Dibenz (a,h) anthracene	0.0248	0.00500	"	0.0333	ND	74.3	30-120	22.2	30		
Fluoranthene	0.0246	0.00500	"	0.0333	ND	73.9	30-120	58.7	30		QR-02
Fluorene	0.0186	0.00500	"	0.0333	ND	55.7	30-120	28.7	30		
Indeno (1,2,3-cd) pyrene	0.0221	0.00500	"	0.0333	ND	66.4	30-120	41.3	30		QR-02
Pyrene	0.0288	0.00500	"	0.0333	ND	86.4	35-142	67.1	30		QR-02
1-Methylnaphthalene	0.0215	0.00500	"	0.0333	ND	64.4	15-130	5.37	50		
2-Methylnaphthalene	0.0232	0.00500	"	0.0333	ND	69.5	15-130	55.5	50		QR-02
Surrogate: 2-Methylnaphthalene-d10	0.0241		"	0.0333		72.2	40-150				
Surrogate: Fluoranthene-d10	0.0196		"	0.0333		58.9	40-150				

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Sec 9 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/26/24 11:53

Total Metals by EPA 6020B Hot Water Soluble Extraction - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHD0118 - EPA 3050B

Blank (BHD0118-BLK1)

Prepared: 04/03/24 Analyzed: 04/10/24

Boron ND 2.00 mg/L

LCS (BHD0118-BS1)

Prepared: 04/03/24 Analyzed: 04/10/24

Boron 4.61 2.00 mg/L 5.00 92.2 80-120

Duplicate (BHD0118-DUP1)

Source: 2403435-01

Prepared: 04/03/24 Analyzed: 04/10/24

Boron 0.149 2.00 mg/L 0.166 10.7 20

Matrix Spike (BHD0118-MS1)

Source: 2403435-01

Prepared: 04/03/24 Analyzed: 04/10/24

Boron 4.69 2.00 mg/L 5.00 0.166 90.4 75-125

Matrix Spike Dup (BHD0118-MSD1)

Source: 2403435-01

Prepared: 04/03/24 Analyzed: 04/10/24

Boron 4.65 2.00 mg/L 5.00 0.166 89.6 75-125 0.860 25

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6855 W. 119th Ave.
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Project: PDC - Merritt Sec 9 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/26/24 11:53

Total Metals by EPA 6020B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHD0554 - EPA 3050B

Blank (BHD0554-BLK1)

Prepared: 04/17/24 Analyzed: 04/23/24

Arsenic	ND	0.200	mg/kg wet
Barium	ND	0.400	"
Cadmium	ND	0.200	"
Copper	ND	0.400	"
Lead	ND	0.200	"
Nickel	ND	0.400	"
Silver	ND	0.0200	"
Zinc	ND	0.400	"
Selenium	ND	0.260	"

LCS (BHD0554-BS1)

Prepared: 04/17/24 Analyzed: 04/23/24

Arsenic	40.0	0.200	mg/kg wet	40.0	100	80-120
Barium	39.7	0.400	"	40.0	99.1	80-120
Cadmium	2.00	0.200	"	2.00	99.9	80-120
Copper	40.2	0.400	"	40.0	100	80-120
Lead	19.4	0.200	"	20.0	96.8	80-120
Nickel	39.7	0.400	"	40.0	99.3	80-120
Silver	1.98	0.0200	"	2.00	99.1	80-120
Zinc	39.5	0.400	"	40.0	98.8	80-120
Selenium	4.60	0.260	"	4.00	115	80-120

Duplicate (BHD0554-DUP1)

Source: 2403449-01

Prepared: 04/17/24 Analyzed: 04/23/24

Arsenic	4.62	0.200	mg/kg dry	4.57	1.12	20
Barium	93.4	0.400	"	91.6	2.03	20
Cadmium	0.233	0.200	"	0.230	1.14	20
Copper	6.52	0.400	"	6.36	2.54	20
Lead	7.46	0.200	"	7.26	2.72	20
Nickel	9.11	0.400	"	8.93	2.03	20
Silver	0.0343	0.0200	"	0.0336	2.11	20
Zinc	31.4	0.400	"	30.6	2.78	20
Selenium	ND	0.260	"	ND		20

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Project: PDC - Merritt Sec 9 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/26/24 11:53

Total Metals by EPA 6020B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHD0554 - EPA 3050B

Matrix Spike (BHD0554-MS1)

Source: 2403449-01

Prepared: 04/17/24 Analyzed: 04/23/24

Arsenic	52.7	0.200	mg/kg dry	47.0	4.57	102	75-125
Barium	135	0.400	"	47.0	91.6	93.1	75-125
Cadmium	2.70	0.200	"	2.35	0.230	105	75-125
Copper	54.9	0.400	"	47.0	6.36	103	75-125
Lead	30.4	0.200	"	23.5	7.26	98.5	75-125
Nickel	57.8	0.400	"	47.0	8.93	104	75-125
Silver	2.43	0.0200	"	2.35	0.0336	102	75-125
Zinc	80.5	0.400	"	47.0	30.6	106	75-125
Selenium	5.57	0.260	"	4.70	ND	118	75-125

Matrix Spike Dup (BHD0554-MSD1)

Source: 2403449-01

Prepared: 04/17/24 Analyzed: 04/23/24

Arsenic	51.0	0.200	mg/kg dry	47.0	4.57	98.9	75-125	3.17	25
Barium	132	0.400	"	47.0	91.6	86.8	75-125	2.22	25
Cadmium	2.61	0.200	"	2.35	0.230	101	75-125	3.19	25
Copper	53.0	0.400	"	47.0	6.36	99.2	75-125	3.47	25
Lead	29.6	0.200	"	23.5	7.26	95.2	75-125	2.59	25
Nickel	56.0	0.400	"	47.0	8.93	100	75-125	3.22	25
Silver	2.37	0.0200	"	2.35	0.0336	99.4	75-125	2.58	25
Zinc	77.6	0.400	"	47.0	30.6	100	75-125	3.66	25
Selenium	5.64	0.260	"	4.70	ND	120	75-125	1.28	25

Summit Scientific

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Project: PDC - Merritt Sec 9 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/26/24 11:53

Hexavalent Chromium by EPA Method 7196 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHD0019 - 3060A Mod

Blank (BHD0019-BLK1)

Prepared: 04/01/24 Analyzed: 04/11/24

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BHD0019-BS1)

Prepared: 04/01/24 Analyzed: 04/11/24

Chromium, Hexavalent 23.2 0.30 mg/kg wet 25.0 93.0 80-120

Duplicate (BHD0019-DUP1)

Source: 2403435-01

Prepared: 04/01/24 Analyzed: 04/11/24

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BHD0019-MS1)

Source: 2403435-01

Prepared: 04/01/24 Analyzed: 04/11/24

Chromium, Hexavalent 24.5 0.30 mg/kg dry 26.8 ND 91.2 75-125

Matrix Spike Dup (BHD0019-MSD1)

Source: 2403435-01

Prepared: 04/01/24 Analyzed: 04/11/24

Chromium, Hexavalent 24.3 0.30 mg/kg dry 26.8 ND 90.4 75-125 0.881 20

Summit Scientific

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Broomfield CO, 80020

Project: PDC - Merritt Sec 9 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/26/24 11:53

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD	
		Limit	Units		Result	%REC	Limits	RPD	Limit	Notes

Batch BHD0253 - General Preparation

Blank (BHD0253-BLK1)

Prepared: 04/08/24 Analyzed: 04/26/24

Calcium	ND	0.0500	mg/L wet
Magnesium	ND	0.0500	"
Sodium	ND	0.0500	"

LCS (BHD0253-BS1)

Prepared: 04/08/24 Analyzed: 04/26/24

Calcium	5.57	0.0500	mg/L wet	5.00	111	70-130
Magnesium	5.01	0.0500	"	5.00	100	70-130
Sodium	5.34	0.0500	"	5.00	107	70-130

Summit Scientific

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Project: PDC - Merritt Sec 9 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/26/24 11:53

Anions by EPA Method 300.0 - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHD0181 - General Preparation

Blank (BHD0181-BLK1)

Prepared & Analyzed: 04/05/24

Chloride	ND	0.0600	mg/L
Sulfate	ND	0.300	"

LCS (BHD0181-BS1)

Prepared & Analyzed: 04/05/24

Chloride	3.05	0.0600	mg/L	3.00	102	90-110
Sulfate	15.6	0.300	"	15.0	104	90-110

Duplicate (BHD0181-DUP1)

Source: 2403376-01

Prepared & Analyzed: 04/05/24

Chloride	77.6	12.0	mg/L	78.4	1.03	20
Sulfate	279	60.0	"	274	1.81	20

Matrix Spike (BHD0181-MS1)

Source: 2403376-01

Prepared & Analyzed: 04/05/24

Chloride	660	12.0	mg/L	600	78.4	97.0	80-120
Sulfate	3260	60.0	"	3000	274	99.6	80-120

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Project: PDC - Merritt Sec 9 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/26/24 11:53

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control

Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD	
		Limit	Units		Result	%REC	Limits	RPD	Limit	Notes

Batch BHD0126 - General Preparation

Duplicate (BHD0126-DUP1)

Source: 2403448-01

Prepared & Analyzed: 04/04/24

% Solids	82.6	%		81.7		1.17	20

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Project: PDC - Merritt Sec 9 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/26/24 11:53

Total Dissolved Solids by SM2540C - Quality Control
Summit Scientific

Reporting				Spike	Source	%REC			RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHD0045 - General Preparation

Blank (BHD0045-BLK1)

Prepared & Analyzed: 04/02/24

Total Dissolved Solids ND 10.0 mg/L

Duplicate (BHD0045-DUP1)

Source: 2403439-01

Prepared & Analyzed: 04/02/24

Total Dissolved Solids 844 10.0 mg/L 932 9.95 20

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Tasman Geosciences
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Broomfield CO, 80020

Project: PDC - Merritt Sec 9 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/26/24 11:53

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD	
		Limit	Units		Result	%REC	Limits	RPD	Limit	Notes

Batch BHD0255 - General Preparation

Blank (BHD0255-BLK1)

Prepared: 04/08/24 Analyzed: 04/09/24

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BHD0255-BS1)

Prepared: 04/08/24 Analyzed: 04/09/24

Specific Conductance (EC) 0.147 0.0100 mmhos/cm 0.150 98.1 95-105

Duplicate (BHD0255-DUP1)

Source: 2403387-01

Prepared: 04/08/24 Analyzed: 04/09/24

Specific Conductance (EC) 0.631 0.0100 mmhos/cm 0.645 2.24 20

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Sec 9 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/26/24 11:53

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source Result	%REC		RPD		Notes
		Limit	Units			%REC	Limits	RPD	Limit	

Batch BHD0254 - General Preparation

LCS (BHD0254-BS1)

Prepared: 04/08/24 Analyzed: 04/09/24

pH	9.02	pH Units	9.18	98.3	95-105

Duplicate (BHD0254-DUP1)

Source: 2403387-01

Prepared: 04/08/24 Analyzed: 04/09/24

pH	7.98	pH Units	8.10	1.49	20

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Sec 9 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
04/26/24 11:53

Notes and Definitions

QR-02	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

May 09, 2024

Karen Olson

Tasman Geosciences

6855 W. 119th Ave.

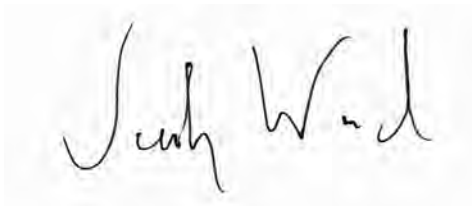
Broomfield, CO 80020

RE: PDC - Merritt Combined Wellheads

Work Order #2404055

Enclosed are the results of analyses for samples received by Summit Scientific on 04/03/24 17:47. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Jacob Wood", is shown within a light gray rectangular border.

Jacob Wood For Paul Shrewsbury

President



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

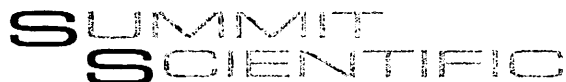
Reported:
05/09/24 14:45

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BKG02@4'	2404055-01	Soil	04/03/24 11:00	04/03/24 17:47
BKG02@6'	2404055-02	Soil	04/03/24 11:05	04/03/24 17:47
BKG02@8'	2404055-03	Soil	04/03/24 11:10	04/03/24 17:47

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4653 Table Mountain Drive
Golden, CO 80403
303-277-9310

Lab ID	Page 1 of 1
2404059	

					Send Data To:					Send Invoice To:												
Client: PDC PDC / Tasman					Project Manager: Karen Olson					Company: PDC Energy												
Address: 6855 W 119th Ave					E-Mail: karen.olson@chevron.com					Project Name/Location:												
City/State/Zip: Broomfield / CO / 80220										AFE#:												
Phone: 303-487-1228					Project Name: Merritt Combined Wellheads					PO/Billing Codes:												
Sampler Name: Jordan Hestmark					Project Number:					Contact: Karen Olson												
					Preservative				Matrix				Analysis Requested						Special Instructions			
ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEXN - 8260B	TPH - (C6 - C36)	1,2,4 & 1,3,5 - TMB	Boron - HWS	pH, EC, SAR	PAHs	Metals	TDS, SO4, Cl		
1	BK602 @ 4'	4/3/24	1100	2			X			X								X		X		
2	BK602 @ 6'	↓	1105	↓			↓			↓								↓		↓		
3	BK602 @ 8'	↓	1110	↓			↓			↓								↓		↓		
4																						
5																						
6																						
7																						
8																						
9																						
10																						
11																						
12																						
13																						
14																						
15																						

Relinquished by: Jordan Hestmark	Date/Time: 4/3/24 1454	Received by: Tasman Lockbox	Date/Time: 4/3/24 1454	TAT Business Days	Field DO	Notes:
Relinquished by: Tasman Lockbox	Date/Time: 4/3/24 1747	Received by: [Signature]	Date/Time: 4/3/24 1747	Same Day	Field EC	
				1 Day	Field ORP	
				2 Days	Field pH	
				3 Days	Field Temp.	
Relinquished by:	Date/Time:	Received by:	Date/Time:	Standard	X Field Turb.	
Temperature Upon Receipt: 84		Corrected Temperature: 6	IR gun #: 1	HNO3 lot #:		

S₂

Sample Receipt Checklist

S2 Work Order# 2404055Client: PotrasmanClient Project ID: Merritt Combined wellheadShipped Via: H.D./P.U./FedEx/UPS/USPS/Other

Airbill #:

☐	☒	☐	☐	☐

Matrix (Check all that apply)

Air

☐

Soil/Solid

☐

Water

☐

Other

☐

Temp (°C)

8.4

Thermometer #

1

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	☒	☐	☐	
If custody seals are present, are they intact? ⁽¹⁾	☒	☐	☐	NOTE
Are samples due within 48 hours present?	☐	☒	☐	
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe ²⁺), Hexavalent Chromium (Cr ⁶⁺ , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	☐	☒	☐	
Is a chain-of-custody (COC) form present and filled out Completely? ⁽¹⁾	☒	☐	☐	
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	☒	☐	☐	
Were all samples received intact? ⁽¹⁾	☒	☐	☐	
Was adequate sample volume provided? ⁽¹⁾	☒	☐	☐	
Does the COC agree with the number and type of sample bottles received? ⁽¹⁾	☒	☐	☐	
Do the sample IDs on the bottle labels match the COC? ⁽¹⁾	☒	☐	☐	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	☐	☐	☒	//
Are samples preserved that require preservation (excluding cooling)? ⁽¹⁾ Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	☐	☐	☒	
If samples are acid preserved for metals, is the pH ≤ 2? ⁽¹⁾ Record the pH in Comments.	☐	☐	☒	
If dissolved metals are requested, were samples field filtered?	☐	☐	☒	
Additional Comments (if any):				

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.

Custodian Printed Name

Date/Time



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/09/24 14:45

BKG02@4'
2404055-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **04/03/24 11:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	5.24	0.200	mg/kg dry	1	BHD0692	04/19/24	05/08/24	EPA 6020B	
Barium	97.8	0.400	"	"	"	"	"	"	
Cadmium	0.246	0.200	"	"	"	"	"	"	
Copper	4.63	0.400	"	"	"	"	"	"	
Lead	7.78	0.200	"	"	"	"	"	"	
Nickel	6.26	0.400	"	"	"	"	"	"	
Silver	0.0433	0.0200	"	"	"	"	"	"	
Zinc	21.8	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/03/24 11:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHD0464	04/15/24	04/17/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **04/03/24 11:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	117	0.0500	mg/L dry	1	BHD0698	04/20/24	05/07/24	EPA 6020B	
Magnesium	50.0	0.0500	"	"	"	"	"	"	
Sodium	159	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **04/03/24 11:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Sodium Adsorption Ratio	3.10	0.00100	units	1	BHE0278	05/08/24	05/08/24	Calculation	

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Project Number: [none]
Project Manager: Karen Olson

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BKG02@4'
2404055-01 (Soil)

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Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/03/24 11:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	88.7			%	1	BHD0358	04/11/24	04/12/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/03/24 11:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	1.87	0.0100		mmhos/cm	1	BHD0699	04/20/24	04/22/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **04/03/24 11:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	8.12			pH Units	1	BHD0700	04/20/24	04/22/24	EPA 9045D	

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Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/09/24 14:45

BKG02@6'
2404055-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **04/03/24 11:05**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	5.55	0.200	mg/kg dry	1	BHD0692	04/19/24	05/08/24	EPA 6020B	
Barium	93.6	0.400	"	"	"	"	"	"	
Cadmium	0.238	0.200	"	"	"	"	"	"	
Copper	5.14	0.400	"	"	"	"	"	"	
Lead	7.74	0.200	"	"	"	"	"	"	
Nickel	6.16	0.400	"	"	"	"	"	"	
Silver	0.0457	0.0200	"	"	"	"	"	"	
Zinc	21.3	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/03/24 11:05**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHD0464	04/15/24	04/17/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **04/03/24 11:05**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	107	0.0500	mg/L dry	1	BHD0698	04/20/24	05/07/24	EPA 6020B	
Magnesium	51.3	0.0500	"	"	"	"	"	"	
Sodium	130	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **04/03/24 11:05**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Sodium Adsorption Ratio	2.59	0.00100	units	1	BHE0278	05/08/24	05/08/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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BKG02@6'
2404055-02 (Soil)

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Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/03/24 11:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	82.1			%	1	BHD0358	04/11/24	04/12/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/03/24 11:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	1.51	0.0100		mmhos/cm	1	BHD0699	04/20/24	04/22/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **04/03/24 11:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	8.19			pH Units	1	BHD0700	04/20/24	04/22/24	EPA 9045D	

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Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/09/24 14:45

BKG02@8'
2404055-03 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **04/03/24 11:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	4.26	0.200	mg/kg dry	1	BHD0692	04/19/24	05/08/24	EPA 6020B	
Barium	79.6	0.400	"	"	"	"	"	"	
Cadmium	0.233	0.200	"	"	"	"	"	"	
Copper	4.50	0.400	"	"	"	"	"	"	
Lead	7.13	0.200	"	"	"	"	"	"	
Nickel	5.62	0.400	"	"	"	"	"	"	
Silver	0.0339	0.0200	"	"	"	"	"	"	
Zinc	21.1	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/03/24 11:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHD0464	04/15/24	04/17/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **04/03/24 11:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	175	0.0500	mg/L dry	1	BHD0698	04/20/24	05/07/24	EPA 6020B	
Magnesium	148	0.0500	"	"	"	"	"	"	
Sodium	274	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **04/03/24 11:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Sodium Adsorption Ratio	3.69	0.00100	units	1	BHE0278	05/08/24	05/08/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Project: PDC - Merritt Combined Wellheads
Project Number: [none]
Project Manager: Karen Olson

Reported:
05/09/24 14:45

BKG02@8'
2404055-03 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/03/24 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	86.3		%	1	BHD0358	04/11/24	04/12/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/03/24 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	3.28	0.0100	mmhos/cm	1	BHD0699	04/20/24	04/22/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **04/03/24 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.20		pH Units	1	BHD0700	04/20/24	04/22/24	EPA 9045D	

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Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/09/24 14:45

Total Metals by EPA 6020B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHD0692 - EPA 3050B

Blank (BHD0692-BLK1)

Prepared: 04/19/24 Analyzed: 05/08/24

Arsenic	ND	0.200	mg/kg wet
Barium	ND	0.400	"
Cadmium	ND	0.200	"
Copper	ND	0.400	"
Lead	ND	0.200	"
Nickel	ND	0.400	"
Silver	ND	0.0200	"
Zinc	ND	0.400	"
Selenium	ND	0.260	"

LCS (BHD0692-BS1)

Prepared: 04/19/24 Analyzed: 05/08/24

Arsenic	38.3	0.200	mg/kg wet	40.0	95.9	80-120
Barium	39.0	0.400	"	40.0	97.5	80-120
Cadmium	1.93	0.200	"	2.00	96.3	80-120
Copper	42.1	0.400	"	40.0	105	80-120
Lead	18.9	0.200	"	20.0	94.5	80-120
Nickel	41.3	0.400	"	40.0	103	80-120
Silver	1.92	0.0200	"	2.00	96.2	80-120
Zinc	41.8	0.400	"	40.0	104	80-120
Selenium	4.11	0.260	"	4.00	103	80-120

Duplicate (BHD0692-DUP1)

Source: 2404052-01

Prepared: 04/19/24 Analyzed: 05/08/24

Arsenic	4.55	0.200	mg/kg dry	7.67	51.0	20	QR-04
Barium	95.0	0.400	"	96.6	1.65	20	
Cadmium	0.356	0.200	"	0.619	54.1	20	QR-01
Copper	6.22	0.400	"	6.19	0.440	20	
Lead	9.39	0.200	"	10.5	11.3	20	
Nickel	5.19	0.400	"	5.47	5.28	20	
Silver	0.0440	0.0200	"	0.0432	1.89	20	
Zinc	22.8	0.400	"	24.6	7.55	20	
Selenium	0.279	0.260	"	0.514	59.3	20	QR-01

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Project Number: [none]
Project Manager: Karen Olson

Reported:
05/09/24 14:45

Total Metals by EPA 6020B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHD0692 - EPA 3050B

Matrix Spike (BHD0692-MS1)		Source: 2404052-01			Prepared: 04/19/24 Analyzed: 05/08/24					
Arsenic	45.8	0.180	mg/kg dry	41.0	7.67	92.8	75-125			
Barium	128	0.360	"	41.0	96.6	76.9	75-125			
Cadmium	2.44	0.180	"	2.05	0.619	88.7	75-125			
Copper	27.7	0.360	"	41.0	6.19	52.5	75-125			QM-05
Lead	28.9	0.180	"	20.5	10.5	89.8	75-125			
Nickel	27.0	0.360	"	41.0	5.47	52.5	75-125			QM-05
Silver	2.04	0.0180	"	2.05	0.0432	97.5	75-125			
Zinc	44.1	0.360	"	41.0	24.6	47.5	75-125			QM-05
Selenium	4.30	0.234	"	4.10	0.514	92.3	75-125			

Matrix Spike Dup (BHD0692-MSD1)		Source: 2404052-01			Prepared: 04/19/24 Analyzed: 05/08/24					
Arsenic	45.2	0.180	mg/kg dry	41.0	7.67	91.5	75-125	1.22	25	
Barium	128	0.360	"	41.0	96.6	76.1	75-125	0.239	25	
Cadmium	2.46	0.180	"	2.05	0.619	89.9	75-125	1.00	25	
Copper	28.5	0.360	"	41.0	6.19	54.4	75-125	2.78	25	QM-05
Lead	29.3	0.180	"	20.5	10.5	91.3	75-125	1.05	25	
Nickel	27.8	0.360	"	41.0	5.47	54.3	75-125	2.69	25	QM-05
Silver	2.06	0.0180	"	2.05	0.0432	98.1	75-125	0.641	25	
Zinc	45.8	0.360	"	41.0	24.6	51.7	75-125	3.75	25	QM-05
Selenium	4.34	0.234	"	4.10	0.514	93.3	75-125	0.949	25	

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Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/09/24 14:45

Hexavalent Chromium by EPA Method 7196 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHD0464 - 3060A Mod

Blank (BHD0464-BLK1)

Prepared: 04/15/24 Analyzed: 04/17/24

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BHD0464-BS1)

Prepared: 04/15/24 Analyzed: 04/17/24

Chromium, Hexavalent 25.4 0.30 mg/kg wet 25.0 101 80-120

Duplicate (BHD0464-DUP1)

Source: 2404055-01

Prepared: 04/15/24 Analyzed: 04/17/24

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BHD0464-MS1)

Source: 2404055-01

Prepared: 04/15/24 Analyzed: 04/17/24

Chromium, Hexavalent 27.4 0.30 mg/kg dry 28.2 ND 97.4 75-125

Matrix Spike Dup (BHD0464-MSD1)

Source: 2404055-01

Prepared: 04/15/24 Analyzed: 04/17/24

Chromium, Hexavalent 27.4 0.30 mg/kg dry 28.2 ND 97.4 75-125 0.00 20

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/09/24 14:45

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHD0698 - General Preparation

Blank (BHD0698-BLK1)

Prepared: 04/20/24 Analyzed: 05/07/24

Calcium	ND	0.0500	mg/L wet
Magnesium	ND	0.0500	"
Sodium	ND	0.0500	"

LCS (BHD0698-BS1)

Prepared: 04/20/24 Analyzed: 05/07/24

Calcium	5.90	0.0500	mg/L wet	5.00	118	70-130
Magnesium	5.41	0.0500	"	5.00	108	70-130
Sodium	5.39	0.0500	"	5.00	108	70-130

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/09/24 14:45

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control

Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD	
		Limit	Units		Result	%REC	Limits	RPD	Limit	Notes

Batch BHD0358 - General Preparation

Duplicate (BHD0358-DUP1)

Source: 2404052-01

Prepared: 04/11/24 Analyzed: 04/12/24

% Solids	87.7	%	87.6	0.0341	20

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/09/24 14:45

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD	
		Limit	Units		Result	%REC	Limits	RPD	Limit	Notes

Batch BHD0699 - General Preparation

Blank (BHD0699-BLK1)

Prepared: 04/20/24 Analyzed: 04/22/24

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BHD0699-BS1)

Prepared: 04/20/24 Analyzed: 04/22/24

Specific Conductance (EC) 0.153 0.0100 mmhos/cm 0.150 102 95-105

Duplicate (BHD0699-DUP1)

Source: 2404026-01

Prepared: 04/20/24 Analyzed: 04/22/24

Specific Conductance (EC) 0.264 0.0100 mmhos/cm 0.275 3.93 20

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/09/24 14:45

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD	
		Limit	Units		Result	%REC	Limits	RPD	Limit	Notes

Batch BHD0700 - General Preparation

LCS (BHD0700-BS1)

Prepared: 04/20/24 Analyzed: 04/22/24

pH	9.22	pH Units	9.18	100	95-105

Duplicate (BHD0700-DUP1)

Source: 2404026-01

Prepared: 04/20/24 Analyzed: 04/22/24

pH	8.41	pH Units	8.42	0.119	20

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Combined Wellheads

Project Number: [none]
Project Manager: Karen Olson

Reported:
05/09/24 14:45

Notes and Definitions

QR-04	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QR-01	Analyses are not controlled on RPD values from sample concentrations less than 10 times the reporting limit. QC batch accepted based on LCS and/or LCSD QC results.
QM-05	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The associated LCS and/or LCSD were within acceptance limits, therefore the data are considered valid.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

July 26, 2024

Karen Olson

Tasman Geosciences

6855 W. 119th Ave.

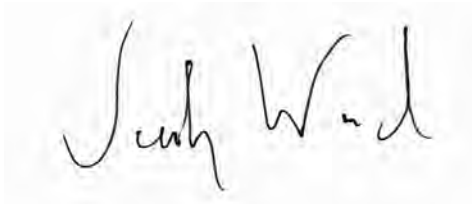
Broomfield, CO 80020

RE: PDC - Merritt 6-66-9-0659BH Wellhead

Work Order #2406079

Enclosed are the results of analyses for samples received by Summit Scientific on 06/06/24 16:45. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Jacob Wood", is displayed within a light gray rectangular box.

Jacob Wood For Paul Shrewsbury

President



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 14:35

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS06@10'	2406079-01	Soil	06/06/24 15:00	06/06/24 16:45
SS07@4'	2406079-02	Soil	06/06/24 15:14	06/06/24 16:45
SS08@6'	2406079-03	Soil	06/06/24 15:16	06/06/24 16:45
SS09@6'	2406079-04	Soil	06/06/24 15:18	06/06/24 16:45
SS10@6'	2406079-05	Soil	06/06/24 15:20	06/06/24 16:45

Case Narrative

Client requested samples be renamed on 7/26/2024.

Hunter Merlo requested all 915-PAH analytes be reported for all samples on 7/25/2024.
This report includes those results.

This is a revision of the report originally sent on 6/18/2024 at 14:11 MT.

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client: PDC / Tasman		Send Data To: Project Manager: Karen Olson		Send Invoice To: Company: PDC Energy	
Address: 6855 W 119th Ave		E-Mail: karen.olson@chevron.com		Project Name/Location:	
City/State/Zip: Broomfield / CO / 80020				AFE#:	
Phone: 303-487-1228		Project Name: Merritt 6-66-9-06598H Wellhead		PO/Billing Codes:	
Sampler Name: Elizabeth Brauer		Project Number:		Contact: Karen Olson	

					Preservative				Matrix		Analysis Requested										Special Instructions
ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEXN - 8260B	TPH - (C6 - C36)	1,2,4 & 1,3,5-TMB	Boron - HWS	pH, EC, SAR	PAHs**	pH	Q15-Metals**	
1	SS01 @ 16'	6/6/24	1500	2			X			X			X	X	X			X	X	X	*48hr turnaround
2	SS02 @ 4'		1514																		
3	SS03 @ 6'		1516																		
4	SS04 @ 4'		1518																		
5	SS05 @ 6'		1520																		
6																					
7																					
8																					
9																					
10																					
11																					
12																					
13																					
14																					
15																					

Relinquished by: 	Date/Time: 6/6/24 1645	Received by: Summit North	Date/Time: 6/6/24 1645	TAT Business Days	Field DO	Notes: * xenanthrene, fluorene, 1-M, 2-M, pyrene ** arsenic, barium, cadmium, zinc, selenium
Relinquished by: 52	Date/Time: 6/6/24 1645	Received by: 	Date/Time: 6/6/24 1645	Same Day ☒	Field EC	
				1 Day ☐	Field ORP	
				2 Days ☐	Field pH	
				3 Days ☐	Field Temp.	
Relinquished by:	Date/Time:	Received by:	Date/Time:	Standard ☐	Field Turb.	
Temperature Upon Receipt: 9.0		Corrected Temperature: 8		IR gun #: 1		HNO3 lot #:

S₂

Sample Receipt Checklist

S2 Work Order# 2408079Client: Tosman/PDCClient Project ID: 10011116-66-9-06594H Wellhead
Sec 4 Tank BatteriesShipped Via: H.D./P.U./FedEx/UPS/USPS/Other ☐

Airbill #: _____

☐	☐	☐	☐	☐

Matrix (Check all that apply)

Air

☐

Soil

☒

Solid

Water

☐

Other

☐

Temp (°C)

9.6

Thermometer #

1

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	☒	☐	☐	<u>cuize</u>
If custody seals are present, are they intact? ⁽¹⁾	☒	☐	☐	
Are samples due within 48 hours present?	☒	☐	☐	<u>Same day</u>
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe ²⁺), Hexavalent Chromium (Cr ⁶⁺ , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	☐	☒	☐	
Is a chain-of-custody (COC) form present and filled out Completely? ⁽¹⁾	☒	☐	☐	
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	☒	☐	☐	
Were all samples received intact? ⁽¹⁾	☒	☐	☐	
Was adequate sample volume provided? ⁽¹⁾	☒	☐	☐	
Does the COC agree with the number and type of sample bottles received? ⁽¹⁾	☒	☐	☐	
Do the sample IDs on the bottle labels match the COC? ⁽¹⁾	☒	☐	☐	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	☐	☐	☒	
Are samples preserved that require preservation (excluding cooling)? ⁽¹⁾ Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	☐	☐	☒	
If samples are acid preserved for metals, is the pH ≤ 2? ⁽¹⁾ Record the pH in Comments.	☐	☐	☒	
If dissolved metals are requested, were samples field filtered?	☐	☐	☒	
Additional Comments (if any):				

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.AS
Custodian Printed Name6/6/24
Date/Time



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 14:35

SS06@10'
2406079-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/06/24 15:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHF0161	06/06/24	06/06/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **06/06/24 15:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0446	112 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0400	100 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0391	97.7 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **06/06/24 15:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHF0160	06/06/24	06/06/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **06/06/24 15:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	10.5	84.1 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 14:35

SS06@10'
2406079-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **06/06/24 15:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHF0167	06/07/24	06/08/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **06/06/24 15:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0232	69.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0231	69.2 %	40-150		"	"	"	"	

Total Metals by EPA 6020B

Date Sampled: **06/06/24 15:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Arsenic	5.34	0.200	mg/kg dry	1	BHF0197	06/07/24	06/13/24	EPA 6020B	
Barium	145	0.400	"	"	"	"	"	"	
Cadmium	0.362	0.200	"	"	"	"	"	"	
Zinc	44.7	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 14:35

SS06@10'
2406079-01 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/06/24 15:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	73.1		%	1	BHF0180	06/07/24	06/07/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **06/06/24 15:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.52		pH Units	1	BHF0179	06/07/24	06/07/24	EPA 9045D	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 14:35

SS07@4'
2406079-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/06/24 15:14**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHF0161	06/06/24	06/06/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **06/06/24 15:14**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0437	109 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0400	100 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0384	95.9 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **06/06/24 15:14**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHF0160	06/06/24	06/06/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **06/06/24 15:14**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	10.4	83.2 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 14:35

SS07@4'
2406079-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **06/06/24 15:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHF0167	06/07/24	06/08/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	0.0232	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	0.0214	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	0.0284	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	0.0179	0.00500	"	"	"	"	"	"	
Chrysene	0.0267	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	0.0167	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	0.0708	0.00500	"	"	"	"	"	"	
Pyrene	0.0300	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **06/06/24 15:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0237	71.2 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0230	68.9 %	40-150		"	"	"	"	

Total Metals by EPA 6020B

Date Sampled: **06/06/24 15:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	3.49	0.200	mg/kg dry	1	BHF0197	06/07/24	06/13/24	EPA 6020B	
Barium	65.2	0.400	"	"	"	"	"	"	
Cadmium	0.226	0.200	"	"	"	"	"	"	
Zinc	39.3	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 14:35

SS07@4'
2406079-02 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/06/24 15:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	85.5		%	1	BHF0180	06/07/24	06/07/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **06/06/24 15:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.92		pH Units	1	BHF0179	06/07/24	06/07/24	EPA 9045D	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 14:35

SS08@6'
2406079-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/06/24 15:16**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHF0161	06/06/24	06/06/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **06/06/24 15:16**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0432	108 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0406	102 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0391	97.8 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **06/06/24 15:16**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHF0160	06/06/24	06/06/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **06/06/24 15:16**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	8.62	69.0 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 14:35

SS08@6'
2406079-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **06/06/24 15:16**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	0.00523	0.00500	mg/kg	1	BHF0167	06/07/24	06/08/24	EPA 8270D SIM	
Anthracene	0.00918	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	0.0176	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	0.0144	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	0.0198	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	0.0123	0.00500	"	"	"	"	"	"	
Chrysene	0.0169	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	0.0284	0.00500	"	"	"	"	"	"	
Fluorene	0.00723	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	0.0329	0.00500	"	"	"	"	"	"	
Pyrene	0.0256	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **06/06/24 15:16**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0217	65.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0221	66.3 %	40-150		"	"	"	"	

Total Metals by EPA 6020B

Date Sampled: **06/06/24 15:16**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Arsenic	4.51	0.176	mg/kg dry	1	BHF0197	06/07/24	06/13/24	EPA 6020B	
Barium	113	0.352	"	"	"	"	"	"	
Cadmium	0.235	0.176	"	"	"	"	"	"	
Zinc	42.0	0.352	"	"	"	"	"	"	
Selenium	ND	0.229	"	"	"	"	"	"	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 14:35

SS08@6'
2406079-03 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/06/24 15:16**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	84.5		%	1	BHF0180	06/07/24	06/07/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **06/06/24 15:16**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.42		pH Units	1	BHF0179	06/07/24	06/07/24	EPA 9045D	

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 14:35

SS09@6'
2406079-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/06/24 15:18**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHF0161	06/06/24	06/06/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **06/06/24 15:18**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0440	110 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0398	99.5 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0394	98.5 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **06/06/24 15:18**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHF0160	06/06/24	06/06/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **06/06/24 15:18**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	10.1	80.9 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 14:35

SS09@6'
2406079-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **06/06/24 15:18**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHF0167	06/07/24	06/08/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **06/06/24 15:18**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0216	64.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0226	67.9 %	40-150		"	"	"	"	

Total Metals by EPA 6020B

Date Sampled: **06/06/24 15:18**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	7.28	0.200	mg/kg dry	1	BHF0197	06/07/24	06/13/24	EPA 6020B	
Barium	164	0.400	"	"	"	"	"	"	
Cadmium	0.200	0.200	"	"	"	"	"	"	
Zinc	42.4	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Physical Parameters by APHA/ASTM/EPA Methods

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 14:35

SS09@6'
2406079-04 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/06/24 15:18**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	86.3			%	1	BHF0180	06/07/24	06/07/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **06/06/24 15:18**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	8.29			pH Units	1	BHF0179	06/07/24	06/07/24	EPA 9045D	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 14:35

SS10@6'
2406079-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/06/24 15:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHF0161	06/06/24	06/06/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **06/06/24 15:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0439	110 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0399	99.8 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0401	100 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **06/06/24 15:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHF0160	06/06/24	06/06/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **06/06/24 15:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	9.81	78.5 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 14:35

SS10@6'
2406079-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **06/06/24 15:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHF0167	06/07/24	06/08/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **06/06/24 15:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0215	64.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0233	70.0 %	40-150		"	"	"	"	

Total Metals by EPA 6020B

Date Sampled: **06/06/24 15:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	4.62	0.200	mg/kg dry	1	BHF0197	06/07/24	06/13/24	EPA 6020B	
Barium	93.5	0.400	"	"	"	"	"	"	
Cadmium	0.213	0.200	"	"	"	"	"	"	
Zinc	34.5	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Physical Parameters by APHA/ASTM/EPA Methods

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 14:35

SS10@6'
2406079-05 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/06/24 15:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	84.7		%	1	BHF0180	06/07/24	06/07/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **06/06/24 15:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.12		pH Units	1	BHF0179	06/07/24	06/07/24	EPA 9045D	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 14:35

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHF0161 - EPA 5030 Soil MS

Blank (BHF0161-BLK1)

Prepared: 06/06/24 Analyzed: 06/07/24

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0392		"	0.0400		98.1	50-150			
Surrogate: Toluene-d8	0.0399		"	0.0400		99.7	50-150			
Surrogate: 4-Bromofluorobenzene	0.0386		"	0.0400		96.5	50-150			

LCS (BHF0161-BS1)

Prepared: 06/06/24 Analyzed: 06/07/24

Benzene	0.120	0.0020	mg/kg	0.100		120	70-130			
Toluene	0.120	0.0050	"	0.100		120	70-130			
Ethylbenzene	0.115	0.0050	"	0.100		115	70-130			
m,p-Xylene	0.213	0.010	"	0.200		106	70-130			
o-Xylene	0.101	0.0050	"	0.100		101	70-130			
1,2,4-Trimethylbenzene	0.107	0.0050	"	0.100		107	70-130			
1,3,5-Trimethylbenzene	0.107	0.0050	"	0.100		107	70-130			
Naphthalene	0.110	0.0038	"	0.100		110	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0414		"	0.0400		104	50-150			
Surrogate: Toluene-d8	0.0417		"	0.0400		104	50-150			
Surrogate: 4-Bromofluorobenzene	0.0393		"	0.0400		98.3	50-150			

Matrix Spike (BHF0161-MS1)

Source: 2406077-01

Prepared: 06/06/24 Analyzed: 06/07/24

Benzene	0.103	0.0020	mg/kg	0.100	ND	103	70-130			
Toluene	0.100	0.0050	"	0.100	ND	100	70-130			
Ethylbenzene	0.101	0.0050	"	0.100	ND	101	70-130			
m,p-Xylene	0.187	0.010	"	0.200	ND	93.6	70-130			
o-Xylene	0.0884	0.0050	"	0.100	ND	88.4	70-130			
1,2,4-Trimethylbenzene	0.0905	0.0050	"	0.100	ND	90.5	70-130			
1,3,5-Trimethylbenzene	0.0910	0.0050	"	0.100	ND	91.0	70-130			
Naphthalene	0.0819	0.0038	"	0.100	ND	81.9	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0418		"	0.0400		104	50-150			
Surrogate: Toluene-d8	0.0408		"	0.0400		102	50-150			
Surrogate: 4-Bromofluorobenzene	0.0386		"	0.0400		96.4	50-150			

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 14:35

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHF0161 - EPA 5030 Soil MS

Matrix Spike Dup (BHF0161-MSD1)

Source: 2406077-01

Prepared: 06/06/24 Analyzed: 06/07/24

Benzene	0.106	0.0020	mg/kg	0.100	ND	106	70-130	2.94	30	
Toluene	0.103	0.0050	"	0.100	ND	103	70-130	2.94	30	
Ethylbenzene	0.101	0.0050	"	0.100	ND	101	70-130	0.475	30	
m,p-Xylene	0.190	0.010	"	0.200	ND	94.8	70-130	1.21	30	
o-Xylene	0.0886	0.0050	"	0.100	ND	88.6	70-130	0.203	30	
1,2,4-Trimethylbenzene	0.0896	0.0050	"	0.100	ND	89.6	70-130	0.933	30	
1,3,5-Trimethylbenzene	0.0911	0.0050	"	0.100	ND	91.1	70-130	0.165	30	
Naphthalene	0.0784	0.0038	"	0.100	ND	78.4	70-130	4.45	30	
Surrogate: 1,2-Dichloroethane-d4	0.0416		"	0.0400		104	50-150			
Surrogate: Toluene-d8	0.0416		"	0.0400		104	50-150			
Surrogate: 4-Bromofluorobenzene	0.0388		"	0.0400		97.0	50-150			

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead
Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 14:35

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHF0160 - EPA 3550A

Blank (BHF0160-BLK1)

Prepared: 06/06/24 Analyzed: 06/07/24

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: o-Terphenyl	17.1		"	12.5		137	30-150			

LCS (BHF0160-BS1)

Prepared: 06/06/24 Analyzed: 06/07/24

C10-C28 (DRO)	462	50	mg/kg	500		92.3	70-130			
Surrogate: o-Terphenyl	13.2		"	12.5		106	30-150			

Matrix Spike (BHF0160-MS1)

Source: 2406077-01

Prepared: 06/06/24 Analyzed: 06/07/24

C10-C28 (DRO)	466	50	mg/kg	500	30.5	87.0	70-130			
Surrogate: o-Terphenyl	9.94		"	12.5		79.5	30-150			

Matrix Spike Dup (BHF0160-MSD1)

Source: 2406077-01

Prepared: 06/06/24 Analyzed: 06/07/24

C10-C28 (DRO)	431	50	mg/kg	500	30.5	80.1	70-130	7.66	20	
Surrogate: o-Terphenyl	10.1		"	12.5		80.7	30-150			

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 14:35

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Reporting				Spike	Source	%REC			RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHF0167 - EPA 5030 Soil MS

Blank (BHF0167-BLK1)

Prepared & Analyzed: 06/07/24

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
Surrogate: 2-Methylnaphthalene-d10	0.0297		"	0.0333		89.0	40-150			
Surrogate: Fluoranthene-d10	0.0284		"	0.0333		85.1	40-150			

LCS (BHF0167-BS1)

Prepared & Analyzed: 06/07/24

Acenaphthene	0.0284	0.00500	mg/kg	0.0333		85.1	31-137			
Anthracene	0.0278	0.00500	"	0.0333		83.3	30-120			
Benzo (a) anthracene	0.0281	0.00500	"	0.0333		84.3	30-120			
Benzo (a) pyrene	0.0282	0.00500	"	0.0333		84.5	30-120			
Benzo (b) fluoranthene	0.0264	0.00500	"	0.0333		79.2	30-120			
Benzo (k) fluoranthene	0.0263	0.00500	"	0.0333		79.0	30-120			
Chrysene	0.0294	0.00500	"	0.0333		88.1	30-120			
Dibenz (a,h) anthracene	0.0358	0.00500	"	0.0333		107	30-120			
Fluoranthene	0.0275	0.00500	"	0.0333		82.6	30-120			
Fluorene	0.0271	0.00500	"	0.0333		81.3	30-120			
Indeno (1,2,3-cd) pyrene	0.0391	0.00500	"	0.0333		117	30-120			
Pyrene	0.0383	0.00500	"	0.0333		115	35-142			
1-Methylnaphthalene	0.0279	0.00500	"	0.0333		83.7	35-142			
2-Methylnaphthalene	0.0279	0.00500	"	0.0333		83.7	35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0282		"	0.0333		84.7	40-150			
Surrogate: Fluoranthene-d10	0.0280		"	0.0333		84.0	40-150			

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 14:35

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Reporting				Spike	Source	%REC			RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHF0167 - EPA 5030 Soil MS

Matrix Spike (BHF0167-MS1)

Source: 2406077-01

Prepared & Analyzed: 06/07/24

Acenaphthene	0.0256	0.00500	mg/kg	0.0333	ND	76.7	31-137			
Anthracene	0.0250	0.00500	"	0.0333	ND	75.1	30-120			
Benzo (a) anthracene	0.0274	0.00500	"	0.0333	ND	82.3	30-120			
Benzo (a) pyrene	0.0265	0.00500	"	0.0333	ND	79.6	30-120			
Benzo (b) fluoranthene	0.0256	0.00500	"	0.0333	ND	76.8	30-120			
Benzo (k) fluoranthene	0.0254	0.00500	"	0.0333	ND	76.2	30-120			
Chrysene	0.0271	0.00500	"	0.0333	ND	81.4	30-120			
Dibenz (a,h) anthracene	0.0307	0.00500	"	0.0333	ND	92.2	30-120			
Fluoranthene	0.0270	0.00500	"	0.0333	0.00521	65.4	30-120			
Fluorene	0.0250	0.00500	"	0.0333	ND	75.1	30-120			
Indeno (1,2,3-cd) pyrene	0.0292	0.00500	"	0.0333	ND	87.5	30-120			
Pyrene	0.0358	0.00500	"	0.0333	ND	107	35-142			
1-Methylnaphthalene	0.0252	0.00500	"	0.0333	ND	75.5	15-130			
2-Methylnaphthalene	0.0253	0.00500	"	0.0333	ND	76.0	15-130			
Surrogate: 2-Methylnaphthalene-d10	0.0259		"	0.0333		77.8	40-150			
Surrogate: Fluoranthene-d10	0.0253		"	0.0333		75.8	40-150			

Matrix Spike Dup (BHF0167-MSD1)

Source: 2406077-01

Prepared & Analyzed: 06/07/24

Acenaphthene	0.0232	0.00500	mg/kg	0.0333	ND	69.7	31-137	9.58	30	
Anthracene	0.0224	0.00500	"	0.0333	ND	67.2	30-120	11.2	30	
Benzo (a) anthracene	0.0246	0.00500	"	0.0333	ND	73.8	30-120	10.8	30	
Benzo (a) pyrene	0.0228	0.00500	"	0.0333	ND	68.3	30-120	15.3	30	
Benzo (b) fluoranthene	0.0225	0.00500	"	0.0333	ND	67.4	30-120	13.0	30	
Benzo (k) fluoranthene	0.0228	0.00500	"	0.0333	ND	68.4	30-120	10.9	30	
Chrysene	0.0246	0.00500	"	0.0333	ND	73.9	30-120	9.66	30	
Dibenz (a,h) anthracene	0.0241	0.00500	"	0.0333	ND	72.2	30-120	24.4	30	
Fluoranthene	0.0249	0.00500	"	0.0333	0.00521	59.0	30-120	8.22	30	
Fluorene	0.0219	0.00500	"	0.0333	ND	65.8	30-120	13.3	30	
Indeno (1,2,3-cd) pyrene	0.0261	0.00500	"	0.0333	ND	78.3	30-120	11.1	30	
Pyrene	0.0267	0.00500	"	0.0333	ND	80.2	35-142	28.9	30	
1-Methylnaphthalene	0.0226	0.00500	"	0.0333	ND	67.9	15-130	10.6	50	
2-Methylnaphthalene	0.0225	0.00500	"	0.0333	ND	67.4	15-130	12.1	50	
Surrogate: 2-Methylnaphthalene-d10	0.0232		"	0.0333		69.7	40-150			
Surrogate: Fluoranthene-d10	0.0235		"	0.0333		70.4	40-150			

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead
Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 14:35

Total Metals by EPA 6020B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHF0197 - EPA 3050B

Blank (BHF0197-BLK1)

Prepared: 06/07/24 Analyzed: 06/13/24

Arsenic	ND	0.200	mg/kg wet
Barium	ND	0.400	"
Cadmium	ND	0.200	"
Zinc	ND	0.400	"
Selenium	ND	0.260	"

LCS (BHF0197-BS1)

Prepared: 06/07/24 Analyzed: 06/13/24

Arsenic	36.6	0.200	mg/kg wet	40.0	91.4	80-120
Barium	37.7	0.400	"	40.0	94.3	80-120
Cadmium	1.90	0.200	"	2.00	95.1	80-120
Zinc	36.4	0.400	"	40.0	91.1	80-120
Selenium	3.66	0.260	"	4.00	91.5	80-120

Duplicate (BHF0197-DUP1)

Source: 2406053-01

Prepared: 06/07/24 Analyzed: 06/13/24

Arsenic	1.32	0.200	mg/kg dry	1.53	15.3	20	
Barium	36.3	0.400	"	50.9	33.5	20	QM-05
Cadmium	0.107	0.200	"	0.146	30.8	20	QR-01
Zinc	14.9	0.400	"	15.6	4.26	20	
Selenium	ND	0.260	"	ND		20	

Matrix Spike (BHF0197-MS1)

Source: 2406053-01

Prepared: 06/07/24 Analyzed: 06/13/24

Arsenic	38.5	0.180	mg/kg dry	39.6	1.53	93.5	75-125	
Barium	74.9	0.360	"	39.6	50.9	60.8	75-125	QM-01
Cadmium	2.00	0.180	"	1.98	0.146	93.7	75-125	
Zinc	52.6	0.360	"	39.6	15.6	93.4	75-125	
Selenium	3.36	0.234	"	3.96	ND	84.9	75-125	

Matrix Spike Dup (BHF0197-MSD1)

Source: 2406053-01

Prepared: 06/07/24 Analyzed: 06/13/24

Arsenic	38.7	0.179	mg/kg dry	39.3	1.53	94.5	75-125	0.356	25	
Barium	71.4	0.357	"	39.3	50.9	52.4	75-125	4.76	25	QM-01
Cadmium	2.02	0.179	"	1.97	0.146	95.2	75-125	0.855	25	
Zinc	51.9	0.357	"	39.3	15.6	92.4	75-125	1.28	25	
Selenium	3.29	0.232	"	3.93	ND	83.8	75-125	2.00	25	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 14:35

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD	
		Limit	Units		Result	%REC	Limits	RPD	Limit	Notes

Batch BHF0180 - General Preparation

Duplicate (BHF0180-DUP1)		Source: 2406077-01			Prepared & Analyzed: 06/07/24					
% Solids	92.3		%		90.8		1.61		20	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 14:35

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source Result	%REC		RPD		Notes
		Limit	Units			%REC	Limits	RPD	Limit	

Batch BHF0179 - General Preparation

LCS (BHF0179-BS1)

Prepared & Analyzed: 06/07/24

pH	9.27	pH Units	9.18	101	95-105

Duplicate (BHF0179-DUP1)

Source: 2406077-01

Prepared & Analyzed: 06/07/24

pH	8.27	pH Units	8.35	0.963	20

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 14:35

Notes and Definitions

QR-01	Analyses are not controlled on RPD values from sample concentrations less than 10 times the reporting limit. QC batch accepted based on LCS and/or LCSD QC results.
QM-05	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The associated LCS and/or LCSD were within acceptance limits, therefore the data are considered valid.
QM-01	The spike recovery for this QC sample is outside of established control limits due to sample matrix interference.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

July 26, 2024

Karen Olson

Tasman Geosciences

6855 W. 119th Ave.

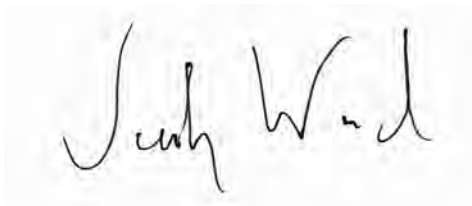
Broomfield, CO 80020

RE: PDC - Merritt 6-66-9-0659BH Wellhead

Work Order #2406101

Enclosed are the results of analyses for samples received by Summit Scientific on 06/07/24 16:50. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Jacob Wood". The signature is written in a cursive, flowing style.

Jacob Wood For Paul Shrewsbury

President



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 13:35

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS11@10'	2406101-01	Soil	06/07/24 08:56	06/07/24 16:50
SS12@4'	2406101-02	Soil	06/07/24 10:14	06/07/24 16:50
SS13@6'	2406101-03	Soil	06/07/24 10:28	06/07/24 16:50
SS14@10'	2406101-04	Soil	06/07/24 10:30	06/07/24 16:50
SS15@10'	2406101-05	Soil	06/07/24 10:36	06/07/24 16:50
SS16@4'	2406101-06	Soil	06/07/24 10:40	06/07/24 16:50
SS17@6'	2406101-07	Soil	06/07/24 10:42	06/07/24 16:50
SS18@10'	2406101-08	Soil	06/07/24 10:44	06/07/24 16:50
SS19@4'	2406101-09	Soil	06/07/24 10:50	06/07/24 16:50
SS20@6'	2406101-10	Soil	06/07/24 10:52	06/07/24 16:50
SS21@10'	2406101-11	Soil	06/07/24 10:54	06/07/24 16:50
SS22@4'	2406101-12	Soil	06/07/24 11:04	06/07/24 16:50
SS23@6'	2406101-13	Soil	06/07/24 11:06	06/07/24 16:50
SS24@10'	2406101-14	Soil	06/07/24 11:08	06/07/24 16:50
SS25@10'	2406101-15	Soil	06/07/24 11:42	06/07/24 16:50
SS26@2.5'	2406101-16	Soil	06/07/24 13:36	06/07/24 16:50
GW01	2406101-17	Water	06/07/24 08:20	06/07/24 16:50

Case Narrative

Client requested all samples be renamed on 7/25/2024.

Hunter Merlo requested full 915 PAH analyte list be reported on 7/25/2024.
This report includes those results.

This is a revision of the report originally sent on 7/1/2024 at 11:01 AM MT.

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client: PDC / Tasman				Send Data To: Project Manager: Karen Olson				Send Invoice To: Company: PDC Energy													
Address: 6855 W 119th Ave				E-Mail: karen.olson@chevron.com				Project Name/Location:													
City/State/Zip: Broomfield / CO / 80020								AFE#:													
Phone: 303-487-1228				Project Name: Merriitt 6-66-9-0659BH Wellhead				PO/Billing Codes:													
Sampler Name: Elizabeth Brauer				Project Number:				Contact: Karen Olson													
				Preservative				Matrix				Analysis Requested				Special Instructions					
ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEXN - 8260B	TPH - (C6 - C36)	1,2,4 & 1,3,5-TMB	Boron - HWS	pH, EC, SARs	PAHs **	915-Metals**		
1	SS06 @ 10'	6/7/24	856	2			X			X			X	X	X		X	X	X		*48 hour turnaround
2	SS07 @ 4'		1014																		
3	SS08 @ 6'		1028																		
4	SS09 @ 10'		1030																		
5	SS10 @ 10'		1036																		
6	SS11 @ 4'		1040																		
7	SS12 @ 6'		1042																		
8	SS13 @ 10'		1044																		
9	SS14 @ 4'		1050																		
10	SS15 @ 6'		1052																		
11	SS16 @ 10'		1054																		
12	SS17 @ 4'		1104																		
13	SS18 @ 6'		1106																		
14	SS19 @ 10'		1108																		
15	SS20 @ 10'		1142																		
Relinquished by: <i>ELB</i> 6/7/24 1600				Received by: Summit North 6/7/24 1600				TAT Business Days				Field DO		Notes: *2cenaphthene, fluorene, pyrene, 1-M, 2-M **zinc, arsenic, barium, cadmium, selenium							
Relinquished by: <i>52</i> 6/24 1150				Received by: <i>DRD</i> 6/24 1150				Same Day ☒				Field EC									
								1 Day ☐				Field ORP									
								2 Days ☐				Field pH									
								3 Days ☐				Field Temp.									
Relinquished by: <i>52</i> 6/24 1150				Received by: <i>DRD</i> 6/24 1150				Standard ☐				Field Turb.									
Temperature Upon Receipt: 8.4				Corrected Temperature: 8				IR gun #: 1				HNO3 lot #:									

Client: PDC / Tasman				Send Data To: Project Manager: Karen Olson				Send Invoice To: Company: PDC Energy													
Address: 6855 W 119th Ave				E-Mail: karen.olson@chevron.com				Project Name/Location:													
City/State/Zip: Broomfield / CO / 80020								AFE#:													
Phone: 303-487-1228				Project Name: Merritt 6-66-9-06598H Wellhead				PO/Billing Codes:													
Sampler Name: Elizabeth Brauer				Project Number:				Contact: Karen Olson													
ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative	Matrix	Analysis Requested	Special Instructions													
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEXN - 8260B	TPH - (C6 - C36)	1,2,4 & 1,3,5-TMB	Boron - HWS	pH, EC, SAR	PAHs	TDS, Cl, SO4		
1	SS21 @ 2.5'	6/7/24	1336	2			X			X							X	X			★ Standard turnaround
2	GW01	6/7/24	820	4	3		1		X				X		X				X		
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					
13																					
14																					
15																					

Relinquished by: <i>Elk</i>	Date/Time: 6/7/24 1600	Received by: <i>Summit North</i>	Date/Time: 6/7/24 1600	TAT Business Days	Field DO	Notes:
				Same Day ☒	Field EC	
Relinquished by: <i>52</i>	Date/Time: 6/7/24 1600	Received by: <i>[Signature]</i>	Date/Time: 6/7/24 1600	1 Day ☐	Field ORP	
				2 Days ☐	Field pH	
Relinquished by:	Date/Time:	Received by:	Date/Time:	3 Days ☐	Field Temp.	
				Standard ☐	Field Turb.	
Temperature Upon Receipt: <i>84</i>		Corrected Temperature: <i>8</i>		IR gun #: <i>1</i>	HNO3 lot #:	

S₂

Sample Receipt Checklist

S2 Work Order# 2406101Client: PottermanClient Project ID: Merritt 6-66-9-0659BHShipped Via: H.D./P.U./FedEx/UPS/USPS/Other ☐Airbill #: wellhead
☐ ☐ ☐ ☐ ☐

Matrix (Check all that apply)

Air ☐Soil/Solid ☐Water ☒Other ☐

Temp (°C)

8.4

Thermometer #

1

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	☒	☐	☐	outside
If custody seals are present, are they intact? ⁽¹⁾	☒	☐	☐	
Are samples due within 48 hours present?	☒	☐	☐	summed up
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe ²⁺), Hexavalent Chromium (Cr ⁶⁺ , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	☐	☒	☐	
Is a chain-of-custody (COC) form present and filled out Completely? ⁽¹⁾	☒	☐	☐	
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	☒	☐	☐	
Were all samples received intact? ⁽¹⁾	☒	☐	☐	
Was adequate sample volume provided? ⁽¹⁾	☒	☐	☐	
Does the COC agree with the number and type of sample bottles received? ⁽¹⁾	☒	☐	☐	
Do the sample IDs on the bottle labels match the COC? ⁽¹⁾	☐	☒	☐	last sample # 16 - one jar did not match
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	☐	☒	☐	
Are samples preserved that require preservation (excluding cooling)? ⁽¹⁾ Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	☒	☐	☐	HCl
If samples are acid preserved for metals, is the pH ≤ 2? ⁽¹⁾ Record the pH in Comments.	☐	☐	☒	
If dissolved metals are requested, were samples field filtered?	☐	☐	☒	

Additional Comments (if any):

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.

Custodian Printed Name

Date/Time



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 13:35

SS11@10'
2406101-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/07/24 08:56**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHF0200	06/07/24	06/07/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **06/07/24 08:56**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0392	98.0 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0416	104 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0406	102 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **06/07/24 08:56**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHF0202	06/07/24	06/07/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **06/07/24 08:56**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	8.10	64.8 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 13:35

SS11@10'
2406101-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **06/07/24 08:56**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHF0223	06/10/24	06/10/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	0.00946	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	0.0193	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	0.0325	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	0.0105	0.00500	"	"	"	"	"	"	
Chrysene	0.0146	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	0.00974	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	0.0229	0.00500	"	"	"	"	"	"	
Pyrene	0.0333	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **06/07/24 08:56**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0216	64.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0167	50.1 %	40-150		"	"	"	"	

Total Metals by EPA 6020B

Date Sampled: **06/07/24 08:56**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Arsenic	3.40	0.200	mg/kg dry	1	BHF0286	06/11/24	06/12/24	EPA 6020B	
Barium	86.0	0.400	"	"	"	"	"	"	
Cadmium	0.216	0.200	"	"	"	"	"	"	
Zinc	36.7	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 13:35

SS11@10'
2406101-01 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/07/24 08:56**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	85.3		%	1	BHF0257	06/10/24	06/10/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **06/07/24 08:56**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.87		pH Units	1	BHF0274	06/11/24	06/11/24	EPA 9045D	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 13:35

SS12@4'
2406101-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/07/24 10:14**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHF0200	06/07/24	06/07/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **06/07/24 10:14**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0384	95.9 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0405	101 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0409	102 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **06/07/24 10:14**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHF0202	06/07/24	06/07/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **06/07/24 10:14**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	9.13	73.1 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 13:35

SS12@4'
2406101-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **06/07/24 10:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHF0223	06/10/24	06/10/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **06/07/24 10:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0378	113 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0239	71.7 %	40-150		"	"	"	"	

Total Metals by EPA 6020B

Date Sampled: **06/07/24 10:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	5.35	0.180	mg/kg dry	1	BHF0286	06/11/24	06/12/24	EPA 6020B	
Barium	77.7	0.360	"	"	"	"	"	"	
Cadmium	0.220	0.180	"	"	"	"	"	"	
Zinc	31.7	0.360	"	"	"	"	"	"	
Selenium	ND	0.234	"	"	"	"	"	"	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 13:35

SS12@4'
2406101-02 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/07/24 10:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	84.5		%	1	BHF0257	06/10/24	06/10/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **06/07/24 10:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.70		pH Units	1	BHF0274	06/11/24	06/11/24	EPA 9045D	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 13:35

SS13@6'
2406101-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/07/24 10:28**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHF0200	06/07/24	06/07/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **06/07/24 10:28**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0422	106 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0411	103 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0410	102 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **06/07/24 10:28**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHF0202	06/07/24	06/07/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **06/07/24 10:28**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	10.1	80.6 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 13:35

SS13@6'
2406101-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **06/07/24 10:28**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHF0223	06/10/24	06/10/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **06/07/24 10:28**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0330	98.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0220	65.9 %	40-150		"	"	"	"	

Total Metals by EPA 6020B

Date Sampled: **06/07/24 10:28**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Arsenic	4.04	0.200	mg/kg dry	1	BHF0286	06/11/24	06/12/24	EPA 6020B	
Barium	92.3	0.400	"	"	"	"	"	"	
Cadmium	0.245	0.200	"	"	"	"	"	"	
Zinc	32.9	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 13:35

SS13@6'
2406101-03 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/07/24 10:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	83.4		%	1	BHF0257	06/10/24	06/10/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **06/07/24 10:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.55		pH Units	1	BHF0274	06/11/24	06/11/24	EPA 9045D	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 13:35

SS14@10'
2406101-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/07/24 10:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHF0200	06/07/24	06/07/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **06/07/24 10:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0431	108 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0422	106 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0409	102 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **06/07/24 10:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHF0202	06/07/24	06/07/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **06/07/24 10:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	8.45	67.6 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 13:35

SS14@10'
2406101-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **06/07/24 10:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHF0223	06/10/24	06/10/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **06/07/24 10:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0314	94.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0217	65.1 %	40-150		"	"	"	"	

Total Metals by EPA 6020B

Date Sampled: **06/07/24 10:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Arsenic	4.65	0.200	mg/kg dry	1	BHF0286	06/11/24	06/12/24	EPA 6020B	
Barium	108	0.400	"	"	"	"	"	"	
Cadmium	0.275	0.200	"	"	"	"	"	"	
Zinc	41.3	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 13:35

SS14@10'
2406101-04 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/07/24 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	76.9		%	1	BHF0257	06/10/24	06/10/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **06/07/24 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.22		pH Units	1	BHF0274	06/11/24	06/11/24	EPA 9045D	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 13:35

SS15@10'
2406101-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/07/24 10:36**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHF0200	06/07/24	06/07/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **06/07/24 10:36**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0415	104 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0413	103 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0403	101 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **06/07/24 10:36**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHF0202	06/07/24	06/07/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **06/07/24 10:36**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	10.7	85.7 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 13:35

SS15@10'
2406101-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **06/07/24 10:36**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Acenaphthene	ND	0.00500		mg/kg	1	BHF0223	06/10/24	06/10/24	EPA 8270D SIM	
Anthracene	ND	0.00500		"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500		"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500		"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500		"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500		"	"	"	"	"	"	
Chrysene	ND	0.00500		"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500		"	"	"	"	"	"	
Fluoranthene	ND	0.00500		"	"	"	"	"	"	
Fluorene	ND	0.00500		"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500		"	"	"	"	"	"	
Pyrene	ND	0.00500		"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500		"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500		"	"	"	"	"	"	

Date Sampled: **06/07/24 10:36**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 2-Methylnaphthalene-d10	0.0251	75.2 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0222	66.5 %		40-150		"	"	"	"	

Total Metals by EPA 6020B

Date Sampled: **06/07/24 10:36**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	5.55	0.200		mg/kg dry	1	BHF0286	06/11/24	06/12/24	EPA 6020B	
Barium	123	0.400		"	"	"	"	"	"	
Cadmium	0.289	0.200		"	"	"	"	"	"	
Zinc	42.7	0.400		"	"	"	"	"	"	
Selenium	ND	0.260		"	"	"	"	"	"	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 13:35

SS15@10'
2406101-05 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/07/24 10:36**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	75.9		%	1	BHF0257	06/10/24	06/10/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **06/07/24 10:36**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.70		pH Units	1	BHF0274	06/11/24	06/11/24	EPA 9045D	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 13:35

SS16@4'
2406101-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/07/24 10:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHF0200	06/07/24	06/07/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **06/07/24 10:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0409	102 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0416	104 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0400	99.9 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **06/07/24 10:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHF0202	06/07/24	06/07/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **06/07/24 10:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	9.35	74.8 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 13:35

SS16@4'
2406101-06 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **06/07/24 10:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHF0223	06/10/24	06/10/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **06/07/24 10:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0289	86.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0195	58.4 %	40-150		"	"	"	"	

Total Metals by EPA 6020B

Date Sampled: **06/07/24 10:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Arsenic	4.83	0.200	mg/kg dry	1	BHF0286	06/11/24	06/12/24	EPA 6020B	
Barium	80.8	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Zinc	34.0	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 13:35

SS16@4'
2406101-06 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/07/24 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	86.0		%	1	BHF0257	06/10/24	06/10/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **06/07/24 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.47		pH Units	1	BHF0274	06/11/24	06/11/24	EPA 9045D	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 13:35

SS17@6'
2406101-07 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/07/24 10:42**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHF0200	06/07/24	06/07/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **06/07/24 10:42**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0448	112 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0418	104 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0412	103 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **06/07/24 10:42**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHF0202	06/07/24	06/07/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **06/07/24 10:42**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	9.69	77.5 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 13:35

SS17@6'
2406101-07 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **06/07/24 10:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHF0223	06/10/24	06/10/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **06/07/24 10:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0268	80.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0217	65.0 %	40-150		"	"	"	"	

Total Metals by EPA 6020B

Date Sampled: **06/07/24 10:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	5.90	0.200	mg/kg dry	1	BHF0286	06/11/24	06/12/24	EPA 6020B	
Barium	121	0.400	"	"	"	"	"	"	
Cadmium	0.304	0.200	"	"	"	"	"	"	
Zinc	42.2	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 13:35

SS17@6'
2406101-07 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/07/24 10:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	80.8		%	1	BHF0257	06/10/24	06/10/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **06/07/24 10:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.51		pH Units	1	BHF0274	06/11/24	06/11/24	EPA 9045D	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 13:35

SS18@10'
2406101-08 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/07/24 10:44**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHF0200	06/07/24	06/07/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **06/07/24 10:44**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0399	99.8 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0429	107 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0416	104 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **06/07/24 10:44**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHF0202	06/07/24	06/08/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **06/07/24 10:44**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	12.3	98.2 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 13:35

SS18@10'
2406101-08 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **06/07/24 10:44**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHF0223	06/10/24	06/10/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **06/07/24 10:44**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0339	102 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0230	69.1 %	40-150		"	"	"	"	

Total Metals by EPA 6020B

Date Sampled: **06/07/24 10:44**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Arsenic	4.90	0.200	mg/kg dry	1	BHF0286	06/11/24	06/12/24	EPA 6020B	
Barium	271	0.400	"	"	"	"	"	"	
Cadmium	0.323	0.200	"	"	"	"	"	"	
Zinc	57.3	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 13:35

SS18@10'
2406101-08 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/07/24 10:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	77.7		%	1	BHF0257	06/10/24	06/10/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **06/07/24 10:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.24		pH Units	1	BHF0274	06/11/24	06/11/24	EPA 9045D	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 13:35

SS19@4'
2406101-09 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/07/24 10:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHF0200	06/07/24	06/07/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **06/07/24 10:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0421	105 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0454	113 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0406	102 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **06/07/24 10:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHF0202	06/07/24	06/08/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **06/07/24 10:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	7.19	57.6 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 13:35

SS19@4'
2406101-09 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **06/07/24 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHF0223	06/10/24	06/11/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **06/07/24 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0363	109 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0212	63.6 %	40-150		"	"	"	"	

Total Metals by EPA 6020B

Date Sampled: **06/07/24 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	5.27	0.200	mg/kg dry	1	BHF0286	06/11/24	06/12/24	EPA 6020B	
Barium	191	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Zinc	36.9	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 13:35

SS19@4'
2406101-09 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/07/24 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	87.8		%	1	BHF0257	06/10/24	06/10/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **06/07/24 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.56		pH Units	1	BHF0274	06/11/24	06/11/24	EPA 9045D	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 13:35

SS20@6'
2406101-10 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/07/24 10:52**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHF0200	06/07/24	06/08/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **06/07/24 10:52**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0364	90.9 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0415	104 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0410	103 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **06/07/24 10:52**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHF0202	06/07/24	06/08/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **06/07/24 10:52**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	9.11	72.9 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 13:35

SS20@6'
2406101-10 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **06/07/24 10:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHF0223	06/10/24	06/11/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **06/07/24 10:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0222	66.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0160	47.9 %	40-150		"	"	"	"	

Total Metals by EPA 6020B

Date Sampled: **06/07/24 10:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	5.36	0.200	mg/kg dry	1	BHF0286	06/11/24	06/12/24	EPA 6020B	
Barium	111	0.400	"	"	"	"	"	"	
Cadmium	0.318	0.200	"	"	"	"	"	"	
Zinc	40.9	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 13:35

SS20@6'
2406101-10 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/07/24 10:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	82.1		%	1	BHF0257	06/10/24	06/10/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **06/07/24 10:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.18		pH Units	1	BHF0274	06/11/24	06/11/24	EPA 9045D	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 13:35

SS21@10'
2406101-11 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/07/24 10:54**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHF0200	06/07/24	06/08/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **06/07/24 10:54**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0370	92.6 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0411	103 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0416	104 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **06/07/24 10:54**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHF0202	06/07/24	06/08/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **06/07/24 10:54**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	11.9	95.1 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 13:35

SS21@10'
2406101-11 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **06/07/24 10:54**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHF0223	06/10/24	06/11/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **06/07/24 10:54**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0237	71.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0180	54.1 %	40-150		"	"	"	"	

Total Metals by EPA 6020B

Date Sampled: **06/07/24 10:54**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Arsenic	5.43	0.200	mg/kg dry	1	BHF0286	06/11/24	06/12/24	EPA 6020B	
Barium	118	0.400	"	"	"	"	"	"	
Cadmium	0.341	0.200	"	"	"	"	"	"	
Zinc	48.0	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 13:35

SS21@10'
2406101-11 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/07/24 10:54**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	79.4		%	1	BHF0257	06/10/24	06/10/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **06/07/24 10:54**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.92		pH Units	1	BHF0274	06/11/24	06/11/24	EPA 9045D	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 13:35

SS22@4'
2406101-12 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/07/24 11:04**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHF0200	06/07/24	06/08/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **06/07/24 11:04**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0376	94.0 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0424	106 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0394	98.6 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **06/07/24 11:04**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHF0202	06/07/24	06/08/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **06/07/24 11:04**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	11.5	91.9 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 13:35

SS22@4'
2406101-12 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **06/07/24 11:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHF0223	06/10/24	06/11/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **06/07/24 11:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0234	70.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0179	53.6 %	40-150		"	"	"	"	

Total Metals by EPA 6020B

Date Sampled: **06/07/24 11:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	5.52	0.200	mg/kg dry	1	BHF0286	06/11/24	06/12/24	EPA 6020B	
Barium	73.9	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Zinc	30.8	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 13:35

SS22@4'
2406101-12 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/07/24 11:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	86.6		%	1	BHF0257	06/10/24	06/10/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **06/07/24 11:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.06		pH Units	1	BHF0274	06/11/24	06/11/24	EPA 9045D	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 13:35

SS23@6'
2406101-13 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/07/24 11:06**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHF0200	06/07/24	06/08/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **06/07/24 11:06**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0427	107 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0411	103 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0422	106 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **06/07/24 11:06**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHF0202	06/07/24	06/08/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **06/07/24 11:06**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	12.2	97.6 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 13:35

SS23@6'
2406101-13 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **06/07/24 11:06**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHF0223	06/10/24	06/11/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **06/07/24 11:06**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0204	61.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0160	47.9 %	40-150		"	"	"	"	

Total Metals by EPA 6020B

Date Sampled: **06/07/24 11:06**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Arsenic	4.13	0.200	mg/kg dry	1	BHF0286	06/11/24	06/12/24	EPA 6020B	
Barium	88.8	0.400	"	"	"	"	"	"	
Cadmium	0.229	0.200	"	"	"	"	"	"	
Zinc	31.9	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 13:35

SS23@6'
2406101-13 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/07/24 11:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	83.0		%	1	BHF0257	06/10/24	06/10/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **06/07/24 11:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.00		pH Units	1	BHF0274	06/11/24	06/11/24	EPA 9045D	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 13:35

SS24@10'
2406101-14 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/07/24 11:08**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHF0200	06/07/24	06/08/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **06/07/24 11:08**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0364	91.0 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0411	103 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0407	102 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **06/07/24 11:08**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHF0202	06/07/24	06/08/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **06/07/24 11:08**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	11.0	87.6 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 13:35

SS24@10'
2406101-14 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **06/07/24 11:08**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHF0223	06/10/24	06/11/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **06/07/24 11:08**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0359	108 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0238	71.6 %	40-150		"	"	"	"	

Total Metals by EPA 6020B

Date Sampled: **06/07/24 11:08**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Arsenic	4.76	0.180	mg/kg dry	1	BHF0286	06/11/24	06/12/24	EPA 6020B	
Barium	96.8	0.360	"	"	"	"	"	"	
Cadmium	0.298	0.180	"	"	"	"	"	"	
Zinc	43.3	0.360	"	"	"	"	"	"	
Selenium	ND	0.234	"	"	"	"	"	"	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 13:35

SS24@10'
2406101-14 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/07/24 11:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	80.8		%	1	BHF0257	06/10/24	06/10/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **06/07/24 11:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.92		pH Units	1	BHF0274	06/11/24	06/11/24	EPA 9045D	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 13:35

SS25@10'
2406101-15 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/07/24 11:42**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHF0200	06/07/24	06/08/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **06/07/24 11:42**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0364	91.1 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0418	104 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0403	101 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **06/07/24 11:42**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHF0202	06/07/24	06/08/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **06/07/24 11:42**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	12.9	104 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 13:35

SS25@10'
2406101-15 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **06/07/24 11:42**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Acenaphthene	ND	0.00500	mg/kg	1	BHF0223	06/10/24	06/11/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **06/07/24 11:42**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 2-Methylnaphthalene-d10	0.0314	94.2 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0214	64.2 %	40-150		"	"	"	"	

Total Metals by EPA 6020B

Date Sampled: **06/07/24 11:42**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	4.84	0.200	mg/kg dry	1	BHF0286	06/11/24	06/12/24	EPA 6020B	
Barium	96.1	0.400	"	"	"	"	"	"	
Cadmium	0.291	0.200	"	"	"	"	"	"	
Zinc	42.6	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 13:35

SS25@10'
2406101-15 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/07/24 11:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	76.1		%	1	BHF0257	06/10/24	06/10/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **06/07/24 11:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.22		pH Units	1	BHF0274	06/11/24	06/11/24	EPA 9045D	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 13:35

SS26@2.5'
2406101-16 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **06/07/24 13:36**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHF0281	06/11/24	06/13/24	EPA 6020B	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **06/07/24 13:36**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Calcium	25.8	0.0500	mg/L dry	1	BHF0305	06/11/24	06/13/24	EPA 6020B	
Magnesium	3.65	0.0500	"	"	"	"	"	"	
Sodium	5.63	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **06/07/24 13:36**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Sodium Adsorption Ratio	0.275	0.00100	units	1	BHF0430	06/14/24	06/14/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/07/24 13:36**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
% Solids	85.8		%	1	BHF0257	06/10/24	06/10/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **06/07/24 13:36**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Specific Conductance (EC)	0.160	0.0100	mmhos/cm	1	BHF0306	06/11/24	06/12/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 13:35

SS26@2.5'
2406101-16 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **06/07/24 13:36**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	8.53			pH Units	1	BHF0307	06/11/24	06/12/24	EPA 9045D	

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Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 13:35

GW01
2406101-17 (Water)

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Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/07/24 08:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BHF0116	06/07/24	06/07/24	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	
Naphthalene	ND	1.0		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0		"	"	"	"	"	"	

Date Sampled: **06/07/24 08:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	13.9	104 %		23-173		"	"	"	"	
Surrogate: Toluene-d8	13.2	98.8 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	13.7	103 %		21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **06/07/24 08:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chloride	422	12.0		mg/L	200	BHF0633	06/20/24	06/22/24	EPA 300.0	
Sulfate	681	60.0		"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **06/07/24 08:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	1880	10.0		mg/L	1	BHF0213	06/10/24	06/10/24	SM2540C	

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Project: PDC - Merritt 6-66-9-0659BH Wellhead
Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 13:35

Volatile Organic Compounds by EPA Method 8260B - Quality Control

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Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHF0116 - EPA 5030 Water MS

Blank (BHF0116-BLK1)

Prepared: 06/05/24 Analyzed: 06/08/24

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	2.0	"							
Naphthalene	ND	1.0	"							
1,2,4-Trimethylbenzene	ND	1.0	"							
1,3,5-Trimethylbenzene	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	13.9		"	13.3		104	23-173			
Surrogate: Toluene-d8	13.3		"	13.3		100	20-170			
Surrogate: 4-Bromofluorobenzene	12.9		"	13.3		96.7	21-167			

LCS (BHF0116-BS1)

Prepared: 06/05/24 Analyzed: 06/08/24

Benzene	37.6	1.0	ug/l	33.3		113	51-132			
Toluene	36.9	1.0	"	33.3		111	51-138			
Ethylbenzene	37.5	1.0	"	33.3		113	58-146			
m,p-Xylene	69.5	2.0	"	66.7		104	57-144			
o-Xylene	34.3	1.0	"	33.3		103	53-146			
Naphthalene	34.8	1.0	"	33.3		104	70-130			
1,2,4-Trimethylbenzene	36.0	1.0	"	33.3		108	70-130			
1,3,5-Trimethylbenzene	36.6	1.0	"	33.3		110	70-130			
Surrogate: 1,2-Dichloroethane-d4	14.2		"	13.3		106	23-173			
Surrogate: Toluene-d8	13.7		"	13.3		103	20-170			
Surrogate: 4-Bromofluorobenzene	13.8		"	13.3		103	21-167			

Matrix Spike (BHF0116-MS1)

Source: 2406017-21

Prepared: 06/05/24 Analyzed: 06/08/24

Benzene	35.0	1.0	ug/l	33.3	ND	105	34-141			
Toluene	34.3	1.0	"	33.3	ND	103	27-151			
Ethylbenzene	34.9	1.0	"	33.3	ND	105	29-160			
m,p-Xylene	64.2	2.0	"	66.7	ND	96.2	20-166			
o-Xylene	31.7	1.0	"	33.3	ND	95.1	33-159			
Naphthalene	34.3	1.0	"	33.3	ND	103	70-130			
1,2,4-Trimethylbenzene	33.0	1.0	"	33.3	ND	99.1	70-130			
1,3,5-Trimethylbenzene	33.1	1.0	"	33.3	ND	99.4	70-130			
Surrogate: 1,2-Dichloroethane-d4	14.5		"	13.3		109	23-173			
Surrogate: Toluene-d8	13.5		"	13.3		101	20-170			
Surrogate: 4-Bromofluorobenzene	13.3		"	13.3		99.6	21-167			

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Project: PDC - Merritt 6-66-9-0659BH Wellhead
Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 13:35

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHF0116 - EPA 5030 Water MS

Matrix Spike Dup (BHF0116-MSD1)

Source: 2406017-21

Prepared: 06/05/24 Analyzed: 06/08/24

Benzene	35.1	1.0	ug/l	33.3	ND	105	34-141	0.285	30	
Toluene	34.2	1.0	"	33.3	ND	102	27-151	0.351	30	
Ethylbenzene	34.8	1.0	"	33.3	ND	104	29-160	0.230	30	
m,p-Xylene	64.1	2.0	"	66.7	ND	96.1	20-166	0.125	30	
o-Xylene	31.5	1.0	"	33.3	ND	94.4	33-159	0.760	30	
Naphthalene	34.4	1.0	"	33.3	ND	103	70-130	0.204	30	
1,2,4-Trimethylbenzene	32.6	1.0	"	33.3	ND	97.7	70-130	1.49	30	
1,3,5-Trimethylbenzene	33.2	1.0	"	33.3	ND	99.6	70-130	0.241	30	
Surrogate: 1,2-Dichloroethane-d4	14.2		"	13.3		107	23-173			
Surrogate: Toluene-d8	13.5		"	13.3		101	20-170			
Surrogate: 4-Bromofluorobenzene	13.4		"	13.3		100	21-167			

Batch BHF0200 - EPA 5030 Soil MS

Blank (BHF0200-BLK1)

Prepared: 06/07/24 Analyzed: 06/08/24

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0401		"	0.0400		100	50-150			
Surrogate: Toluene-d8	0.0421		"	0.0400		105	50-150			
Surrogate: 4-Bromofluorobenzene	0.0412		"	0.0400		103	50-150			

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Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 13:35

Volatile Organic Compounds by EPA Method 8260B - Quality Control

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Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHF0200 - EPA 5030 Soil MS

LCS (BHF0200-BS1)

Prepared: 06/07/24 Analyzed: 06/08/24

Benzene	0.0917	0.0020	mg/kg	0.100		91.7	70-130			
Toluene	0.104	0.0050	"	0.100		104	70-130			
Ethylbenzene	0.0972	0.0050	"	0.100		97.2	70-130			
m,p-Xylene	0.189	0.010	"	0.200		94.3	70-130			
o-Xylene	0.0967	0.0050	"	0.100		96.7	70-130			
1,2,4-Trimethylbenzene	0.0935	0.0050	"	0.100		93.5	70-130			
1,3,5-Trimethylbenzene	0.0953	0.0050	"	0.100		95.3	70-130			
Naphthalene	0.0732	0.0038	"	0.100		73.2	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0341		"	0.0400		85.4	50-150			
Surrogate: Toluene-d8	0.0407		"	0.0400		102	50-150			
Surrogate: 4-Bromofluorobenzene	0.0398		"	0.0400		99.5	50-150			

Matrix Spike (BHF0200-MS1)

Source: 2406101-01

Prepared: 06/07/24 Analyzed: 06/08/24

Benzene	0.0694	0.0020	mg/kg	0.100	ND	69.4	70-130			QM-07
Toluene	0.0816	0.0050	"	0.100	ND	81.6	70-130			
Ethylbenzene	0.0811	0.0050	"	0.100	ND	81.1	70-130			
m,p-Xylene	0.159	0.010	"	0.200	ND	79.7	70-130			
o-Xylene	0.0828	0.0050	"	0.100	ND	82.8	70-130			
1,2,4-Trimethylbenzene	0.0683	0.0050	"	0.100	ND	68.3	70-130			QM-07
1,3,5-Trimethylbenzene	0.0791	0.0050	"	0.100	ND	79.1	70-130			
Naphthalene	0.0489	0.0038	"	0.100	ND	48.9	70-130			QM-07
Surrogate: 1,2-Dichloroethane-d4	0.0317		"	0.0400		79.4	50-150			
Surrogate: Toluene-d8	0.0407		"	0.0400		102	50-150			
Surrogate: 4-Bromofluorobenzene	0.0408		"	0.0400		102	50-150			

Matrix Spike Dup (BHF0200-MSD1)

Source: 2406101-01

Prepared: 06/07/24 Analyzed: 06/08/24

Benzene	0.0700	0.0020	mg/kg	0.100	ND	70.0	70-130	0.904	30	
Toluene	0.0804	0.0050	"	0.100	ND	80.4	70-130	1.56	30	
Ethylbenzene	0.0819	0.0050	"	0.100	ND	81.9	70-130	0.994	30	
m,p-Xylene	0.157	0.010	"	0.200	ND	78.3	70-130	1.80	30	
o-Xylene	0.0825	0.0050	"	0.100	ND	82.5	70-130	0.327	30	
1,2,4-Trimethylbenzene	0.0649	0.0050	"	0.100	ND	64.9	70-130	5.18	30	QM-07
1,3,5-Trimethylbenzene	0.0783	0.0050	"	0.100	ND	78.3	70-130	0.953	30	
Naphthalene	0.0407	0.0038	"	0.100	ND	40.7	70-130	18.3	30	QM-07
Surrogate: 1,2-Dichloroethane-d4	0.0350		"	0.0400		87.4	50-150			
Surrogate: Toluene-d8	0.0416		"	0.0400		104	50-150			
Surrogate: 4-Bromofluorobenzene	0.0398		"	0.0400		99.5	50-150			

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Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead
Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 13:35

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHF0202 - EPA 3550A

Blank (BHF0202-BLK1)

Prepared: 06/07/24 Analyzed: 06/08/24

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: o-Terphenyl	15.2		"	12.5		122	30-150			

LCS (BHF0202-BS1)

Prepared: 06/07/24 Analyzed: 06/08/24

C10-C28 (DRO)	472	50	mg/kg	500		94.3	70-130			
Surrogate: o-Terphenyl	14.1		"	12.5		113	30-150			

Matrix Spike (BHF0202-MS1)

Source: 2406101-01

Prepared: 06/07/24 Analyzed: 06/08/24

C10-C28 (DRO)	496	50	mg/kg	500	31.5	92.8	70-130			
Surrogate: o-Terphenyl	9.96		"	12.5		79.6	30-150			

Matrix Spike Dup (BHF0202-MSD1)

Source: 2406101-01

Prepared: 06/07/24 Analyzed: 06/08/24

C10-C28 (DRO)	447	50	mg/kg	500	31.5	83.0	70-130	10.4	20	
Surrogate: o-Terphenyl	10.0		"	12.5		80.0	30-150			

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Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 13:35

PAH by EPA Method 8270D SIM - Quality Control

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Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHF0223 - EPA 5030 Soil MS

Blank (BHF0223-BLK1)

Prepared & Analyzed: 06/10/24

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
Surrogate: 2-Methylnaphthalene-d10	0.0267		"	0.0333		80.1	40-150			
Surrogate: Fluoranthene-d10	0.0271		"	0.0333		81.3	40-150			

LCS (BHF0223-BS1)

Prepared & Analyzed: 06/10/24

Acenaphthene	0.0217	0.00500	mg/kg	0.0333		65.0	31-137			
Anthracene	0.0205	0.00500	"	0.0333		61.4	30-120			
Benzo (a) anthracene	0.0199	0.00500	"	0.0333		59.8	30-120			
Benzo (a) pyrene	0.0228	0.00500	"	0.0333		68.3	30-120			
Benzo (b) fluoranthene	0.0237	0.00500	"	0.0333		71.1	30-120			
Benzo (k) fluoranthene	0.0247	0.00500	"	0.0333		74.2	30-120			
Chrysene	0.0192	0.00500	"	0.0333		57.6	30-120			
Dibenz (a,h) anthracene	0.0200	0.00500	"	0.0333		60.1	30-120			
Fluoranthene	0.0212	0.00500	"	0.0333		63.5	30-120			
Fluorene	0.0205	0.00500	"	0.0333		61.6	30-120			
Indeno (1,2,3-cd) pyrene	0.0210	0.00500	"	0.0333		62.9	30-120			
Pyrene	0.0197	0.00500	"	0.0333		59.2	35-142			
1-Methylnaphthalene	0.0231	0.00500	"	0.0333		69.3	35-142			
2-Methylnaphthalene	0.0217	0.00500	"	0.0333		65.1	35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0250		"	0.0333		74.9	40-150			
Surrogate: Fluoranthene-d10	0.0221		"	0.0333		66.2	40-150			

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Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 13:35

PAH by EPA Method 8270D SIM - Quality Control

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Analyte	Reporting			Spike	Source	%REC		RPD		
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHF0223 - EPA 5030 Soil MS

Matrix Spike (BHF0223-MS1)

Source: 2406101-01

Prepared & Analyzed: 06/10/24

Acenaphthene	0.0165	0.00500	mg/kg	0.0333	ND	49.5	31-137			
Anthracene	0.0178	0.00500	"	0.0333	ND	53.4	30-120			
Benzo (a) anthracene	0.0283	0.00500	"	0.0333	0.00946	56.6	30-120			
Benzo (a) pyrene	0.0325	0.00500	"	0.0333	0.0193	39.6	30-120			
Benzo (b) fluoranthene	0.0493	0.00500	"	0.0333	0.0325	50.3	30-120			
Benzo (k) fluoranthene	0.0327	0.00500	"	0.0333	0.0105	66.7	30-120			
Chrysene	0.0305	0.00500	"	0.0333	0.0146	47.6	30-120			
Dibenz (a,h) anthracene	0.0170	0.00500	"	0.0333	ND	50.9	30-120			
Fluoranthene	0.0289	0.00500	"	0.0333	0.00974	57.5	30-120			
Fluorene	0.0171	0.00500	"	0.0333	ND	51.4	30-120			
Indeno (1,2,3-cd) pyrene	0.0543	0.00500	"	0.0333	0.0229	94.2	30-120			
Pyrene	0.0534	0.00500	"	0.0333	0.0333	60.2	35-142			
1-Methylnaphthalene	0.0204	0.00500	"	0.0333	ND	61.2	15-130			
2-Methylnaphthalene	0.0196	0.00500	"	0.0333	ND	58.7	15-130			
Surrogate: 2-Methylnaphthalene-d10	0.0163		"	0.0333		49.0	40-150			
Surrogate: Fluoranthene-d10	0.0180		"	0.0333		54.0	40-150			

Matrix Spike Dup (BHF0223-MSD1)

Source: 2406101-01

Prepared & Analyzed: 06/10/24

Acenaphthene	0.0191	0.00500	mg/kg	0.0333	ND	57.2	31-137	14.4	30	
Anthracene	0.0223	0.00500	"	0.0333	ND	66.9	30-120	22.5	30	
Benzo (a) anthracene	0.0402	0.00500	"	0.0333	0.00946	92.3	30-120	34.7	30	QR-03
Benzo (a) pyrene	0.0469	0.00500	"	0.0333	0.0193	83.1	30-120	36.5	30	QR-03
Benzo (b) fluoranthene	0.0756	0.00500	"	0.0333	0.0325	129	30-120	42.1	30	QM-05
Benzo (k) fluoranthene	0.0425	0.00500	"	0.0333	0.0105	96.2	30-120	26.1	30	
Chrysene	0.0468	0.00500	"	0.0333	0.0146	96.5	30-120	42.2	30	QR-03
Dibenz (a,h) anthracene	0.0191	0.00500	"	0.0333	ND	57.3	30-120	11.8	30	
Fluoranthene	0.0430	0.00500	"	0.0333	0.00974	99.7	30-120	39.2	30	QR-03
Fluorene	0.0190	0.00500	"	0.0333	ND	57.0	30-120	10.3	30	
Indeno (1,2,3-cd) pyrene	0.0663	0.00500	"	0.0333	0.0229	130	30-120	19.9	30	QM-05
Pyrene	0.0967	0.00500	"	0.0333	0.0333	190	35-142	57.7	30	QM-05
1-Methylnaphthalene	0.0331	0.00500	"	0.0333	ND	99.4	15-130	47.6	50	
2-Methylnaphthalene	0.0322	0.00500	"	0.0333	ND	96.6	15-130	48.8	50	
Surrogate: 2-Methylnaphthalene-d10	0.0226		"	0.0333		67.7	40-150			
Surrogate: Fluoranthene-d10	0.0172		"	0.0333		51.7	40-150			

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Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 13:35

Total Metals by EPA 6020B Hot Water Soluble Extraction - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHF0281 - EPA 3050B

Blank (BHF0281-BLK1)

Prepared: 06/11/24 Analyzed: 06/13/24

Boron ND 2.00 mg/L

LCS (BHF0281-BS1)

Prepared: 06/11/24 Analyzed: 06/13/24

Boron 5.35 2.00 mg/L 5.00 107 80-120

Duplicate (BHF0281-DUP1)

Source: 2405075-10

Prepared: 06/11/24 Analyzed: 06/13/24

Boron 0.703 2.00 mg/L 0.744 5.70 20

Matrix Spike (BHF0281-MS1)

Source: 2405075-10

Prepared: 06/11/24 Analyzed: 06/13/24

Boron 6.14 2.00 mg/L 5.01 0.744 108 75-125

Matrix Spike Dup (BHF0281-MSD1)

Source: 2405075-10

Prepared: 06/11/24 Analyzed: 06/13/24

Boron 5.73 2.00 mg/L 5.01 0.744 99.5 75-125 6.94 25

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 13:35

Total Metals by EPA 6020B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHF0286 - EPA 3050B

Blank (BHF0286-BLK1)

Prepared: 06/11/24 Analyzed: 06/12/24

Arsenic	ND	0.200	mg/kg wet
Barium	ND	0.400	"
Cadmium	ND	0.200	"
Zinc	ND	0.400	"
Selenium	ND	0.260	"

LCS (BHF0286-BS1)

Prepared: 06/11/24 Analyzed: 06/14/24

Arsenic	36.0	0.200	mg/kg wet	40.0	90.0	80-120
Barium	38.4	0.400	"	40.0	95.9	80-120
Cadmium	1.93	0.200	"	2.00	96.3	80-120
Zinc	35.6	0.400	"	40.0	89.1	80-120
Selenium	3.69	0.260	"	4.00	92.3	80-120

Duplicate (BHF0286-DUP1)

Source: 2406100-01

Prepared: 06/11/24 Analyzed: 06/12/24

Arsenic	5.93	0.181	mg/kg dry	4.94	18.3	20	
Barium	201	0.362	"	290	36.2	20	QR-04
Cadmium	0.287	0.181	"	0.232	20.9	20	QR-04
Zinc	167	0.362	"	66.5	86.0	20	QR-04
Selenium	0.163	0.236	"	0.165	200	20	QR-01

Matrix Spike (BHF0286-MS1)

Source: 2406100-01

Prepared: 06/11/24 Analyzed: 06/12/24

Arsenic	47.8	0.200	mg/kg dry	44.8	4.94	95.5	75-125
Barium	337	0.400	"	44.8	290	103	75-125
Cadmium	2.43	0.200	"	2.24	0.232	98.0	75-125
Zinc	101	0.400	"	44.8	66.5	77.7	75-125
Selenium	3.73	0.260	"	4.48	ND	83.2	75-125

Matrix Spike Dup (BHF0286-MSD1)

Source: 2406100-01

Prepared: 06/11/24 Analyzed: 06/12/24

Arsenic	49.8	0.200	mg/kg dry	47.6	4.94	94.2	75-125	4.17	25	
Barium	222	0.400	"	47.6	290	NR	75-125	41.1	25	QM-07
Cadmium	2.56	0.200	"	2.38	0.232	97.9	75-125	5.39	25	
Zinc	95.5	0.400	"	47.6	66.5	60.9	75-125	5.94	25	QM-07
Selenium	3.87	0.260	"	4.76	ND	81.3	75-125	3.67	25	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 13:35

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHF0305 - General Preparation

Blank (BHF0305-BLK1)

Prepared: 06/11/24 Analyzed: 06/13/24

Calcium	ND	0.0500	mg/L wet
Magnesium	ND	0.0500	"
Sodium	ND	0.0500	"

LCS (BHF0305-BS1)

Prepared: 06/11/24 Analyzed: 06/13/24

Calcium	5.62	0.0500	mg/L wet	5.00	112	70-130
Magnesium	5.53	0.0500	"	5.00	111	70-130
Sodium	5.43	0.0500	"	5.00	109	70-130

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 13:35

Anions by EPA Method 300.0 - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHF0633 - General Preparation

Blank (BHF0633-BLK1)

Prepared: 06/20/24 Analyzed: 06/22/24

Chloride	ND	0.0600	mg/L
Sulfate	ND	0.300	"

LCS (BHF0633-BS1)

Prepared: 06/20/24 Analyzed: 06/22/24

Chloride	3.08	0.0600	mg/L	3.00	103	90-110
Sulfate	15.2	0.300	"	15.0	101	90-110

Duplicate (BHF0633-DUP1)

Source: 2405448-01

Prepared: 06/20/24 Analyzed: 06/22/24

Chloride	228	12.0	mg/L	210	7.99	20
Sulfate	2430	60.0	"	2270	6.53	20

Matrix Spike (BHF0633-MS1)

Source: 2405448-01

Prepared: 06/20/24 Analyzed: 06/22/24

Chloride	851	12.0	mg/L	600	210	107	80-120
Sulfate	5330	60.0	"	3000	2270	102	80-120

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 13:35

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD	
		Limit	Units		Result	%REC	Limits	RPD	Limit	Notes

Batch BHF0257 - General Preparation

Duplicate (BHF0257-DUP1)			Source: 2405470-31			Prepared & Analyzed: 06/10/24				
% Solids	96.4		%			96.0		0.343	20	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 13:35

Total Dissolved Solids by SM2540C - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD	
		Limit	Units		Result	%REC	Limits	RPD	Limit	Notes

Batch BHF0213 - General Preparation

Blank (BHF0213-BLK1)

Prepared & Analyzed: 06/10/24

Total Dissolved Solids ND 10.0 mg/L

Duplicate (BHF0213-DUP1)

Source: 2406065-01

Prepared & Analyzed: 06/10/24

Total Dissolved Solids 872 10.0 mg/L 869 0.367 20

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 13:35

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction - Quality Control

Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD	
		Limit	Units		Result	%REC	Limits	RPD	Limit	Notes

Batch BHF0306 - General Preparation

Blank (BHF0306-BLK1)

Prepared: 06/11/24 Analyzed: 06/12/24

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BHF0306-BS1)

Prepared: 06/11/24 Analyzed: 06/12/24

Specific Conductance (EC) 0.155 0.0100 mmhos/cm 0.150 103 95-105

Duplicate (BHF0306-DUP1)

Source: 2406082-01

Prepared: 06/11/24 Analyzed: 06/12/24

Specific Conductance (EC) 0.0767 0.0100 mmhos/cm 0.0767 0.0130 20

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 13:35

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHF0274 - General Preparation

LCS (BHF0274-BS1)

Prepared & Analyzed: 06/11/24

pH	9.23		pH Units	9.18	101	95-105

Duplicate (BHF0274-DUP1)

Source: 2404468-08

Prepared & Analyzed: 06/11/24

pH	8.16		pH Units	8.14	0.245	20

Batch BHF0307 - General Preparation

LCS (BHF0307-BS1)

Prepared: 06/11/24 Analyzed: 06/12/24

pH	9.17		pH Units	9.18	99.9	95-105

Duplicate (BHF0307-DUP1)

Source: 2406082-01

Prepared: 06/11/24 Analyzed: 06/12/24

pH	8.02		pH Units	8.12	1.24	20

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0659BH Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/26/24 13:35

Notes and Definitions

QR-04	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QR-01	Analyses are not controlled on RPD values from sample concentrations less than 10 times the reporting limit. QC batch accepted based on LCS and/or LCSD QC results.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
QM-05	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The associated LCS and/or LCSD were within acceptance limits, therefore the data are considered valid.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

July 11, 2024

Karen Olson

Tasman Geosciences

6855 W. 119th Ave.

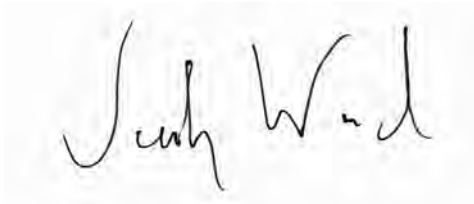
Broomfield, CO 80020

RE: PDC - Merritt Wellhead Pad

Work Order #2407100

Enclosed are the results of analyses for samples received by Summit Scientific on 07/09/24 17:38. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Jacob Wood". The signature is written in a cursive, flowing style.

Jacob Wood For Paul Shrewsbury

President



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/11/24 13:01

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
WC03@1'	2407100-01	Soil	07/09/24 13:45	07/09/24 17:38

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

SUMMIT SCIENTIFIC

4653 Table Mountain Drive
Golden, CO 80403
303-277-9310

Lab ID	Page of
2407100	

Client: PDC / Tasman				Send Data To: Project Manager: Karen Olson				Send Invoice To: Company: PDC Energy													
Address: 6855 W 119th Ave				E-Mail: Karen.Olson@chevron.com				Project Name/Location: <i>Merritt Wellhead Pad</i>													
City/State/Zip: Broomfield / CO / 80020								AFE#:													
Phone: 303-487-1228				Project Name: <i>Merritt Wellhead Pad</i>				PO/Billing Codes:													
Sampler Name: <i>David Vigil</i> <i>Kaitlin Steinfort</i>				Project Number:				Contact: Karen Olson													
ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested								Special Instructions
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEXN - 8260B	TPH - (C6 - C36)	1,2,4 & 1,3,5-TMB	Boron - HWS	pH, EC, SAR	PAHs - 915	Metals - 915		
1	WC03 @ 1'	07-09-24	1345	2			X			X			X	X	X	X	X	X	X	X	
2																					
3																					
4																					
5																					
6																					
7																					
8																					
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10																					
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13																					
14																					
15																					
Relinquished by: <i>Ed [Signature]</i>		Date/Time: 07-09-24 1555		Received by: <i>Tasman Lockbox</i>		Date/Time: 07-09-24 1555		TAT Business Days		Field DO		Notes: BTEX, naphthalene, TPH, 1,2,3,4-TMB & 1,3,5-TMB on same day, remaining analytes on 48 hr									
Relinquished by: <i>Tasman Lockbox</i>		Date/Time: 7924 1758		Received by: <i>[Signature]</i>		Date/Time: 7924 1738		Same Day	X	Field EC											
Relinquished by:		Date/Time:		Received by:		Date/Time:		1 Day		Field ORP											
Relinquished by:		Date/Time:		Received by:		Date/Time:		2 Days		Field pH											
Relinquished by:		Date/Time:		Received by:		Date/Time:		3 Days		Field Temp.											
Temperature Upon Receipt: 9.9		Corrected Temperature: 6		IR gun #: 1		HNO3 lot #:		Standard		Field Turb.											

S₂

Sample Receipt Checklist

S2 Work Order# 2407100Client: Pactosman Client Project ID: Merritt wellhead padShipped Via: H.D./P.U./FedEx/UPS/USPS/Other ☐ Airbill #: ☐

☐	☒	☐	☐	☐

Matrix (Check all that apply) Air ☐ Soil/Solid ☒ Water ☐ Other ☐Temp (°C) 9.9 Thermometer # 1

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	☒	☐	☐	<u>an 7 CE</u>
If custody seals are present, are they intact? ⁽¹⁾	☒	☐	☐	
Are samples due within 48 hours present?	☒	☐	☐	<u>Same day</u>
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe ²⁺), Hexavalent Chromium (Cr ⁶⁺ , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	☐	☒	☐	
Is a chain-of-custody (COC) form present and filled out Completely? ⁽¹⁾	☒	☐	☐	
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	☒	☐	☐	
Were all samples received intact? ⁽¹⁾	☒	☐	☐	
Was adequate sample volume provided? ⁽¹⁾	☒	☐	☐	
Does the COC agree with the number and type of sample bottles received? ⁽¹⁾	☒	☐	☐	
Do the sample IDs on the bottle labels match the COC? ⁽¹⁾	☒	☐	☐	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	☐	☐	☒	
Are samples preserved that require preservation (excluding cooling)? ⁽¹⁾ Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	☐	☐	☒	
If samples are acid preserved for metals, is the pH ≤ 2? ⁽¹⁾ Record the pH in Comments.	☐	☐	☒	
If dissolved metals are requested, were samples field filtered?	☐	☐	☒	

Additional Comments (if any):

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.
AS
Custodian Printed Name

7/9/24
Date/Time



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/11/24 13:01

WC03@1'
2407100-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/09/24 13:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.0020	mg/kg	1	BHG0235	07/09/24	07/10/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	0.0077	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **07/09/24 13:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4	0.0402	100 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0414	104 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0410	103 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/09/24 13:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (DRO)	510	50	mg/kg	1	BHG0238	07/09/24	07/09/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/09/24 13:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: o-Terphenyl	8.74	69.9 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/11/24 13:01

WC03@1'
2407100-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/09/24 13:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	0.00648	0.00500	mg/kg	1	BHG0245	07/10/24	07/10/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	0.0181	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	0.0323	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	0.0451	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	0.0796	0.00500	"	"	"	"	"	"	

Date Sampled: **07/09/24 13:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0206	61.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0135	40.6 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/09/24 13:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHG0256	07/10/24	07/11/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/09/24 13:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/11/24 13:01

WC03@1'
2407100-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	4.91	0.200	mg/kg dry	1	BHG0242	07/10/24	07/11/24	EPA 6020B
Barium	588	0.400	"	"	"	"	"	"
Cadmium	0.273	0.200	"	"	"	"	"	"
Copper	7.61	0.400	"	"	"	"	"	"
Lead	6.54	0.200	"	"	"	"	"	"
Nickel	5.79	0.400	"	"	"	"	"	"
Silver	0.0450	0.0200	"	"	"	"	"	"
Zinc	20.9	0.400	"	"	"	"	"	"
Selenium	0.418	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **07/09/24 13:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHG0248	07/10/24	07/10/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **07/09/24 13:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	5350	0.0500	mg/L dry	1	BHG0239	07/09/24	07/10/24	EPA 6020B	
Magnesium	155	0.0500	"	"	"	"	"	"	
Sodium	103	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/09/24 13:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.379	0.00100	units	1	BHG0294	07/11/24	07/11/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/09/24 13:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/11/24 13:01

WC03@1'
2407100-01 (Soil)

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Physical Parameters by APHA/ASTM/EPA Methods

% Solids	94.1	%	1	BHG0243	07/10/24	07/10/24	Calculation

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/09/24 13:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.681	0.0100	mmhos/cm	1	BHG0241	07/09/24	07/10/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **07/09/24 13:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.57		pH Units	1	BHG0240	07/09/24	07/10/24	EPA 9045D	

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Project Number: [none]
Project Manager: Karen Olson

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Volatile Organic Compounds by EPA Method 8260B - Quality Control

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Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0235 - EPA 5030 Soil MS

Blank (BHG0235-BLK1)

Prepared: 07/09/24 Analyzed: 07/10/24

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0429		"	0.0400		107	50-150			
Surrogate: Toluene-d8	0.0405		"	0.0400		101	50-150			
Surrogate: 4-Bromofluorobenzene	0.0408		"	0.0400		102	50-150			

LCS (BHG0235-BS1)

Prepared: 07/09/24 Analyzed: 07/10/24

Benzene	0.0873	0.0020	mg/kg	0.100		87.3	70-130			
Toluene	0.105	0.0050	"	0.100		105	70-130			
Ethylbenzene	0.0996	0.0050	"	0.100		99.6	70-130			
m,p-Xylene	0.198	0.010	"	0.200		99.1	70-130			
o-Xylene	0.0986	0.0050	"	0.100		98.6	70-130			
1,2,4-Trimethylbenzene	0.0937	0.0050	"	0.100		93.7	70-130			
1,3,5-Trimethylbenzene	0.0941	0.0050	"	0.100		94.1	70-130			
Naphthalene	0.0771	0.0038	"	0.100		77.1	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0340		"	0.0400		85.1	50-150			
Surrogate: Toluene-d8	0.0417		"	0.0400		104	50-150			
Surrogate: 4-Bromofluorobenzene	0.0392		"	0.0400		98.0	50-150			

Matrix Spike (BHG0235-MS1)

Source: 2407091-01

Prepared: 07/09/24 Analyzed: 07/10/24

Benzene	0.0942	0.0020	mg/kg	0.100	ND	94.2	70-130			
Toluene	0.111	0.0050	"	0.100	ND	111	70-130			
Ethylbenzene	0.103	0.0050	"	0.100	ND	103	70-130			
m,p-Xylene	0.203	0.010	"	0.200	ND	102	70-130			
o-Xylene	0.101	0.0050	"	0.100	ND	101	70-130			
1,2,4-Trimethylbenzene	0.0975	0.0050	"	0.100	ND	97.5	70-130			
1,3,5-Trimethylbenzene	0.0984	0.0050	"	0.100	ND	98.4	70-130			
Naphthalene	0.0793	0.0038	"	0.100	ND	79.3	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0428		"	0.0400		107	50-150			
Surrogate: Toluene-d8	0.0410		"	0.0400		102	50-150			
Surrogate: 4-Bromofluorobenzene	0.0401		"	0.0400		100	50-150			

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Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/11/24 13:01

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0235 - EPA 5030 Soil MS

Matrix Spike Dup (BHG0235-MSD1)		Source: 2407091-01			Prepared: 07/09/24 Analyzed: 07/10/24					
Benzene	0.0874	0.0020	mg/kg	0.100	ND	87.4	70-130	7.50	30	
Toluene	0.104	0.0050	"	0.100	ND	104	70-130	6.32	30	
Ethylbenzene	0.100	0.0050	"	0.100	ND	100	70-130	2.21	30	
m,p-Xylene	0.196	0.010	"	0.200	ND	97.8	70-130	3.73	30	
o-Xylene	0.100	0.0050	"	0.100	ND	100	70-130	1.40	30	
1,2,4-Trimethylbenzene	0.0942	0.0050	"	0.100	ND	94.2	70-130	3.51	30	
1,3,5-Trimethylbenzene	0.0950	0.0050	"	0.100	ND	95.0	70-130	3.51	30	
Naphthalene	0.0797	0.0038	"	0.100	ND	79.7	70-130	0.528	30	
Surrogate: 1,2-Dichloroethane-d4		0.0396	"	0.0400		98.9	50-150			
Surrogate: Toluene-d8		0.0413	"	0.0400		103	50-150			
Surrogate: 4-Bromofluorobenzene		0.0394	"	0.0400		98.6	50-150			

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Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/11/24 13:01

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0238 - EPA 3550A

Blank (BHG0238-BLK1)

Prepared: 07/09/24 Analyzed: 07/10/24

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: o-Terphenyl	13.3		"	12.5		106	30-150			

LCS (BHG0238-BS1)

Prepared: 07/09/24 Analyzed: 07/10/24

C10-C28 (DRO)	530	50	mg/kg	500		106	70-130			
Surrogate: o-Terphenyl	11.8		"	12.5		94.4	30-150			

Matrix Spike (BHG0238-MS1)

Source: 2407091-01

Prepared: 07/09/24 Analyzed: 07/10/24

C10-C28 (DRO)	518	50	mg/kg	500	9.81	102	70-130			
Surrogate: o-Terphenyl	9.64		"	12.5		77.1	30-150			

Matrix Spike Dup (BHG0238-MSD1)

Source: 2407091-01

Prepared: 07/09/24 Analyzed: 07/10/24

C10-C28 (DRO)	540	50	mg/kg	500	9.81	106	70-130	4.05	20	
Surrogate: o-Terphenyl	10.7		"	12.5		85.5	30-150			

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Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/11/24 13:01

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Reporting				Spike	Source	%REC			RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0245 - EPA 5030 Soil MS

Blank (BHG0245-BLK1)

Prepared & Analyzed: 07/10/24

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
Surrogate: 2-Methylnaphthalene-d10	0.0152		"	0.0333		45.6	40-150			
Surrogate: Fluoranthene-d10	0.0189		"	0.0333		56.6	40-150			

LCS (BHG0245-BS1)

Prepared & Analyzed: 07/10/24

Acenaphthene	0.0185	0.00500	mg/kg	0.0333		55.6	31-137			
Anthracene	0.0177	0.00500	"	0.0333		53.2	30-120			
Benzo (a) anthracene	0.0190	0.00500	"	0.0333		57.0	30-120			
Benzo (a) pyrene	0.0174	0.00500	"	0.0333		52.3	30-120			
Benzo (b) fluoranthene	0.0175	0.00500	"	0.0333		52.4	30-120			
Benzo (k) fluoranthene	0.0182	0.00500	"	0.0333		54.7	30-120			
Chrysene	0.0189	0.00500	"	0.0333		56.7	30-120			
Dibenz (a,h) anthracene	0.0152	0.00500	"	0.0333		45.7	30-120			
Fluoranthene	0.0190	0.00500	"	0.0333		56.9	30-120			
Fluorene	0.0186	0.00500	"	0.0333		55.9	30-120			
Indeno (1,2,3-cd) pyrene	0.0157	0.00500	"	0.0333		47.1	30-120			
Pyrene	0.0213	0.00500	"	0.0333		63.8	35-142			
1-Methylnaphthalene	0.0193	0.00500	"	0.0333		57.8	35-142			
2-Methylnaphthalene	0.0172	0.00500	"	0.0333		51.6	35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0184		"	0.0333		55.1	40-150			
Surrogate: Fluoranthene-d10	0.0205		"	0.0333		61.6	40-150			

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Tasman Geosciences
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Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/11/24 13:01

PAH by EPA Method 8270D SIM - Quality Control

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Analyte	Reporting			Spike		Source		%REC		RPD	
	Result	Limit	Units	Level		Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0245 - EPA 5030 Soil MS

Matrix Spike (BHG0245-MS1)

Source: 2407091-01

Prepared & Analyzed: 07/10/24

Acenaphthene	0.0154	0.00500	mg/kg	0.0333	ND	46.1	31-137				
Anthracene	0.0147	0.00500	"	0.0333	ND	44.0	30-120				
Benzo (a) anthracene	0.0157	0.00500	"	0.0333	ND	47.2	30-120				
Benzo (a) pyrene	0.0165	0.00500	"	0.0333	ND	49.5	30-120				
Benzo (b) fluoranthene	0.0168	0.00500	"	0.0333	ND	50.5	30-120				
Benzo (k) fluoranthene	0.0181	0.00500	"	0.0333	ND	54.2	30-120				
Chrysene	0.0156	0.00500	"	0.0333	ND	46.8	30-120				
Dibenz (a,h) anthracene	0.0135	0.00500	"	0.0333	ND	40.4	30-120				
Fluoranthene	0.0147	0.00500	"	0.0333	ND	44.1	30-120				
Fluorene	0.0158	0.00500	"	0.0333	ND	47.4	30-120				
Indeno (1,2,3-cd) pyrene	0.0151	0.00500	"	0.0333	ND	45.3	30-120				
Pyrene	0.0172	0.00500	"	0.0333	ND	51.5	35-142				
1-Methylnaphthalene	0.0158	0.00500	"	0.0333	ND	47.5	15-130				
2-Methylnaphthalene	0.0151	0.00500	"	0.0333	ND	45.3	15-130				
Surrogate: 2-Methylnaphthalene-d10	0.0155		"	0.0333		46.6	40-150				
Surrogate: Fluoranthene-d10	0.0157		"	0.0333		47.1	40-150				

Matrix Spike Dup (BHG0245-MSD1)

Source: 2407091-01

Prepared & Analyzed: 07/10/24

Acenaphthene	0.0164	0.00500	mg/kg	0.0333	ND	49.1	31-137	6.26	30		
Anthracene	0.0162	0.00500	"	0.0333	ND	48.5	30-120	9.65	30		
Benzo (a) anthracene	0.0163	0.00500	"	0.0333	ND	48.8	30-120	3.25	30		
Benzo (a) pyrene	0.0171	0.00500	"	0.0333	ND	51.2	30-120	3.37	30		
Benzo (b) fluoranthene	0.0175	0.00500	"	0.0333	ND	52.4	30-120	3.73	30		
Benzo (k) fluoranthene	0.0184	0.00500	"	0.0333	ND	55.1	30-120	1.71	30		
Chrysene	0.0157	0.00500	"	0.0333	ND	47.2	30-120	0.943	30		
Dibenz (a,h) anthracene	0.0143	0.00500	"	0.0333	ND	42.9	30-120	6.07	30		
Fluoranthene	0.0164	0.00500	"	0.0333	ND	49.3	30-120	11.1	30		
Fluorene	0.0169	0.00500	"	0.0333	ND	50.8	30-120	6.99	30		
Indeno (1,2,3-cd) pyrene	0.0155	0.00500	"	0.0333	ND	46.6	30-120	2.65	30		
Pyrene	0.0174	0.00500	"	0.0333	ND	52.1	35-142	1.11	30		
1-Methylnaphthalene	0.0177	0.00500	"	0.0333	ND	53.2	15-130	11.4	50		
2-Methylnaphthalene	0.0165	0.00500	"	0.0333	ND	49.5	15-130	8.79	50		
Surrogate: 2-Methylnaphthalene-d10	0.0171		"	0.0333		51.2	40-150				
Surrogate: Fluoranthene-d10	0.0175		"	0.0333		52.4	40-150				

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Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/11/24 13:01

Total Metals by EPA 6020B Hot Water Soluble Extraction - Quality Control
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Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0256 - EPA 3050B

Blank (BHG0256-BLK1)

Prepared: 07/10/24 Analyzed: 07/11/24

Boron	ND	2.00	mg/L

LCS (BHG0256-BS1)

Prepared: 07/10/24 Analyzed: 07/11/24

Boron	5.19	2.00	mg/L	5.00	104	80-120

Duplicate (BHG0256-DUP1)

Source: 2407091-01

Prepared: 07/10/24 Analyzed: 07/11/24

Boron	0.125	2.00	mg/L	0.149	17.8	20

Matrix Spike (BHG0256-MS1)

Source: 2407091-01

Prepared: 07/10/24 Analyzed: 07/11/24

Boron	7.23	2.00	mg/L	5.02	0.149	141	75-125	QM-07

Matrix Spike Dup (BHG0256-MSD1)

Source: 2407091-01

Prepared: 07/10/24 Analyzed: 07/11/24

Boron	5.39	2.00	mg/L	5.02	0.149	104	75-125	29.1	25	QM-07

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Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/11/24 13:01

Total Metals by EPA 6020B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0242 - EPA 3050B

Blank (BHG0242-BLK1)

Prepared: 07/10/24 Analyzed: 07/11/24

Arsenic	ND	0.200	mg/kg wet
Barium	ND	0.400	"
Cadmium	ND	0.200	"
Copper	ND	0.400	"
Lead	ND	0.200	"
Nickel	ND	0.400	"
Silver	ND	0.0200	"
Zinc	ND	0.400	"
Selenium	ND	0.260	"

LCS (BHG0242-BS1)

Prepared: 07/10/24 Analyzed: 07/11/24

Arsenic	35.0	0.200	mg/kg wet	40.0	87.5	80-120
Barium	37.2	0.400	"	40.0	92.9	80-120
Cadmium	1.88	0.200	"	2.00	93.8	80-120
Copper	37.5	0.400	"	40.0	93.8	80-120
Lead	18.6	0.200	"	20.0	93.2	80-120
Nickel	37.2	0.400	"	40.0	93.0	80-120
Silver	1.86	0.0200	"	2.00	93.1	80-120
Zinc	36.6	0.400	"	40.0	91.5	80-120
Selenium	3.99	0.260	"	4.00	99.8	80-120

Duplicate (BHG0242-DUP1)

Source: 2405469-13RE1

Prepared: 07/10/24 Analyzed: 07/11/24

Arsenic	5.41	0.200	mg/kg wet	5.48	1.36	20
Barium	113	0.400	"	92.4	19.9	20
Cadmium	0.211	0.200	"	0.235	10.7	20
Copper	5.47	0.400	"	5.65	3.25	20
Lead	9.70	0.200	"	9.52	1.86	20
Nickel	4.64	0.400	"	4.55	2.13	20
Silver	0.0742	0.0200	"	0.0770	3.62	20
Zinc	16.1	0.400	"	16.3	1.17	20
Selenium	ND	0.260	"	0.189	200	20

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/11/24 13:01

Total Metals by EPA 6020B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0242 - EPA 3050B

Matrix Spike (BHG0242-MS1)

Source: 2405469-13RE1

Prepared: 07/10/24 Analyzed: 07/11/24

Arsenic	41.8	0.200	mg/kg wet	39.4	5.48	92.2	75-125			
Barium	124	0.400	"	39.4	92.4	81.2	75-125			
Cadmium	2.19	0.200	"	1.97	0.235	99.2	75-125			
Copper	24.9	0.400	"	39.4	5.65	48.9	75-125			QM-05
Lead	28.9	0.200	"	19.7	9.52	98.5	75-125			
Nickel	24.2	0.400	"	39.4	4.55	49.8	75-125			QM-05
Silver	1.94	0.0200	"	1.97	0.0770	94.7	75-125			
Zinc	36.3	0.400	"	39.4	16.3	51.0	75-125			QM-05
Selenium	3.99	0.260	"	3.94	0.189	96.4	75-125			

Matrix Spike Dup (BHG0242-MSD1)

Source: 2405469-13RE1

Prepared: 07/10/24 Analyzed: 07/11/24

Arsenic	42.3	0.200	mg/kg wet	39.4	5.48	93.6	75-125	1.28	25	
Barium	125	0.400	"	39.4	92.4	81.6	75-125	0.117	25	
Cadmium	2.19	0.200	"	1.97	0.235	99.5	75-125	0.270	25	
Copper	25.1	0.400	"	39.4	5.65	49.4	75-125	0.696	25	QM-05
Lead	28.8	0.200	"	19.7	9.52	98.1	75-125	0.264	25	
Nickel	24.4	0.400	"	39.4	4.55	50.3	75-125	0.862	25	QM-05
Silver	1.96	0.0200	"	1.97	0.0770	95.5	75-125	0.849	25	
Zinc	36.4	0.400	"	39.4	16.3	51.2	75-125	0.223	25	QM-05
Selenium	3.97	0.260	"	3.94	0.189	96.1	75-125	0.356	25	

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/11/24 13:01

Hexavalent Chromium by EPA Method 7196 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0248 - 3060A Mod

Blank (BHG0248-BLK1)

Prepared & Analyzed: 07/10/24

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BHG0248-BS1)

Prepared & Analyzed: 07/10/24

Chromium, Hexavalent 25.2 0.30 mg/kg wet 25.0 101 80-120

Duplicate (BHG0248-DUP1)

Source: 2407091-01

Prepared & Analyzed: 07/10/24

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BHG0248-MS1)

Source: 2407091-01

Prepared & Analyzed: 07/10/24

Chromium, Hexavalent 30.3 0.30 mg/kg dry 29.5 ND 103 75-125

Matrix Spike Dup (BHG0248-MSD1)

Source: 2407091-01

Prepared & Analyzed: 07/10/24

Chromium, Hexavalent 29.5 0.30 mg/kg dry 29.5 ND 100 75-125 2.57 20

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/11/24 13:01

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0239 - General Preparation

Blank (BHG0239-BLK1)

Prepared: 07/09/24 Analyzed: 07/10/24

Calcium	ND	0.0500	mg/L wet
Magnesium	ND	0.0500	"
Sodium	ND	0.0500	"

LCS (BHG0239-BS1)

Prepared: 07/09/24 Analyzed: 07/10/24

Calcium	5.44	0.0500	mg/L wet	5.00	109	70-130
Magnesium	5.19	0.0500	"	5.00	104	70-130
Sodium	5.18	0.0500	"	5.00	104	70-130

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/11/24 13:01

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD	
		Limit	Units		Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0243 - General Preparation

Duplicate (BHG0243-DUP1)		Source: 2407091-01		Prepared & Analyzed: 07/10/24						
% Solids	84.7		%		84.7			0.0176	20	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/11/24 13:01

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD	
		Limit	Units		Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0241 - General Preparation

Blank (BHG0241-BLK1)

Prepared: 07/09/24 Analyzed: 07/10/24

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BHG0241-BS1)

Prepared: 07/09/24 Analyzed: 07/10/24

Specific Conductance (EC) 0.156 0.0100 mmhos/cm 0.150 104 95-105

Duplicate (BHG0241-DUP1)

Source: 2407091-01

Prepared: 07/09/24 Analyzed: 07/10/24

Specific Conductance (EC) 1.12 0.0100 mmhos/cm 1.12 0.358 20

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/11/24 13:01

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source Result	%REC		RPD		Notes
		Limit	Units			%REC	Limits	RPD	Limit	

Batch BHG0240 - General Preparation

LCS (BHG0240-BS1)

Prepared: 07/09/24 Analyzed: 07/10/24

pH	9.13	pH Units	9.18	99.5	95-105

Duplicate (BHG0240-DUP1)

Source: 2407091-01

Prepared: 07/09/24 Analyzed: 07/10/24

pH	8.34	pH Units	8.33	0.120	20

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/11/24 13:01

Notes and Definitions

QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
QM-05	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The associated LCS and/or LCSD were within acceptance limits, therefore the data are considered valid.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

July 17, 2024

Karen Olson

Tasman Geosciences

6855 W. 119th Ave.

Broomfield, CO 80020

RE: PDC - Merritt Wellhead Pad

Work Order #2407160

Enclosed are the results of analyses for samples received by Summit Scientific on 07/12/24 17:47. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Natalie Tessier". The signature is fluid and cursive, with the first name being more prominent.

Natalie Tessier For Paul Shrewsbury
President



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS01@1'	2407160-01	Soil	07/12/24 08:30	07/12/24 17:47
SS02@1'	2407160-02	Soil	07/12/24 08:32	07/12/24 17:47
SS03@1'	2407160-03	Soil	07/12/24 08:34	07/12/24 17:47
SS04@1'	2407160-04	Soil	07/12/24 08:36	07/12/24 17:47
SS05@1'	2407160-05	Soil	07/12/24 08:38	07/12/24 17:47
SS06@1'	2407160-06	Soil	07/12/24 08:40	07/12/24 17:47
SS07@1'	2407160-07	Soil	07/12/24 08:42	07/12/24 17:47
SS10@1'	2407160-08	Soil	07/12/24 08:48	07/12/24 17:47
SS11@1'	2407160-09	Soil	07/12/24 08:50	07/12/24 17:47
SS12@1'	2407160-10	Soil	07/12/24 08:52	07/12/24 17:47
SS13@1'	2407160-11	Soil	07/12/24 08:54	07/12/24 17:47
SS14@1'	2407160-12	Soil	07/12/24 10:23	07/12/24 17:47
SS15@1'	2407160-13	Soil	07/12/24 08:56	07/12/24 17:47
SS16@2'	2407160-14	Soil	07/12/24 08:58	07/12/24 17:47
SS17@3'	2407160-15	Soil	07/12/24 09:00	07/12/24 17:47
SS18@1'	2407160-16	Soil	07/12/24 00:00	07/12/24 17:47
SS19@2'	2407160-17	Soil	07/12/24 00:00	07/12/24 17:47
SS20@2'	2407160-18	Soil	07/12/24 00:00	07/12/24 17:47
SS21@1'	2407160-19	Soil	07/12/24 00:00	07/12/24 17:47
SS22@1'	2407160-20	Soil	07/12/24 00:00	07/12/24 17:47
SS23@1'	2407160-21	Soil	07/12/24 00:00	07/12/24 17:47
SS24@1'	2407160-22	Soil	07/12/24 00:00	07/12/24 17:47
SS25@1'	2407160-23	Soil	07/12/24 00:00	07/12/24 17:47
SS26@1'	2407160-24	Soil	07/12/24 00:00	07/12/24 17:47
SS27@1'	2407160-25	Soil	07/12/24 00:00	07/12/24 17:47

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad
Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

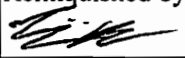
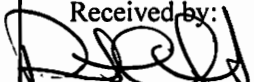
Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

A handwritten signature in black ink, reading "Matthew Bessin".

Client: PDC/Tasman		Send Data To: Project Manager: Karen Olson		Send Invoice To: Company: PDC Energy	
Address: 6855 W 119th Ave		E-Mail: karen.olson@chevron.com		Project Name/Location:	
City/State/Zip: Broomfield / CO / 80020				AFE#:	
Phone: 970-214-7901		Project Name: Merritt Wellhead Pad		PO/Billing Codes:	
Sampler Name: Lillian Buck		Project Number:		Contact: Karen Olson	

					Preservative				Matrix				Analysis Requested								Special Instructions
ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	VOC - 915	TPH - 915	PAH - 915	pH, EC, SAR	Boron - HWS	Metals - 915	HOLD		
1	SS01e1'	7/12/24	830	3			X			X			X	X	X	X	X	X			*VOC + TPH on quick turn everything else is 48 hrs pH, EC, SAR by saturated paste
2	SS02e1'		832	1			X			X			X	X	X	X	X	X			
3	SS03e1'		834	1			X			X			X	X	X	X	X	X			
4	SS04e1'		836	1			X			X			X	X	X	X	X	X			
5	SS05e1'		838	1			X			X			X	X	X	X	X	X			
6	SS06e1'		840	1			X			X			X	X	X	X	X	X			
7	SS07e1'		842	1			X			X			X	X	X	X	X	X			
8	SS10e1'		848	1			X			X			X	X	X	X	X	X			
9	SS11e1'		850	1			X			X			X	X	X	X	X	X			
10	SS12e1'		852	1			X			X			X	X	X	X	X	X			
11	SS13e1'		854	1			X			X			X	X	X	X	X	X			
12	SS14e1'	18	851023	1			X			X			X	X	X	X	X	X			
13	SS15e1'		856	1			X			X			X	X	X	X	X	X			
14	SS16e2'		858	1			X			X			X	X	X	X	X	X			
15	SS17e3'	✓	900	✓			✓			✓			✓	✓	✓	✓	✓	✓			

Relinquished by:  7/12/24 1627	Received by: Tasman Lockbox 7/12/24 1627	TAT Business Days	Field DO	Notes:
		Same Day ☒	Field EC	
Relinquished by: Tasman Lockbox 7/24 1747	Received by:  7/24 1747	1 Day ☐	Field ORP	
		2 Days ☐	Field pH	
Relinquished by:	Received by:	3 Days ☐	Field Temp.	
		Standard ☐	Field Turb.	
Temperature Upon Receipt: 11.4	Corrected Temperature 	IR gun #: _____	HNO3 lot #: _____	

SUMMIT SCIENTIFIC

4653 Table Mountain Drive
Golden, CO 80403
303-277-9310

Lab ID	Page <u>2</u> of <u>2</u>
<u>2407160.2</u>	

Client: PDC/Tasman		Send Data To: Project Manager: Karen Olson		Send Invoice To: Company: PDC Energy	
Address: 6855 W 119th Ave		E-Mail: karen.olson@chevron.com		Project Name/Location:	
City/State/Zip: Broomfield / CO / 80020				AFE#:	
Phone: 970-214-7901		Project Name: <u>Memitt wellhead pad</u>		PO/Billing Codes:	
Sampler Name: Lillian Buck		Project Number:		Contact: Karen Olson	

				Preservative				Matrix				Analysis Requested								Special Instructions
ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	VOC - 915	TPH - 915	PAH - 915	pH, EC, SAR	Boron - HWS	Metals - 915	HOLD	
1	SS18e1'	7/12/24		2			X			X			X	X	X	X	X	X	X	VOC & TPH On quick turn everything else is 48 hrs
2	SS19e2'																			pH, EC, SAR by saturated paste
3	SS20e2'																			
4	SS21e1'																			
5	SS22e1'																			
6	SS23e1'																			
7	SS24e1'																			
8	SS25e1'																			
9	SS26e1'																			
10	SS27e1'	↓		↓			↓			↓			↓	↓	↓	↓	↓	↓	↓	
11																				
12																				
13																				
14																				
15																				

Relinquished by: <u>Tasman Loehbox</u> Date/Time: <u>7/12/24 1627</u>	Received by: <u>Tasman Loehbox</u> Date/Time: <u>7/12/24 1627</u>	TAT Business Days	Field DO	Notes:
		Same Day ☒	Field EC	
Relinquished by: <u>Tasman Loehbox</u> Date/Time: <u>7/12/24 1747</u>	Received by: <u>[Signature]</u> Date/Time: <u>7/12/24 1747</u>	1 Day ☐	Field ORP	
		2 Days ☐	Field pH	
Relinquished by: <u>Tasman Loehbox</u> Date/Time: <u>7/12/24 1747</u>	Received by: <u>[Signature]</u> Date/Time: <u>7/12/24 1747</u>	3 Days ☐	Field Temp.	
		Standard ☐	Field Turb.	
Temperature Upon Receipt: <u>81.9</u>	Corrected Temperature: <u>8</u>	IR gun #: <u>1</u>	HNO3 lot #:	

S₂

Sample Receipt Checklist

S2 Work Order# 2407160

Client: Procterman Client Project ID: Merritt wellhead padShipped Via: H.D./P.U./FedEx/UPS/USPS/Other ☐ Airbill #: ☐

☐	☒	☐	☐	☐

Matrix (Check all that apply) Air ☐ Soil/Solid ☒ Water ☐ Other ☐Temp (°C) 11.4Thermometer # 1

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	☒	☐	☐	on 2 UE
If custody seals are present, are they intact? ⁽¹⁾	☒	☐	☐	
Are samples due within 48 hours present?	☒	☐	☐	Same day
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe ²⁺), Hexavalent Chromium (Cr ⁶⁺ , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	☐	☒	☐	
Is a chain-of-custody (COC) form present and filled out Completely? ⁽¹⁾	☒	☐	☐	
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	☒	☐	☐	
Were all samples received intact? ⁽¹⁾	☒	☐	☐	
Was adequate sample volume provided? ⁽¹⁾	☒	☐	☐	
Does the COC agree with the number and type of sample bottles received? ⁽¹⁾	☒	☐	☐	
Do the sample IDs on the bottle labels match the COC? ⁽¹⁾	☒	☐	☐	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	☐	☐	☒	
Are samples preserved that require preservation (excluding cooling)? ⁽¹⁾ Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	☐	☐	☒	
If samples are acid preserved for metals, is the pH ≤ 2? ⁽¹⁾ Record the pH in Comments.	☐	☐	☒	
If dissolved metals are requested, were samples field filtered?	☐	☐	☒	

Additional Comments (if any):

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.

Custodian Printed Name

Date/Time



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS01@1'
2407160-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/12/24 08:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHG0364	07/12/24	07/12/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **07/12/24 08:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0460	115 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0392	98.1 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0415	104 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/12/24 08:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHG0366	07/12/24	07/12/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/12/24 08:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	8.10	64.8 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS01@1'
2407160-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/12/24 08:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHG0374	07/15/24	07/15/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **07/12/24 08:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0250	75.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0214	64.3 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/12/24 08:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHG0416	07/16/24	07/17/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/12/24 08:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS01@1'
2407160-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	1.54	0.200	mg/kg dry	1	BHG0384	07/15/24	07/15/24	EPA 6020B
Barium	552	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	4.55	0.400	"	"	"	"	"	"
Lead	5.94	0.200	"	"	"	"	"	"
Nickel	2.31	0.400	"	"	"	"	"	"
Silver	0.0355	0.0200	"	"	"	"	"	"
Zinc	9.89	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **07/12/24 08:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHG0379	07/15/24	07/15/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **07/12/24 08:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	42.1	0.0500	mg/L dry	1	BHG0368	07/12/24	07/16/24	EPA 6020B	
Magnesium	7.80	0.0500	"	"	"	"	"	"	
Sodium	21.7	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/12/24 08:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.806	0.00100	units	1	BHG0414	07/16/24	07/16/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS01@1'
2407160-01 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/12/24 08:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	97.4			%	1	BHG0373	07/15/24	07/15/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/12/24 08:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	0.482	0.0100		mmhos/cm	1	BHG0369	07/12/24	07/15/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **07/12/24 08:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	8.42			pH Units	1	BHG0370	07/12/24	07/15/24	EPA 9045D	

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Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS02@1'
2407160-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/12/24 08:32**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHG0364	07/12/24	07/12/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **07/12/24 08:32**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0418	105 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0406	101 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0422	105 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/12/24 08:32**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHG0366	07/12/24	07/12/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/12/24 08:32**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	10.5	84.3 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

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07/17/24 11:20

SS02@1'
2407160-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/12/24 08:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHG0374	07/15/24	07/15/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **07/12/24 08:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0214	64.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0208	62.5 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/12/24 08:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHG0416	07/16/24	07/17/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/12/24 08:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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Project Manager: Karen Olson

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SS02@1'
2407160-02 (Soil)

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Total Metals by EPA 6020B

Arsenic	1.45	0.200	mg/kg dry	1	BHG0384	07/15/24	07/15/24	EPA 6020B
Barium	404	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	4.32	0.400	"	"	"	"	"	"
Lead	5.71	0.200	"	"	"	"	"	"
Nickel	2.43	0.400	"	"	"	"	"	"
Silver	0.0286	0.0200	"	"	"	"	"	"
Zinc	8.47	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **07/12/24 08:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHG0379	07/15/24	07/15/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **07/12/24 08:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	61.0	0.0500	mg/L dry	1	BHG0368	07/12/24	07/16/24	EPA 6020B	
Magnesium	12.7	0.0500	"	"	"	"	"	"	
Sodium	35.9	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/12/24 08:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.09	0.00100	units	1	BHG0414	07/16/24	07/16/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Project: PDC - Merritt Wellhead Pad

Project Number: [none]
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SS02@1'
2407160-02 (Soil)

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Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/12/24 08:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	95.3		%	1	BHG0373	07/15/24	07/15/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/12/24 08:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.09	0.0100	mmhos/cm	1	BHG0369	07/12/24	07/15/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **07/12/24 08:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.12		pH Units	1	BHG0370	07/12/24	07/15/24	EPA 9045D	

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Project Manager: Karen Olson

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07/17/24 11:20

SS03@1'
2407160-03 (Soil)

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Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/12/24 08:34**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHG0364	07/12/24	07/12/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **07/12/24 08:34**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0373	93.3 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0389	97.4 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0419	105 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/12/24 08:34**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHG0366	07/12/24	07/12/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/12/24 08:34**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	9.96	79.7 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS03@1'
2407160-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/12/24 08:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHG0374	07/15/24	07/15/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **07/12/24 08:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0225	67.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0199	59.7 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/12/24 08:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHG0416	07/16/24	07/17/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/12/24 08:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS03@1'
2407160-03 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	2.96	0.200	mg/kg dry	1	BHG0384	07/15/24	07/15/24	EPA 6020B
Barium	355	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	4.11	0.400	"	"	"	"	"	"
Lead	6.97	0.200	"	"	"	"	"	"
Nickel	2.54	0.400	"	"	"	"	"	"
Silver	0.0344	0.0200	"	"	"	"	"	"
Zinc	8.85	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **07/12/24 08:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHG0379	07/15/24	07/15/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **07/12/24 08:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	54.3	0.0500	mg/L dry	1	BHG0368	07/12/24	07/16/24	EPA 6020B	
Magnesium	12.0	0.0500	"	"	"	"	"	"	
Sodium	30.2	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/12/24 08:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.966	0.00100	units	1	BHG0414	07/16/24	07/16/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS03@1'
2407160-03 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/12/24 08:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	94.5		%	1	BHG0373	07/15/24	07/15/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/12/24 08:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.00	0.0100	mmhos/cm	1	BHG0369	07/12/24	07/15/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **07/12/24 08:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.14		pH Units	1	BHG0370	07/12/24	07/15/24	EPA 9045D	

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Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS04@1'
2407160-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/12/24 08:36**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHG0364	07/12/24	07/12/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **07/12/24 08:36**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0430	108 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0403	101 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0412	103 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/12/24 08:36**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHG0366	07/12/24	07/12/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/12/24 08:36**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	10.3	82.6 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS04@1'
2407160-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/12/24 08:36**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHG0374	07/15/24	07/15/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **07/12/24 08:36**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0220	66.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0176	52.9 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/12/24 08:36**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHG0416	07/16/24	07/17/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/12/24 08:36**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS04@1'
2407160-04 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	3.83	0.200	mg/kg dry	1	BHG0384	07/15/24	07/15/24	EPA 6020B
Barium	442	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	4.70	0.400	"	"	"	"	"	"
Lead	5.99	0.200	"	"	"	"	"	"
Nickel	2.69	0.400	"	"	"	"	"	"
Silver	0.0332	0.0200	"	"	"	"	"	"
Zinc	9.04	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **07/12/24 08:36**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHG0379	07/15/24	07/15/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **07/12/24 08:36**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	180	0.0500	mg/L dry	1	BHG0368	07/12/24	07/16/24	EPA 6020B	
Magnesium	23.4	0.0500	"	"	"	"	"	"	
Sodium	28.8	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/12/24 08:36**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.536	0.00100	units	1	BHG0414	07/16/24	07/16/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS04@1'
2407160-04 (Soil)

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Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/12/24 08:36**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	93.7		%	1	BHG0373	07/15/24	07/15/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/12/24 08:36**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.06	0.0100	mmhos/cm	1	BHG0369	07/12/24	07/15/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **07/12/24 08:36**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.19		pH Units	1	BHG0370	07/12/24	07/15/24	EPA 9045D	

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Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS05@1'
2407160-05 (Soil)

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Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/12/24 08:38**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHG0364	07/12/24	07/12/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **07/12/24 08:38**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0446	112 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0392	98.1 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0437	109 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/12/24 08:38**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	59	50	mg/kg	1	BHG0366	07/12/24	07/12/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/12/24 08:38**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	8.74	69.9 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Tasman Geosciences
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Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS05@1'
2407160-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/12/24 08:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHG0374	07/15/24	07/15/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	0.0110	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	0.00724	0.00500	"	"	"	"	"	"	
Fluorene	0.00616	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	0.0165	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	0.0181	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	0.0248	0.00500	"	"	"	"	"	"	

Date Sampled: **07/12/24 08:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0254	76.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0165	49.4 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/12/24 08:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHG0390	07/15/24	07/16/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/12/24 08:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS05@1'
2407160-05 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.50	0.200	mg/kg dry	1	BHG0384	07/15/24	07/15/24	EPA 6020B	
Barium	660	0.400	"	"	"	"	"	"	
Cadmium	0.390	0.200	"	"	"	"	"	"	
Copper	6.17	0.400	"	"	"	"	"	"	
Lead	6.18	0.200	"	"	"	"	"	"	
Nickel	3.23	0.400	"	"	"	"	"	"	
Silver	0.0542	0.0200	"	"	"	"	"	"	
Zinc	11.9	0.400	"	"	"	"	"	"	
Selenium	0.552	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: 07/12/24 08:38

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHG0379	07/15/24	07/15/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: 07/12/24 08:38

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	173	0.0500	mg/L dry	1	BHG0368	07/12/24	07/16/24	EPA 6020B	
Magnesium	35.2	0.0500	"	"	"	"	"	"	
Sodium	117	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: 07/12/24 08:38

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.12	0.00100	units	1	BHG0414	07/16/24	07/16/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: 07/12/24 08:38

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS05@1'
2407160-05 (Soil)

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Physical Parameters by APHA/ASTM/EPA Methods

% Solids	95.0	%	1	BHG0373	07/15/24	07/15/24	Calculation

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/12/24 08:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	2.01	0.0100	mmhos/cm	1	BHG0369	07/12/24	07/15/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **07/12/24 08:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.97		pH Units	1	BHG0370	07/12/24	07/15/24	EPA 9045D	

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Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS06@1'
2407160-06 (Soil)

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Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/12/24 08:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHG0364	07/12/24	07/12/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **07/12/24 08:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0478	120 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0410	102 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0478	119 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/12/24 08:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHG0366	07/12/24	07/12/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/12/24 08:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	5.60	44.8 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS06@1'
2407160-06 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/12/24 08:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHG0374	07/15/24	07/15/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	0.00792	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	0.00784	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	0.0110	0.00500	"	"	"	"	"	"	

Date Sampled: **07/12/24 08:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0291	87.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0201	60.4 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/12/24 08:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHG0390	07/15/24	07/16/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/12/24 08:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

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Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS06@1'
2407160-06 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.35	0.200	mg/kg dry	1	BHG0384	07/15/24	07/15/24	EPA 6020B	
Barium	679	0.400	"	"	"	"	"	"	
Cadmium	0.201	0.200	"	"	"	"	"	"	
Copper	4.87	0.400	"	"	"	"	"	"	
Lead	4.74	0.200	"	"	"	"	"	"	
Nickel	2.49	0.400	"	"	"	"	"	"	
Silver	0.0351	0.0200	"	"	"	"	"	"	
Zinc	9.53	0.400	"	"	"	"	"	"	
Selenium	0.297	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: 07/12/24 08:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHG0380	07/15/24	07/15/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: 07/12/24 08:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	103	0.0500	mg/L dry	1	BHG0368	07/12/24	07/16/24	EPA 6020B	
Magnesium	23.4	0.0500	"	"	"	"	"	"	
Sodium	72.2	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: 07/12/24 08:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.67	0.00100	units	1	BHG0414	07/16/24	07/16/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: 07/12/24 08:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS06@1'
2407160-06 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	92.6	%	1	BHG0373	07/15/24	07/15/24	Calculation

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/12/24 08:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.98	0.0100	mmhos/cm	1	BHG0369	07/12/24	07/15/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **07/12/24 08:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.11		pH Units	1	BHG0370	07/12/24	07/15/24	EPA 9045D	

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Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS07@1'
2407160-07 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/12/24 08:42**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHG0364	07/12/24	07/12/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **07/12/24 08:42**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0402	101 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0404	101 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0423	106 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/12/24 08:42**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	120	50	mg/kg	1	BHG0366	07/12/24	07/12/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/12/24 08:42**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	7.54	60.3 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Tasman Geosciences
6855 W. 119th Ave.
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Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS07@1'
2407160-07 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/12/24 08:42**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHG0374	07/15/24	07/15/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	0.0109	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	0.0145	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	0.0193	0.00500	"	"	"	"	"	"	

Date Sampled: **07/12/24 08:42**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0254	76.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0187	56.2 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/12/24 08:42**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHG0390	07/15/24	07/16/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/12/24 08:42**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS07@1'
2407160-07 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	1.42	0.200	mg/kg dry	1	BHG0384	07/15/24	07/15/24	EPA 6020B
Barium	673	0.400	"	"	"	"	"	"
Cadmium	0.263	0.200	"	"	"	"	"	"
Copper	6.38	0.400	"	"	"	"	"	"
Lead	5.69	0.200	"	"	"	"	"	"
Nickel	2.89	0.400	"	"	"	"	"	"
Silver	0.0446	0.0200	"	"	"	"	"	"
Zinc	11.2	0.400	"	"	"	"	"	"
Selenium	0.464	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **07/12/24 08:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHG0380	07/15/24	07/15/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **07/12/24 08:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	74.7	0.0500	mg/L dry	1	BHG0368	07/12/24	07/16/24	EPA 6020B	
Magnesium	19.2	0.0500	"	"	"	"	"	"	
Sodium	68.3	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/12/24 08:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.82	0.00100	units	1	BHG0414	07/16/24	07/16/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/12/24 08:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS07@1'
2407160-07 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	95.2	%	1	BHG0373	07/15/24	07/15/24	Calculation

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/12/24 08:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	2.07	0.0100	mmhos/cm	1	BHG0369	07/12/24	07/15/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **07/12/24 08:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.08		pH Units	1	BHG0370	07/12/24	07/15/24	EPA 9045D	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS10@1'
2407160-08 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/12/24 08:48**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHG0364	07/12/24	07/12/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **07/12/24 08:48**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0416	104 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0395	98.8 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0377	94.3 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/12/24 08:48**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHG0366	07/12/24	07/12/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/12/24 08:48**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	13.7	110 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS10@1'
2407160-08 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/12/24 08:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHG0374	07/15/24	07/15/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	0.00626	0.00500	"	"	"	"	"	"	
Chrysene	0.00663	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	0.00673	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	0.0109	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	0.00611	0.00500	"	"	"	"	"	"	

Date Sampled: **07/12/24 08:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0270	81.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0221	66.4 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/12/24 08:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHG0390	07/15/24	07/16/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/12/24 08:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS10@1'
2407160-08 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	1.21	0.200	mg/kg dry	1	BHG0384	07/15/24	07/15/24	EPA 6020B
Barium	479	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	4.95	0.400	"	"	"	"	"	"
Lead	6.13	0.200	"	"	"	"	"	"
Nickel	2.26	0.400	"	"	"	"	"	"
Silver	0.0323	0.0200	"	"	"	"	"	"
Zinc	11.4	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **07/12/24 08:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHG0380	07/15/24	07/15/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **07/12/24 08:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	24.7	0.0500	mg/L dry	1	BHG0368	07/12/24	07/16/24	EPA 6020B	
Magnesium	5.50	0.0500	"	"	"	"	"	"	
Sodium	29.5	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/12/24 08:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.40	0.00100	units	1	BHG0414	07/16/24	07/16/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Tasman Geosciences
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Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS10@1'
2407160-08 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/12/24 08:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	98.6		%	1	BHG0373	07/15/24	07/15/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/12/24 08:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.935	0.0100	mmhos/cm	1	BHG0369	07/12/24	07/15/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **07/12/24 08:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.54		pH Units	1	BHG0370	07/12/24	07/15/24	EPA 9045D	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS11@1'
2407160-09 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/12/24 08:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHG0364	07/12/24	07/12/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **07/12/24 08:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0391	97.8 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0402	101 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0450	113 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/12/24 08:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHG0366	07/12/24	07/12/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/12/24 08:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	5.45	43.6 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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6855 W. 119th Ave.
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Project: PDC - Merritt Wellhead Pad

Project Number: [none]
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Reported:
07/17/24 11:20

SS11@1'
2407160-09 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/12/24 08:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHG0374	07/15/24	07/15/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	0.00503	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	0.00660	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	0.00682	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	0.00840	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	0.0110	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **07/12/24 08:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0265	79.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0246	73.9 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/12/24 08:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHG0390	07/15/24	07/16/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/12/24 08:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS11@1'
2407160-09 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	1.32	0.200	mg/kg dry	1	BHG0384	07/15/24	07/15/24	EPA 6020B
Barium	440	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	4.78	0.400	"	"	"	"	"	"
Lead	9.75	0.200	"	"	"	"	"	"
Nickel	2.29	0.400	"	"	"	"	"	"
Silver	0.0289	0.0200	"	"	"	"	"	"
Zinc	9.04	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **07/12/24 08:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHG0380	07/15/24	07/15/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **07/12/24 08:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	176	0.0500	mg/L dry	1	BHG0368	07/12/24	07/16/24	EPA 6020B	
Magnesium	34.7	0.0500	"	"	"	"	"	"	
Sodium	171	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/12/24 08:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.08	0.00100	units	1	BHG0414	07/16/24	07/16/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS11@1'
2407160-09 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/12/24 08:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	97.4		%	1	BHG0373	07/15/24	07/15/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/12/24 08:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	2.30	0.0100	mmhos/cm	1	BHG0369	07/12/24	07/15/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **07/12/24 08:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.30		pH Units	1	BHG0370	07/12/24	07/15/24	EPA 9045D	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS12@1'
2407160-10 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/12/24 08:52**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHG0364	07/12/24	07/12/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **07/12/24 08:52**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0420	105 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0393	98.3 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0420	105 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/12/24 08:52**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHG0366	07/12/24	07/13/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/12/24 08:52**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	9.66	77.3 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS12@1'
2407160-10 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/12/24 08:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHG0374	07/15/24	07/15/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	0.00715	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	0.00796	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	0.0153	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	0.0113	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	0.00856	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	0.00772	0.00500	"	"	"	"	"	"	
Pyrene	0.0129	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **07/12/24 08:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0284	85.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0238	71.4 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/12/24 08:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHG0390	07/15/24	07/17/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/12/24 08:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS12@1'
2407160-10 (Soil)

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Total Metals by EPA 6020B

Arsenic	1.37	0.200	mg/kg dry	1	BHG0384	07/15/24	07/15/24	EPA 6020B
Barium	472	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	4.95	0.400	"	"	"	"	"	"
Lead	5.85	0.200	"	"	"	"	"	"
Nickel	2.69	0.400	"	"	"	"	"	"
Silver	0.0320	0.0200	"	"	"	"	"	"
Zinc	10.2	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **07/12/24 08:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHG0380	07/15/24	07/15/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **07/12/24 08:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	29.8	0.0500	mg/L dry	1	BHG0368	07/12/24	07/16/24	EPA 6020B	
Magnesium	6.36	0.0500	"	"	"	"	"	"	
Sodium	35.1	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/12/24 08:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.52	0.00100	units	1	BHG0414	07/16/24	07/16/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS12@1'
2407160-10 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/12/24 08:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	93.5		%	1	BHG0373	07/15/24	07/15/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/12/24 08:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	2.71	0.0100	mmhos/cm	1	BHG0369	07/12/24	07/15/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **07/12/24 08:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.29		pH Units	1	BHG0370	07/12/24	07/15/24	EPA 9045D	

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS13@1'
2407160-11 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/12/24 08:54**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHG0364	07/12/24	07/13/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **07/12/24 08:54**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0388	97.0 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0400	99.9 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0428	107 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/12/24 08:54**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHG0366	07/12/24	07/13/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/12/24 08:54**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	6.36	50.9 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS13@1'
2407160-11 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/12/24 08:54**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHG0374	07/15/24	07/16/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	0.00518	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **07/12/24 08:54**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0271	81.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0242	72.6 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/12/24 08:54**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHG0390	07/15/24	07/17/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/12/24 08:54**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

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Tasman Geosciences
6855 W. 119th Ave.
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Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS13@1'
2407160-11 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	1.22	0.200	mg/kg dry	1	BHG0384	07/15/24	07/15/24	EPA 6020B
Barium	429	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	4.83	0.400	"	"	"	"	"	"
Lead	4.71	0.200	"	"	"	"	"	"
Nickel	2.14	0.400	"	"	"	"	"	"
Silver	0.0268	0.0200	"	"	"	"	"	"
Zinc	8.72	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **07/12/24 08:54**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHG0380	07/15/24	07/15/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **07/12/24 08:54**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	52.1	0.0500	mg/L dry	1	BHG0368	07/12/24	07/16/24	EPA 6020B	
Magnesium	10.5	0.0500	"	"	"	"	"	"	
Sodium	47.4	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/12/24 08:54**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.57	0.00100	units	1	BHG0414	07/16/24	07/16/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS13@1'
2407160-11 (Soil)

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Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/12/24 08:54**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	93.3		%	1	BHG0373	07/15/24	07/15/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/12/24 08:54**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.836	0.0100	mmhos/cm	1	BHG0369	07/12/24	07/15/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **07/12/24 08:54**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.19		pH Units	1	BHG0370	07/12/24	07/15/24	EPA 9045D	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS14@1'
2407160-12 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/12/24 10:23**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHG0364	07/12/24	07/13/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **07/12/24 10:23**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0418	105 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0394	98.6 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0428	107 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/12/24 10:23**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHG0366	07/12/24	07/13/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/12/24 10:23**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	6.48	51.8 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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6855 W. 119th Ave.
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Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS14@1'
2407160-12 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/12/24 10:23**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHG0374	07/15/24	07/16/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	0.00860	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	0.0111	0.00500	"	"	"	"	"	"	

Date Sampled: **07/12/24 10:23**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0261	78.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0196	58.8 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/12/24 10:23**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHG0390	07/15/24	07/17/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/12/24 10:23**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS14@1'
2407160-12 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	1.43	0.180	mg/kg dry	1	BHG0384	07/15/24	07/15/24	EPA 6020B
Barium	573	0.360	"	"	"	"	"	"
Cadmium	0.226	0.180	"	"	"	"	"	"
Copper	5.73	0.360	"	"	"	"	"	"
Lead	5.59	0.180	"	"	"	"	"	"
Nickel	2.85	0.360	"	"	"	"	"	"
Silver	0.0396	0.0180	"	"	"	"	"	"
Zinc	10.8	0.360	"	"	"	"	"	"
Selenium	0.316	0.234	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **07/12/24 10:23**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHG0380	07/15/24	07/15/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **07/12/24 10:23**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	177	0.0500	mg/L dry	1	BHG0368	07/12/24	07/16/24	EPA 6020B	
Magnesium	31.2	0.0500	"	"	"	"	"	"	
Sodium	65.1	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/12/24 10:23**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.19	0.00100	units	1	BHG0414	07/16/24	07/16/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/12/24 10:23**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS14@1'
2407160-12 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	91.8	%	1	BHG0373	07/15/24	07/15/24	Calculation

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/12/24 10:23**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	2.68	0.0100	mmhos/cm	1	BHG0369	07/12/24	07/15/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **07/12/24 10:23**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.01		pH Units	1	BHG0370	07/12/24	07/15/24	EPA 9045D	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS15@1'
2407160-13 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/12/24 08:56**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHG0364	07/12/24	07/13/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **07/12/24 08:56**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0377	94.4 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0411	103 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0426	106 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/12/24 08:56**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHG0366	07/12/24	07/13/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/12/24 08:56**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	8.02	64.2 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS15@1'
2407160-13 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/12/24 08:56**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHG0374	07/15/24	07/16/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **07/12/24 08:56**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0200	60.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0176	52.7 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/12/24 08:56**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHG0390	07/15/24	07/17/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/12/24 08:56**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS15@1'
2407160-13 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	1.55	0.200	mg/kg dry	1	BHG0384	07/15/24	07/15/24	EPA 6020B
Barium	416	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	4.36	0.400	"	"	"	"	"	"
Lead	5.94	0.200	"	"	"	"	"	"
Nickel	2.83	0.400	"	"	"	"	"	"
Silver	0.0338	0.0200	"	"	"	"	"	"
Zinc	9.49	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **07/12/24 08:56**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHG0380	07/15/24	07/15/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **07/12/24 08:56**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	15.6	0.0500	mg/L dry	1	BHG0368	07/12/24	07/16/24	EPA 6020B	
Magnesium	4.14	0.0500	"	"	"	"	"	"	
Sodium	17.2	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/12/24 08:56**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.00	0.00100	units	1	BHG0414	07/16/24	07/16/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS15@1'
2407160-13 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/12/24 08:56**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	88.2		%	1	BHG0373	07/15/24	07/15/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/12/24 08:56**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.814	0.0100	mmhos/cm	1	BHG0369	07/12/24	07/15/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **07/12/24 08:56**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.27		pH Units	1	BHG0370	07/12/24	07/15/24	EPA 9045D	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS16@2'
2407160-14 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/12/24 08:58**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHG0364	07/12/24	07/13/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **07/12/24 08:58**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0415	104 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0404	101 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0419	105 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/12/24 08:58**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHG0366	07/12/24	07/13/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/12/24 08:58**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	9.48	75.8 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS16@2'
2407160-14 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/12/24 08:58**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHG0375	07/15/24	07/15/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **07/12/24 08:58**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0167	50.2 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0189	56.8 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/12/24 08:58**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHG0390	07/15/24	07/17/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/12/24 08:58**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS16@2'
2407160-14 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	1.63	0.200	mg/kg dry	1	BHG0384	07/15/24	07/15/24	EPA 6020B
Barium	504	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	4.36	0.400	"	"	"	"	"	"
Lead	5.74	0.200	"	"	"	"	"	"
Nickel	2.86	0.400	"	"	"	"	"	"
Silver	0.0371	0.0200	"	"	"	"	"	"
Zinc	8.86	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **07/12/24 08:58**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHG0380	07/15/24	07/15/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **07/12/24 08:58**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	90.5	0.0500	mg/L dry	1	BHG0368	07/12/24	07/16/24	EPA 6020B	
Magnesium	19.5	0.0500	"	"	"	"	"	"	
Sodium	59.6	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/12/24 08:58**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.48	0.00100	units	1	BHG0414	07/16/24	07/16/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS16@2'
2407160-14 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/12/24 08:58**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	92.9		%	1	BHG0373	07/15/24	07/15/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/12/24 08:58**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.975	0.0100	mmhos/cm	1	BHG0369	07/12/24	07/15/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **07/12/24 08:58**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.26		pH Units	1	BHG0370	07/12/24	07/15/24	EPA 9045D	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS17@3'
2407160-15 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/12/24 09:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHG0364	07/12/24	07/13/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **07/12/24 09:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0277	69.2 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0422	105 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0409	102 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/12/24 09:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHG0366	07/12/24	07/13/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/12/24 09:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	5.04	40.3 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS17@3'
2407160-15 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/12/24 09:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHG0375	07/15/24	07/15/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **07/12/24 09:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0242	72.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0247	74.1 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/12/24 09:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHG0390	07/15/24	07/17/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/12/24 09:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS17@3'
2407160-15 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	1.47	0.200	mg/kg dry	1	BHG0384	07/15/24	07/15/24	EPA 6020B
Barium	459	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	4.58	0.400	"	"	"	"	"	"
Lead	5.71	0.200	"	"	"	"	"	"
Nickel	2.53	0.400	"	"	"	"	"	"
Silver	0.0317	0.0200	"	"	"	"	"	"
Zinc	9.71	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **07/12/24 09:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHG0380	07/15/24	07/15/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **07/12/24 09:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	20.9	0.0500	mg/L dry	1	BHG0368	07/12/24	07/16/24	EPA 6020B	
Magnesium	4.60	0.0500	"	"	"	"	"	"	
Sodium	13.5	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/12/24 09:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.697	0.00100	units	1	BHG0414	07/16/24	07/16/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS17@3'
2407160-15 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/12/24 09:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	97.5		%	1	BHG0373	07/15/24	07/15/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/12/24 09:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.549	0.0100	mmhos/cm	1	BHG0369	07/12/24	07/15/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **07/12/24 09:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.48		pH Units	1	BHG0370	07/12/24	07/15/24	EPA 9045D	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS18@1'
2407160-16 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHG0364	07/12/24	07/13/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0383	95.8 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0400	100 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0422	105 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	83	50	mg/kg	1	BHG0366	07/12/24	07/13/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	9.40	75.2 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad
Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS18@1'
2407160-16 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHG0375	07/15/24	07/15/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	0.00651	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	0.0125	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	0.0419	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	0.0344	0.00500	"	"	"	"	"	"	

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0214	64.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0196	58.7 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHG0390	07/15/24	07/17/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS18@1'
2407160-16 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.43	0.200	mg/kg dry	1	BHG0384	07/15/24	07/15/24	EPA 6020B	
Barium	539	0.400	"	"	"	"	"	"	
Cadmium	0.231	0.200	"	"	"	"	"	"	
Copper	5.80	0.400	"	"	"	"	"	"	
Lead	5.62	0.200	"	"	"	"	"	"	
Nickel	3.15	0.400	"	"	"	"	"	"	
Silver	0.0415	0.0200	"	"	"	"	"	"	
Zinc	11.5	0.400	"	"	"	"	"	"	
Selenium	0.360	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: 07/12/24 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHG0380	07/15/24	07/15/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: 07/12/24 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	244	0.0500	mg/L dry	1	BHG0368	07/12/24	07/16/24	EPA 6020B	
Magnesium	42.6	0.0500	"	"	"	"	"	"	
Sodium	151	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: 07/12/24 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.35	0.00100	units	1	BHG0414	07/16/24	07/16/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: 07/12/24 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS18@1'
2407160-16 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	90.3	%	1	BHG0373	07/15/24	07/15/24	Calculation

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	2.56	0.0100	mmhos/cm	1	BHG0369	07/12/24	07/15/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.90		pH Units	1	BHG0370	07/12/24	07/15/24	EPA 9045D	

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Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS19@2'
2407160-17 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHG0364	07/12/24	07/13/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0383	95.8 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0402	101 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0434	109 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHG0366	07/12/24	07/13/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	9.42	75.3 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS19@2'
2407160-17 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHG0375	07/15/24	07/15/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0271	81.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0248	74.3 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHG0390	07/15/24	07/17/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS19@2'
2407160-17 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	1.47	0.200	mg/kg dry	1	BHG0385	07/15/24	07/16/24	EPA 6020B
Barium	530	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	4.46	0.400	"	"	"	"	"	"
Lead	5.28	0.200	"	"	"	"	"	"
Nickel	2.61	0.400	"	"	"	"	"	"
Silver	0.0296	0.0200	"	"	"	"	"	"
Zinc	9.35	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHG0380	07/15/24	07/15/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	25.5	0.0500	mg/L dry	1	BHG0368	07/12/24	07/16/24	EPA 6020B	
Magnesium	5.97	0.0500	"	"	"	"	"	"	
Sodium	18.0	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.834	0.00100	units	1	BHG0414	07/16/24	07/16/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS19@2'
2407160-17 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	93.0		%	1	BHG0373	07/15/24	07/15/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.570	0.0100	mmhos/cm	1	BHG0369	07/12/24	07/15/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.46		pH Units	1	BHG0370	07/12/24	07/15/24	EPA 9045D	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS20@2'
2407160-18 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHG0364	07/12/24	07/13/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0364	91.1 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0412	103 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0427	107 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHG0366	07/12/24	07/13/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	9.74	78.0 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS20@2'
2407160-18 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHG0375	07/15/24	07/15/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0196	58.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0214	64.2 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHG0390	07/15/24	07/17/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS20@2'
2407160-18 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	1.39	0.200	mg/kg dry	1	BHG0385	07/15/24	07/16/24	EPA 6020B
Barium	352	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	4.31	0.400	"	"	"	"	"	"
Lead	6.62	0.200	"	"	"	"	"	"
Nickel	2.54	0.400	"	"	"	"	"	"
Silver	0.0303	0.0200	"	"	"	"	"	"
Zinc	8.39	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHG0380	07/15/24	07/15/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	22.8	0.0500	mg/L dry	1	BHG0368	07/12/24	07/16/24	EPA 6020B	
Magnesium	4.86	0.0500	"	"	"	"	"	"	
Sodium	15.9	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.789	0.00100	units	1	BHG0414	07/16/24	07/16/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
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Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS20@2'
2407160-18 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	94.7		%	1	BHG0373	07/15/24	07/15/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.573	0.0100	mmhos/cm	1	BHG0369	07/12/24	07/15/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.43		pH Units	1	BHG0370	07/12/24	07/15/24	EPA 9045D	

Summit Scientific

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS21@1'
2407160-19 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHG0364	07/12/24	07/13/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0312	78.1 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0409	102 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0485	121 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHG0366	07/12/24	07/13/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	4.84	38.7 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS21@1'
2407160-19 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHG0375	07/15/24	07/15/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	0.0115	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	0.0202	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	0.0156	0.00500	"	"	"	"	"	"	

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0311	93.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0234	70.3 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHG0390	07/15/24	07/17/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

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Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS21@1'
2407160-19 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	1.27	0.200	mg/kg dry	1	BHG0385	07/15/24	07/16/24	EPA 6020B
Barium	442	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	5.28	0.400	"	"	"	"	"	"
Lead	5.84	0.200	"	"	"	"	"	"
Nickel	2.32	0.400	"	"	"	"	"	"
Silver	0.0332	0.0200	"	"	"	"	"	"
Zinc	10.4	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHG0380	07/15/24	07/15/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	33.1	0.0500	mg/L dry	1	BHG0368	07/12/24	07/16/24	EPA 6020B	
Magnesium	8.00	0.0500	"	"	"	"	"	"	
Sodium	45.4	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.84	0.00100	units	1	BHG0414	07/16/24	07/16/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS21@1'
2407160-19 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	97.4		%	1	BHG0373	07/15/24	07/15/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.814	0.0100	mmhos/cm	1	BHG0369	07/12/24	07/15/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.56		pH Units	1	BHG0370	07/12/24	07/15/24	EPA 9045D	

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Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS22@1'
2407160-20 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHG0364	07/12/24	07/13/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0436	109 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0412	103 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0435	109 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHG0366	07/12/24	07/13/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	9.52	76.2 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Reported:
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SS22@1'
2407160-20 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHG0375	07/15/24	07/15/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0173	52.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0183	55.0 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHG0390	07/15/24	07/17/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS22@1'
2407160-20 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	1.41	0.200	mg/kg dry	1	BHG0385	07/15/24	07/16/24	EPA 6020B
Barium	645	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	4.88	0.400	"	"	"	"	"	"
Lead	4.88	0.200	"	"	"	"	"	"
Nickel	2.63	0.400	"	"	"	"	"	"
Silver	0.0313	0.0200	"	"	"	"	"	"
Zinc	8.47	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHG0380	07/15/24	07/15/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	15.0	0.0500	mg/L dry	1	BHG0368	07/12/24	07/16/24	EPA 6020B	
Magnesium	3.97	0.0500	"	"	"	"	"	"	
Sodium	18.1	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.07	0.00100	units	1	BHG0414	07/16/24	07/16/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Project Number: [none]
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07/17/24 11:20

SS22@1'
2407160-20 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	93.9		%	1	BHG0373	07/15/24	07/15/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.646	0.0100	mmhos/cm	1	BHG0369	07/12/24	07/15/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.37		pH Units	1	BHG0370	07/12/24	07/15/24	EPA 9045D	

Summit Scientific

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Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS23@1'
2407160-21 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHG0365	07/12/24	07/13/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0413	103 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0412	103 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0431	108 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHG0367	07/12/24	07/14/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	7.64	61.1 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS23@1'
2407160-21 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHG0375	07/15/24	07/15/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0184	55.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0212	63.5 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHG0390	07/15/24	07/17/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS23@1'
2407160-21 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	1.40	0.200	mg/kg dry	1	BHG0385	07/15/24	07/16/24	EPA 6020B
Barium	233	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	4.37	0.400	"	"	"	"	"	"
Lead	5.39	0.200	"	"	"	"	"	"
Nickel	2.77	0.400	"	"	"	"	"	"
Silver	0.0304	0.0200	"	"	"	"	"	"
Zinc	8.79	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHG0380	07/15/24	07/15/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	17.9	0.0500	mg/L dry	1	BHG0368	07/12/24	07/16/24	EPA 6020B	
Magnesium	4.33	0.0500	"	"	"	"	"	"	
Sodium	18.8	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.03	0.00100	units	1	BHG0414	07/16/24	07/16/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS23@1'
2407160-21 (Soil)

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Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	90.3		%	1	BHG0373	07/15/24	07/15/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.609	0.0100	mmhos/cm	1	BHG0369	07/12/24	07/15/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.46		pH Units	1	BHG0370	07/12/24	07/15/24	EPA 9045D	

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS24@1'
2407160-22 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHG0365	07/12/24	07/13/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0388	97.0 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0416	104 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0418	104 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHG0367	07/12/24	07/14/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	7.13	57.0 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS24@1'
2407160-22 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHG0375	07/15/24	07/15/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	0.00564	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0164	49.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0203	60.8 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHG0390	07/15/24	07/17/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS24@1'
2407160-22 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	1.39	0.200	mg/kg dry	1	BHG0385	07/15/24	07/16/24	EPA 6020B
Barium	652	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	5.29	0.400	"	"	"	"	"	"
Lead	6.61	0.200	"	"	"	"	"	"
Nickel	2.74	0.400	"	"	"	"	"	"
Silver	0.0346	0.0200	"	"	"	"	"	"
Zinc	13.0	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHG0380	07/15/24	07/15/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	166	0.0500	mg/L dry	1	BHG0368	07/12/24	07/16/24	EPA 6020B	
Magnesium	29.1	0.0500	"	"	"	"	"	"	
Sodium	118	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.22	0.00100	units	1	BHG0414	07/16/24	07/16/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Tasman Geosciences
6855 W. 119th Ave.
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Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS24@1'
2407160-22 (Soil)

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Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	91.3		%	1	BHG0373	07/15/24	07/15/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.59	0.0100	mmhos/cm	1	BHG0369	07/12/24	07/15/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.23		pH Units	1	BHG0370	07/12/24	07/15/24	EPA 9045D	

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Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS25@1'
2407160-23 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHG0365	07/12/24	07/13/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0387	96.7 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0404	101 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0411	103 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHG0367	07/12/24	07/14/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	11.7	93.4 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
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Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS25@1'
2407160-23 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHG0375	07/15/24	07/15/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	0.00698	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0236	70.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0232	69.5 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHG0390	07/15/24	07/17/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS25@1'
2407160-23 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	2.34	0.180	mg/kg dry	1	BHG0385	07/15/24	07/16/24	EPA 6020B
Barium	145	0.360	"	"	"	"	"	"
Cadmium	ND	0.180	"	"	"	"	"	"
Copper	3.98	0.360	"	"	"	"	"	"
Lead	5.73	0.180	"	"	"	"	"	"
Nickel	2.76	0.360	"	"	"	"	"	"
Silver	0.0345	0.0180	"	"	"	"	"	"
Zinc	12.0	0.360	"	"	"	"	"	"
Selenium	ND	0.234	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHG0380	07/15/24	07/15/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	202	0.0500	mg/L dry	1	BHG0368	07/12/24	07/16/24	EPA 6020B	
Magnesium	25.7	0.0500	"	"	"	"	"	"	
Sodium	57.5	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.01	0.00100	units	1	BHG0414	07/16/24	07/16/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Tasman Geosciences
6855 W. 119th Ave.
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Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS25@1'
2407160-23 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	90.7		%	1	BHG0373	07/15/24	07/15/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	2.93	0.0100	mmhos/cm	1	BHG0369	07/12/24	07/15/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.01		pH Units	1	BHG0370	07/12/24	07/15/24	EPA 9045D	

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS26@1'
2407160-24 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHG0365	07/12/24	07/13/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0482	121 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0400	100 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0423	106 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	220	50	mg/kg	1	BHG0367	07/12/24	07/14/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	12.3	98.6 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS26@1'
2407160-24 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHG0375	07/15/24	07/16/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	0.00513	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	0.00701	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	0.0219	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	0.0252	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	0.0282	0.00500	"	"	"	"	"	"	

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0292	87.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0244	73.3 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHG0390	07/15/24	07/17/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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SS26@1'
2407160-24 (Soil)

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Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.35	0.200	mg/kg dry	1	BHG0385	07/15/24	07/16/24	EPA 6020B	
Barium	681	0.400	"	"	"	"	"	"	
Cadmium	0.253	0.200	"	"	"	"	"	"	
Copper	5.44	0.400	"	"	"	"	"	"	
Lead	5.34	0.200	"	"	"	"	"	"	
Nickel	2.67	0.400	"	"	"	"	"	"	
Silver	0.0409	0.0200	"	"	"	"	"	"	
Zinc	9.73	0.400	"	"	"	"	"	"	
Selenium	0.343	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: 07/12/24 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHG0380	07/15/24	07/15/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: 07/12/24 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	59.0	0.0500	mg/L dry	1	BHG0368	07/12/24	07/16/24	EPA 6020B	
Magnesium	12.2	0.0500	"	"	"	"	"	"	
Sodium	56.9	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: 07/12/24 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.76	0.00100	units	1	BHG0414	07/16/24	07/16/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: 07/12/24 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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2407160-24 (Soil)

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Physical Parameters by APHA/ASTM/EPA Methods

% Solids	95.6	%	1	BHG0373	07/15/24	07/15/24	Calculation

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.03	0.0100	mmhos/cm	1	BHG0369	07/12/24	07/15/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.45		pH Units	1	BHG0370	07/12/24	07/15/24	EPA 9045D	

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Project: PDC - Merritt Wellhead Pad

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07/17/24 11:20

SS27@1'
2407160-25 (Soil)

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Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHG0365	07/12/24	07/13/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0362	90.6 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0396	98.9 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0394	98.4 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHG0367	07/12/24	07/14/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	8.37	67.0 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Project: PDC - Merritt Wellhead Pad

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Project Manager: Karen Olson

Reported:
07/17/24 11:20

SS27@1'
2407160-25 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHG0375	07/15/24	07/16/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	0.00557	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0326	97.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0277	83.0 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHG0390	07/15/24	07/17/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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Project Number: [none]
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07/17/24 11:20

SS27@1'
2407160-25 (Soil)

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Total Metals by EPA 6020B

Arsenic	1.56	0.200	mg/kg dry	1	BHG0385	07/15/24	07/16/24	EPA 6020B
Barium	818	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	4.70	0.400	"	"	"	"	"	"
Lead	5.44	0.200	"	"	"	"	"	"
Nickel	2.76	0.400	"	"	"	"	"	"
Silver	0.0305	0.0200	"	"	"	"	"	"
Zinc	9.42	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHG0380	07/15/24	07/15/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	65.2	0.0500	mg/L dry	1	BHG0368	07/12/24	07/16/24	EPA 6020B	
Magnesium	15.0	0.0500	"	"	"	"	"	"	
Sodium	35.2	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.02	0.00100	units	1	BHG0414	07/16/24	07/16/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Project Number: [none]
Project Manager: Karen Olson

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07/17/24 11:20

SS27@1'
2407160-25 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	89.6		%	1	BHG0373	07/15/24	07/15/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.909	0.0100	mmhos/cm	1	BHG0369	07/12/24	07/15/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **07/12/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.23		pH Units	1	BHG0370	07/12/24	07/15/24	EPA 9045D	

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Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0364 - EPA 5030 Soil MS

Blank (BHG0364-BLK1)

Prepared: 07/12/24 Analyzed: 07/13/24

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0314		"	0.0400		78.5	50-150			
Surrogate: Toluene-d8	0.0394		"	0.0400		98.4	50-150			
Surrogate: 4-Bromofluorobenzene	0.0412		"	0.0400		103	50-150			

LCS (BHG0364-BS1)

Prepared: 07/12/24 Analyzed: 07/13/24

Benzene	0.0992	0.0020	mg/kg	0.100		99.2	70-130			
Toluene	0.119	0.0050	"	0.100		119	70-130			
Ethylbenzene	0.108	0.0050	"	0.100		108	70-130			
m,p-Xylene	0.211	0.010	"	0.200		105	70-130			
o-Xylene	0.108	0.0050	"	0.100		108	70-130			
1,2,4-Trimethylbenzene	0.102	0.0050	"	0.100		102	70-130			
1,3,5-Trimethylbenzene	0.103	0.0050	"	0.100		103	70-130			
Naphthalene	0.0981	0.0038	"	0.100		98.1	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0411		"	0.0400		103	50-150			
Surrogate: Toluene-d8	0.0422		"	0.0400		105	50-150			
Surrogate: 4-Bromofluorobenzene	0.0405		"	0.0400		101	50-150			

Matrix Spike (BHG0364-MS1)

Source: 2407160-01

Prepared: 07/12/24 Analyzed: 07/13/24

Benzene	0.0709	0.0020	mg/kg	0.100	ND	70.9	70-130			
Toluene	0.0842	0.0050	"	0.100	ND	84.2	70-130			
Ethylbenzene	0.0773	0.0050	"	0.100	ND	77.3	70-130			
m,p-Xylene	0.153	0.010	"	0.200	ND	76.6	70-130			
o-Xylene	0.0786	0.0050	"	0.100	ND	78.6	70-130			
1,2,4-Trimethylbenzene	0.0995	0.0050	"	0.100	ND	99.5	70-130			
1,3,5-Trimethylbenzene	0.0999	0.0050	"	0.100	ND	99.9	70-130			
Naphthalene	0.120	0.0038	"	0.100	ND	120	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0367		"	0.0400		91.6	50-150			
Surrogate: Toluene-d8	0.0413		"	0.0400		103	50-150			
Surrogate: 4-Bromofluorobenzene	0.0399		"	0.0400		99.8	50-150			

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Project Number: [none]
Project Manager: Karen Olson

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07/17/24 11:20

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0364 - EPA 5030 Soil MS

Matrix Spike Dup (BHG0364-MSD1)

Source: 2407160-01

Prepared: 07/12/24 Analyzed: 07/13/24

Benzene	0.0721	0.0020	mg/kg	0.100	ND	72.1	70-130	1.72	30	
Toluene	0.0846	0.0050	"	0.100	ND	84.6	70-130	0.462	30	
Ethylbenzene	0.0759	0.0050	"	0.100	ND	75.9	70-130	1.84	30	
m,p-Xylene	0.151	0.010	"	0.200	ND	75.4	70-130	1.50	30	
o-Xylene	0.0767	0.0050	"	0.100	ND	76.7	70-130	2.43	30	
1,2,4-Trimethylbenzene	0.0964	0.0050	"	0.100	ND	96.4	70-130	3.25	30	
1,3,5-Trimethylbenzene	0.0972	0.0050	"	0.100	ND	97.2	70-130	2.74	30	
Naphthalene	0.116	0.0038	"	0.100	ND	116	70-130	3.75	30	
Surrogate: 1,2-Dichloroethane-d4	0.0375		"	0.0400		93.8	50-150			
Surrogate: Toluene-d8	0.0413		"	0.0400		103	50-150			
Surrogate: 4-Bromofluorobenzene	0.0389		"	0.0400		97.2	50-150			

Batch BHG0365 - EPA 5030 Soil MS

Blank (BHG0365-BLK1)

Prepared: 07/12/24 Analyzed: 07/13/24

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0411		"	0.0400		103	50-150			
Surrogate: Toluene-d8	0.0395		"	0.0400		98.7	50-150			
Surrogate: 4-Bromofluorobenzene	0.0408		"	0.0400		102	50-150			

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Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0365 - EPA 5030 Soil MS

LCS (BHG0365-BS1)

Prepared: 07/12/24 Analyzed: 07/13/24

Benzene	0.0929	0.0020	mg/kg	0.100		92.9	70-130			
Toluene	0.105	0.0050	"	0.100		105	70-130			
Ethylbenzene	0.104	0.0050	"	0.100		104	70-130			
m,p-Xylene	0.202	0.010	"	0.200		101	70-130			
o-Xylene	0.104	0.0050	"	0.100		104	70-130			
1,2,4-Trimethylbenzene	0.0967	0.0050	"	0.100		96.7	70-130			
1,3,5-Trimethylbenzene	0.0985	0.0050	"	0.100		98.5	70-130			
Naphthalene	0.0858	0.0038	"	0.100		85.8	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0395		"	0.0400		98.7	50-150			
Surrogate: Toluene-d8	0.0402		"	0.0400		101	50-150			
Surrogate: 4-Bromofluorobenzene	0.0400		"	0.0400		100	50-150			

Matrix Spike (BHG0365-MS1)

Source: 2407154-01

Prepared: 07/12/24 Analyzed: 07/13/24

Benzene	0.0744	0.0020	mg/kg	0.100	ND	74.4	70-130			
Toluene	0.0905	0.0050	"	0.100	ND	90.5	70-130			
Ethylbenzene	0.0815	0.0050	"	0.100	ND	81.5	70-130			
m,p-Xylene	0.164	0.010	"	0.200	ND	82.0	70-130			
o-Xylene	0.0831	0.0050	"	0.100	ND	83.1	70-130			
1,2,4-Trimethylbenzene	0.0734	0.0050	"	0.100	ND	73.4	70-130			
1,3,5-Trimethylbenzene	0.0748	0.0050	"	0.100	ND	74.8	70-130			
Naphthalene	0.0825	0.0038	"	0.100	ND	82.5	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0265		"	0.0400		66.2	50-150			
Surrogate: Toluene-d8	0.0403		"	0.0400		101	50-150			
Surrogate: 4-Bromofluorobenzene	0.0411		"	0.0400		103	50-150			

Matrix Spike Dup (BHG0365-MSD1)

Source: 2407154-01

Prepared: 07/12/24 Analyzed: 07/13/24

Benzene	0.0887	0.0020	mg/kg	0.100	ND	88.7	70-130	17.6	30	
Toluene	0.102	0.0050	"	0.100	ND	102	70-130	11.7	30	
Ethylbenzene	0.0923	0.0050	"	0.100	ND	92.3	70-130	12.4	30	
m,p-Xylene	0.185	0.010	"	0.200	ND	92.4	70-130	12.0	30	
o-Xylene	0.0929	0.0050	"	0.100	ND	92.9	70-130	11.2	30	
1,2,4-Trimethylbenzene	0.0868	0.0050	"	0.100	ND	86.8	70-130	16.7	30	
1,3,5-Trimethylbenzene	0.0907	0.0050	"	0.100	ND	90.7	70-130	19.1	30	
Naphthalene	0.0800	0.0038	"	0.100	ND	80.0	70-130	3.14	30	
Surrogate: 1,2-Dichloroethane-d4	0.0446		"	0.0400		112	50-150			
Surrogate: Toluene-d8	0.0413		"	0.0400		103	50-150			
Surrogate: 4-Bromofluorobenzene	0.0394		"	0.0400		98.6	50-150			

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0366 - EPA 3550A

Blank (BHG0366-BLK1)

Prepared: 07/12/24 Analyzed: 07/13/24

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: o-Terphenyl	12.9		"	12.5		103	30-150			

LCS (BHG0366-BS1)

Prepared: 07/12/24 Analyzed: 07/13/24

C10-C28 (DRO)	491	50	mg/kg	500		98.2	70-130			
Surrogate: o-Terphenyl	12.6		"	12.5		101	30-150			

Matrix Spike (BHG0366-MS1)

Source: 2407160-01

Prepared: 07/12/24 Analyzed: 07/13/24

C10-C28 (DRO)	554	50	mg/kg	500	11.6	109	70-130			
Surrogate: o-Terphenyl	5.92		"	12.5		47.3	30-150			

Matrix Spike Dup (BHG0366-MSD1)

Source: 2407160-01

Prepared: 07/12/24 Analyzed: 07/13/24

C10-C28 (DRO)	459	50	mg/kg	500	11.6	89.4	70-130	18.8	20	
Surrogate: o-Terphenyl	7.20		"	12.5		57.6	30-150			

Batch BHG0367 - EPA 3550A

Blank (BHG0367-BLK1)

Prepared: 07/12/24 Analyzed: 07/14/24

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: o-Terphenyl	10.6		"	12.5		85.1	30-150			

LCS (BHG0367-BS1)

Prepared: 07/12/24 Analyzed: 07/14/24

C10-C28 (DRO)	481	50	mg/kg	500		96.3	70-130			
Surrogate: o-Terphenyl	10.2		"	12.5		81.5	30-150			

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD	
		Limit	Units		Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0367 - EPA 3550A

Matrix Spike (BHG0367-MS1)		Source: 2407154-01			Prepared: 07/12/24 Analyzed: 07/14/24					
C10-C28 (DRO)	512	50	mg/kg	500	ND	102	70-130			
Surrogate: o-Terphenyl	7.64		"	12.5		61.2	30-150			
Matrix Spike Dup (BHG0367-MSD1)		Source: 2407154-01			Prepared: 07/12/24 Analyzed: 07/14/24					
C10-C28 (DRO)	477	50	mg/kg	500	ND	95.4	70-130	7.08	20	
Surrogate: o-Terphenyl	5.66		"	12.5		45.3	30-150			

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0374 - EPA 5030 Soil MS

Blank (BHG0374-BLK1)

Prepared & Analyzed: 07/15/24

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
Surrogate: 2-Methylnaphthalene-d10	0.0260		"	0.0333		78.1	40-150			
Surrogate: Fluoranthene-d10	0.0248		"	0.0333		74.3	40-150			

LCS (BHG0374-BS1)

Prepared & Analyzed: 07/15/24

Acenaphthene	0.0232	0.00500	mg/kg	0.0333		69.5	31-137			
Anthracene	0.0233	0.00500	"	0.0333		69.8	30-120			
Benzo (a) anthracene	0.0242	0.00500	"	0.0333		72.5	30-120			
Benzo (a) pyrene	0.0223	0.00500	"	0.0333		66.8	30-120			
Benzo (b) fluoranthene	0.0236	0.00500	"	0.0333		70.9	30-120			
Benzo (k) fluoranthene	0.0248	0.00500	"	0.0333		74.3	30-120			
Chrysene	0.0242	0.00500	"	0.0333		72.6	30-120			
Dibenz (a,h) anthracene	0.0192	0.00500	"	0.0333		57.6	30-120			
Fluoranthene	0.0241	0.00500	"	0.0333		72.4	30-120			
Fluorene	0.0232	0.00500	"	0.0333		69.7	30-120			
Indeno (1,2,3-cd) pyrene	0.0249	0.00500	"	0.0333		74.7	30-120			
Pyrene	0.0280	0.00500	"	0.0333		84.1	35-142			
1-Methylnaphthalene	0.0253	0.00500	"	0.0333		76.0	35-142			
2-Methylnaphthalene	0.0251	0.00500	"	0.0333		75.3	35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0252		"	0.0333		75.5	40-150			
Surrogate: Fluoranthene-d10	0.0251		"	0.0333		75.4	40-150			

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Reporting				Spike	Source	%REC			RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0374 - EPA 5030 Soil MS

Matrix Spike (BHG0374-MS1)

Source: 2407154-01

Prepared & Analyzed: 07/15/24

Acenaphthene	0.0173	0.00500	mg/kg	0.0333	ND	52.0	31-137		
Anthracene	0.0179	0.00500	"	0.0333	ND	53.6	30-120		
Benzo (a) anthracene	0.0181	0.00500	"	0.0333	ND	54.4	30-120		
Benzo (a) pyrene	0.0166	0.00500	"	0.0333	ND	49.8	30-120		
Benzo (b) fluoranthene	0.0163	0.00500	"	0.0333	ND	48.9	30-120		
Benzo (k) fluoranthene	0.0170	0.00500	"	0.0333	ND	51.0	30-120		
Chrysene	0.0183	0.00500	"	0.0333	ND	55.0	30-120		
Dibenz (a,h) anthracene	0.0168	0.00500	"	0.0333	ND	50.3	30-120		
Fluoranthene	0.0175	0.00500	"	0.0333	ND	52.5	30-120		
Fluorene	0.0175	0.00500	"	0.0333	ND	52.6	30-120		
Indeno (1,2,3-cd) pyrene	0.0164	0.00500	"	0.0333	ND	49.3	30-120		
Pyrene	0.0202	0.00500	"	0.0333	ND	60.6	35-142		
1-Methylnaphthalene	0.0182	0.00500	"	0.0333	ND	54.5	15-130		
2-Methylnaphthalene	0.0179	0.00500	"	0.0333	ND	53.8	15-130		
Surrogate: 2-Methylnaphthalene-d10	0.0186		"	0.0333		55.7	40-150		
Surrogate: Fluoranthene-d10	0.0183		"	0.0333		55.0	40-150		

Matrix Spike Dup (BHG0374-MSD1)

Source: 2407154-01

Prepared & Analyzed: 07/15/24

Acenaphthene	0.0192	0.00500	mg/kg	0.0333	ND	57.5	31-137	10.2	30
Anthracene	0.0188	0.00500	"	0.0333	ND	56.5	30-120	5.27	30
Benzo (a) anthracene	0.0191	0.00500	"	0.0333	ND	57.3	30-120	5.15	30
Benzo (a) pyrene	0.0174	0.00500	"	0.0333	ND	52.2	30-120	4.77	30
Benzo (b) fluoranthene	0.0174	0.00500	"	0.0333	ND	52.3	30-120	6.57	30
Benzo (k) fluoranthene	0.0180	0.00500	"	0.0333	ND	54.0	30-120	5.63	30
Chrysene	0.0195	0.00500	"	0.0333	ND	58.6	30-120	6.44	30
Dibenz (a,h) anthracene	0.0171	0.00500	"	0.0333	ND	51.3	30-120	1.98	30
Fluoranthene	0.0182	0.00500	"	0.0333	ND	54.5	30-120	3.85	30
Fluorene	0.0190	0.00500	"	0.0333	ND	57.0	30-120	8.01	30
Indeno (1,2,3-cd) pyrene	0.0186	0.00500	"	0.0333	ND	55.8	30-120	12.4	30
Pyrene	0.0213	0.00500	"	0.0333	ND	63.8	35-142	5.21	30
1-Methylnaphthalene	0.0231	0.00500	"	0.0333	ND	69.3	15-130	23.9	50
2-Methylnaphthalene	0.0215	0.00500	"	0.0333	ND	64.6	15-130	18.2	50
Surrogate: 2-Methylnaphthalene-d10	0.0230		"	0.0333		69.0	40-150		
Surrogate: Fluoranthene-d10	0.0190		"	0.0333		57.0	40-150		

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad
Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0375 - EPA 5030 Soil MS

Blank (BHG0375-BLK1)

Prepared & Analyzed: 07/15/24

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
Surrogate: 2-Methylnaphthalene-d10	0.0245		"	0.0333		73.5	40-150			
Surrogate: Fluoranthene-d10	0.0249		"	0.0333		74.8	40-150			

LCS (BHG0375-BS1)

Prepared & Analyzed: 07/15/24

Acenaphthene	0.0218	0.00500	mg/kg	0.0333		65.3	31-137			
Anthracene	0.0211	0.00500	"	0.0333		63.4	30-120			
Benzo (a) anthracene	0.0222	0.00500	"	0.0333		66.7	30-120			
Benzo (a) pyrene	0.0213	0.00500	"	0.0333		63.8	30-120			
Benzo (b) fluoranthene	0.0219	0.00500	"	0.0333		65.6	30-120			
Benzo (k) fluoranthene	0.0216	0.00500	"	0.0333		64.7	30-120			
Chrysene	0.0211	0.00500	"	0.0333		63.3	30-120			
Dibenz (a,h) anthracene	0.0202	0.00500	"	0.0333		60.7	30-120			
Fluoranthene	0.0218	0.00500	"	0.0333		65.3	30-120			
Fluorene	0.0220	0.00500	"	0.0333		66.0	30-120			
Indeno (1,2,3-cd) pyrene	0.0206	0.00500	"	0.0333		61.8	30-120			
Pyrene	0.0221	0.00500	"	0.0333		66.3	35-142			
1-Methylnaphthalene	0.0194	0.00500	"	0.0333		58.2	35-142			
2-Methylnaphthalene	0.0205	0.00500	"	0.0333		61.4	35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0207		"	0.0333		62.0	40-150			
Surrogate: Fluoranthene-d10	0.0229		"	0.0333		68.8	40-150			

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Reporting			Spike Level	Source		%REC		RPD	
	Result	Limit	Units		Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0375 - EPA 5030 Soil MS

Matrix Spike (BHG0375-MS1)

Source: 2407149-01

Prepared & Analyzed: 07/15/24

Acenaphthene	0.0163	0.00500	mg/kg	0.0333	ND	49.0	31-137		
Anthracene	0.0161	0.00500	"	0.0333	ND	48.3	30-120		
Benzo (a) anthracene	0.0165	0.00500	"	0.0333	ND	49.4	30-120		
Benzo (a) pyrene	0.0151	0.00500	"	0.0333	ND	45.4	30-120		
Benzo (b) fluoranthene	0.0151	0.00500	"	0.0333	ND	45.2	30-120		
Benzo (k) fluoranthene	0.0148	0.00500	"	0.0333	ND	44.4	30-120		
Chrysene	0.0154	0.00500	"	0.0333	ND	46.3	30-120		
Dibenz (a,h) anthracene	0.0145	0.00500	"	0.0333	ND	43.5	30-120		
Fluoranthene	0.0165	0.00500	"	0.0333	ND	49.6	30-120		
Fluorene	0.0167	0.00500	"	0.0333	ND	50.2	30-120		
Indeno (1,2,3-cd) pyrene	0.0150	0.00500	"	0.0333	ND	45.1	30-120		
Pyrene	0.0167	0.00500	"	0.0333	ND	50.1	35-142		
1-Methylnaphthalene	0.0194	0.00500	"	0.0333	ND	58.2	15-130		
2-Methylnaphthalene	0.0199	0.00500	"	0.0333	ND	59.7	15-130		
Surrogate: 2-Methylnaphthalene-d10	0.0176		"	0.0333		52.9	40-150		
Surrogate: Fluoranthene-d10	0.0173		"	0.0333		52.0	40-150		

Matrix Spike Dup (BHG0375-MSD1)

Source: 2407149-01

Prepared & Analyzed: 07/15/24

Acenaphthene	0.0175	0.00500	mg/kg	0.0333	ND	52.5	31-137	6.78	30
Anthracene	0.0174	0.00500	"	0.0333	ND	52.3	30-120	8.04	30
Benzo (a) anthracene	0.0188	0.00500	"	0.0333	ND	56.4	30-120	13.2	30
Benzo (a) pyrene	0.0175	0.00500	"	0.0333	ND	52.4	30-120	14.2	30
Benzo (b) fluoranthene	0.0179	0.00500	"	0.0333	ND	53.8	30-120	17.4	30
Benzo (k) fluoranthene	0.0175	0.00500	"	0.0333	ND	52.5	30-120	16.8	30
Chrysene	0.0178	0.00500	"	0.0333	ND	53.4	30-120	14.3	30
Dibenz (a,h) anthracene	0.0173	0.00500	"	0.0333	ND	52.0	30-120	17.8	30
Fluoranthene	0.0183	0.00500	"	0.0333	ND	54.8	30-120	9.95	30
Fluorene	0.0180	0.00500	"	0.0333	ND	54.0	30-120	7.18	30
Indeno (1,2,3-cd) pyrene	0.0174	0.00500	"	0.0333	ND	52.3	30-120	14.8	30
Pyrene	0.0190	0.00500	"	0.0333	ND	57.1	35-142	13.2	30
1-Methylnaphthalene	0.0201	0.00500	"	0.0333	ND	60.4	15-130	3.68	50
2-Methylnaphthalene	0.0213	0.00500	"	0.0333	ND	63.9	15-130	6.81	50
Surrogate: 2-Methylnaphthalene-d10	0.0188		"	0.0333		56.3	40-150		
Surrogate: Fluoranthene-d10	0.0193		"	0.0333		57.8	40-150		

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

Total Metals by EPA 6020B Hot Water Soluble Extraction - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0390 - EPA 3050B

Blank (BHG0390-BLK1)

Prepared: 07/15/24 Analyzed: 07/16/24

Boron ND 2.00 mg/L

LCS (BHG0390-BS1)

Prepared: 07/15/24 Analyzed: 07/16/24

Boron 5.28 2.00 mg/L 5.00 106 80-120

Duplicate (BHG0390-DUP1)

Source: 2407160-05

Prepared: 07/15/24 Analyzed: 07/16/24

Boron 0.176 2.00 mg/L 0.208 16.2 20

Matrix Spike (BHG0390-MS1)

Source: 2407160-05

Prepared: 07/15/24 Analyzed: 07/16/24

Boron 5.34 2.00 mg/L 4.99 0.208 103 75-125

Matrix Spike Dup (BHG0390-MSD1)

Source: 2407160-05

Prepared: 07/15/24 Analyzed: 07/16/24

Boron 5.61 2.00 mg/L 4.99 0.208 108 75-125 5.00 25

Batch BHG0416 - EPA 3050B

Blank (BHG0416-BLK1)

Prepared: 07/16/24 Analyzed: 07/17/24

Boron ND 2.00 mg/L

LCS (BHG0416-BS1)

Prepared: 07/16/24 Analyzed: 07/17/24

Boron 4.89 2.00 mg/L 5.00 97.9 80-120

Duplicate (BHG0416-DUP1)

Source: 2407160-01

Prepared: 07/16/24 Analyzed: 07/17/24

Boron 0.170 2.00 mg/L 0.182 6.82 20

Matrix Spike (BHG0416-MS1)

Source: 2407160-01

Prepared: 07/16/24 Analyzed: 07/17/24

Boron 5.06 2.00 mg/L 5.04 0.182 96.9 75-125

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

Total Metals by EPA 6020B Hot Water Soluble Extraction - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD	
		Limit	Units		Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0416 - EPA 3050B

Matrix Spike Dup (BHG0416-MSD1)				Source: 2407160-01		Prepared: 07/16/24 Analyzed: 07/17/24				
Boron	5.77	2.00	mg/L	5.04	0.182	111	75-125	13.0	25	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

Total Metals by EPA 6020B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0384 - EPA 3050B

Blank (BHG0384-BLK1)

Prepared & Analyzed: 07/15/24

Arsenic	ND	0.200	mg/kg wet
Barium	ND	0.400	"
Cadmium	ND	0.200	"
Copper	ND	0.400	"
Lead	ND	0.200	"
Nickel	ND	0.400	"
Silver	ND	0.0200	"
Zinc	ND	0.400	"
Selenium	ND	0.260	"

LCS (BHG0384-BS1)

Prepared & Analyzed: 07/15/24

Arsenic	43.0	0.200	mg/kg wet	40.0	108	80-120
Barium	38.3	0.400	"	40.0	95.8	80-120
Cadmium	1.93	0.200	"	2.00	96.6	80-120
Copper	39.1	0.400	"	40.0	97.7	80-120
Lead	18.6	0.200	"	20.0	93.1	80-120
Nickel	44.7	0.400	"	40.0	112	80-120
Silver	1.94	0.0200	"	2.00	96.8	80-120
Zinc	41.3	0.400	"	40.0	103	80-120
Selenium	4.04	0.260	"	4.00	101	80-120

Duplicate (BHG0384-DUP1)

Source: 2407154-01

Prepared & Analyzed: 07/15/24

Arsenic	0.673	0.200	mg/kg dry	0.589	13.2	20
Barium	17.5	0.400	"	17.5	0.283	20
Cadmium	0.0768	0.200	"	0.0695	9.88	20
Copper	3.41	0.400	"	3.54	3.67	20
Lead	4.48	0.200	"	5.06	12.3	20
Nickel	2.15	0.400	"	2.08	3.55	20
Silver	0.0126	0.0200	"	0.0155	20.0	20
Zinc	15.5	0.400	"	15.4	0.817	20
Selenium	ND	0.260	"	ND		20

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

Total Metals by EPA 6020B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0384 - EPA 3050B

Matrix Spike (BHG0384-MS1)			Source: 2407154-01		Prepared & Analyzed: 07/15/24					
Arsenic	10.5	0.200	mg/kg dry	46.1	0.589	21.5	75-125			QM-05
Barium	63.0	0.400	"	46.1	17.5	98.6	75-125			
Cadmium	2.28	0.200	"	2.31	0.0695	96.0	75-125			
Copper	30.0	0.400	"	46.1	3.54	57.5	75-125			QM-05
Lead	24.3	0.200	"	23.1	5.06	83.4	75-125			
Nickel	12.8	0.400	"	46.1	2.08	23.3	75-125			QM-05
Silver	2.12	0.0200	"	2.31	0.0155	91.4	75-125			
Zinc	27.3	0.400	"	46.1	15.4	25.9	75-125			QM-05
Selenium	3.79	0.260	"	4.61	ND	82.1	75-125			

Matrix Spike Dup (BHG0384-MSD1)			Source: 2407154-01		Prepared & Analyzed: 07/15/24					
Arsenic	11.5	0.200	mg/kg dry	49.8	0.589	22.0	75-125	9.35	25	QM-05
Barium	73.5	0.400	"	49.8	17.5	112	75-125	15.4	25	
Cadmium	2.54	0.200	"	2.49	0.0695	99.4	75-125	10.8	25	
Copper	31.6	0.400	"	49.8	3.54	56.4	75-125	5.16	25	QM-05
Lead	27.0	0.200	"	24.9	5.06	88.0	75-125	10.4	25	
Nickel	13.8	0.400	"	49.8	2.08	23.5	75-125	7.09	25	QM-05
Silver	2.42	0.0200	"	2.49	0.0155	96.7	75-125	13.2	25	
Zinc	28.2	0.400	"	49.8	15.4	25.7	75-125	3.05	25	QM-05
Selenium	3.89	0.260	"	4.98	ND	78.2	75-125	2.81	25	

Post Spike (BHG0384-PS1)			Source: 2407154-01		Prepared & Analyzed: 07/15/24					
Arsenic	24.7		ug/l	100	1.17	23.5	75-125			QM-01
Barium	139		"	100	35.0	104	75-125			
Cadmium	4.90		"	5.00	0.139	95.3	75-125			
Copper	71.9		"	100	7.06	64.8	75-125			QM-01
Lead	52.7		"	50.0	10.1	85.3	75-125			
Nickel	28.7		"	100	4.14	24.6	75-125			QM-01
Silver	4.90		"	5.00	0.0308	97.4	75-125			
Zinc	56.3		"	100	30.7	25.6	75-125			QM-01
Selenium	8.90		"	10.0	0.101	88.0	75-125			

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

Total Metals by EPA 6020B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0385 - EPA 3050B

Blank (BHG0385-BLK1)

Prepared & Analyzed: 07/15/24

Arsenic	ND	0.200	mg/kg wet
Barium	ND	0.400	"
Cadmium	ND	0.200	"
Copper	ND	0.400	"
Lead	ND	0.200	"
Nickel	ND	0.400	"
Silver	ND	0.0200	"
Zinc	ND	0.400	"
Selenium	ND	0.260	"

LCS (BHG0385-BS1)

Prepared & Analyzed: 07/15/24

Arsenic	44.2	0.200	mg/kg wet	40.0	110	80-120
Barium	36.3	0.400	"	40.0	90.8	80-120
Cadmium	1.77	0.200	"	2.00	88.5	80-120
Copper	40.3	0.400	"	40.0	101	80-120
Lead	17.9	0.200	"	20.0	89.6	80-120
Nickel	46.4	0.400	"	40.0	116	80-120
Silver	1.83	0.0200	"	2.00	91.4	80-120
Zinc	42.9	0.400	"	40.0	107	80-120
Selenium	3.97	0.260	"	4.00	99.3	80-120

Duplicate (BHG0385-DUP1)

Source: 2405229-01

Prepared & Analyzed: 07/15/24

Arsenic	0.315	0.200	mg/kg dry	0.342	8.23	20
Barium	34.6	0.400	"	37.5	8.16	20
Cadmium	0.0504	0.200	"	0.0549	8.70	20
Copper	2.10	0.400	"	2.05	2.40	20
Lead	3.08	0.200	"	3.16	2.68	20
Nickel	1.20	0.400	"	1.26	4.53	20
Silver	0.0108	0.0200	"	0.00916	16.7	20
Zinc	4.94	0.400	"	5.21	5.26	20
Selenium	ND	0.260	"	ND		20

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

Total Metals by EPA 6020B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0385 - EPA 3050B

Matrix Spike (BHG0385-MS1)			Source: 2405229-01		Prepared & Analyzed: 07/15/24						
Arsenic	17.4	0.200	mg/kg dry	43.2	0.342	39.4	75-125				QM-05
Barium	69.0	0.400	"	43.2	37.5	72.9	75-125				QM-07
Cadmium	1.95	0.200	"	2.16	0.0549	87.7	75-125				
Copper	33.1	0.400	"	43.2	2.05	71.9	75-125				QM-07
Lead	20.7	0.200	"	21.6	3.16	81.0	75-125				
Nickel	19.0	0.400	"	43.2	1.26	41.1	75-125				QM-05
Silver	1.90	0.0200	"	2.16	0.00916	87.4	75-125				
Zinc	21.6	0.400	"	43.2	5.21	37.9	75-125				QM-05
Selenium	3.58	0.260	"	4.32	ND	82.9	75-125				

Matrix Spike Dup (BHG0385-MSD1)			Source: 2405229-01		Prepared & Analyzed: 07/15/24						
Arsenic	18.2	0.200	mg/kg dry	43.2	0.342	41.4	75-125	4.89	25		QM-05
Barium	79.0	0.400	"	43.2	37.5	96.0	75-125	13.4	25		
Cadmium	2.02	0.200	"	2.16	0.0549	91.0	75-125	3.61	25		
Copper	35.7	0.400	"	43.2	2.05	78.0	75-125	7.65	25		
Lead	21.6	0.200	"	21.6	3.16	85.4	75-125	4.50	25		
Nickel	19.9	0.400	"	43.2	1.26	43.3	75-125	4.80	25		QM-05
Silver	1.97	0.0200	"	2.16	0.00916	90.7	75-125	3.69	25		
Zinc	23.0	0.400	"	43.2	5.21	41.2	75-125	6.53	25		QM-05
Selenium	3.74	0.260	"	4.32	ND	86.6	75-125	4.28	25		

Post Spike (BHG0385-PS1)			Source: 2405229-01		Prepared: 07/15/24 Analyzed: 07/16/24						
Arsenic	42.4		ug/l	100	0.750	41.6	75-125				QM-01
Barium	191		"	100	82.2	109	75-125				
Cadmium	5.02		"	5.00	0.120	98.0	75-125				
Copper	80.7		"	100	4.50	76.2	75-125				
Lead	52.2		"	50.0	6.94	90.5	75-125				
Nickel	45.4		"	100	2.76	42.6	75-125				QM-01
Silver	4.88		"	5.00	0.0201	97.2	75-125				
Zinc	52.1		"	100	11.4	40.7	75-125				QM-01
Selenium	9.14		"	10.0	0.0365	91.0	75-125				

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

Hexavalent Chromium by EPA Method 7196 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0379 - 3060A Mod

Blank (BHG0379-BLK1)				Prepared & Analyzed: 07/15/24						
Chromium, Hexavalent	ND	0.30	mg/kg wet							
LCS (BHG0379-BS1)				Prepared & Analyzed: 07/15/24						
Chromium, Hexavalent	25.2	0.30	mg/kg wet	25.0		101	80-120			
Duplicate (BHG0379-DUP1)				Source: 2407143-01		Prepared & Analyzed: 07/15/24				
Chromium, Hexavalent	ND	0.30	mg/kg dry		ND				20	
Matrix Spike (BHG0379-MS1)				Source: 2407143-01		Prepared & Analyzed: 07/15/24				
Chromium, Hexavalent	28.3	0.30	mg/kg dry	29.2	ND	96.8	75-125			
Matrix Spike Dup (BHG0379-MSD1)				Source: 2407143-01		Prepared & Analyzed: 07/15/24				
Chromium, Hexavalent	28.7	0.30	mg/kg dry	29.2	ND	98.2	75-125	1.44	20	

Batch BHG0380 - 3060A Mod

Blank (BHG0380-BLK1)				Prepared & Analyzed: 07/15/24						
Chromium, Hexavalent	ND	0.30	mg/kg wet							
LCS (BHG0380-BS1)				Prepared & Analyzed: 07/15/24						
Chromium, Hexavalent	25.4	0.30	mg/kg wet	25.0		102	80-120			
Duplicate (BHG0380-DUP1)				Source: 2407160-06		Prepared & Analyzed: 07/15/24				
Chromium, Hexavalent	ND	0.30	mg/kg dry		ND				20	
Matrix Spike (BHG0380-MS1)				Source: 2407160-06		Prepared & Analyzed: 07/15/24				
Chromium, Hexavalent	26.3	0.30	mg/kg dry	27.0	ND	97.4	75-125			

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

Hexavalent Chromium by EPA Method 7196 - Quality Control
Summit Scientific

Reporting				Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0380 - 3060A Mod

Matrix Spike Dup (BHG0380-MSD1)		Source: 2407160-06			Prepared & Analyzed: 07/15/24						
Chromium, Hexavalent		26.7	0.30	mg/kg dry	27.0	ND	99.0	75-125	1.63	20	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD	
		Limit	Units		Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0368 - General Preparation

Blank (BHG0368-BLK1)

Prepared: 07/12/24 Analyzed: 07/16/24

Calcium	ND	0.0500	mg/L wet
Magnesium	ND	0.0500	"
Sodium	ND	0.0500	"

LCS (BHG0368-BS1)

Prepared: 07/12/24 Analyzed: 07/16/24

Calcium	5.43	0.0500	mg/L wet	5.00	109	70-130
Magnesium	5.51	0.0500	"	5.00	110	70-130
Sodium	5.65	0.0500	"	5.00	113	70-130

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD	
		Limit	Units		Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0373 - General Preparation

Duplicate (BHG0373-DUP1)		Source: 2405229-01			Prepared & Analyzed: 07/15/24					
% Solids	88.2		%		87.7		0.618		20	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD	
		Limit	Units		Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0369 - General Preparation

Blank (BHG0369-BLK1)

Prepared: 07/12/24 Analyzed: 07/15/24

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BHG0369-BS1)

Prepared: 07/12/24 Analyzed: 07/15/24

Specific Conductance (EC) 0.151 0.0100 mmhos/cm 0.150 101 95-105

Duplicate (BHG0369-DUP1)

Source: 2407160-01

Prepared: 07/12/24 Analyzed: 07/15/24

Specific Conductance (EC) 0.474 0.0100 mmhos/cm 0.482 1.69 20

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source Result	%REC		RPD		Notes
		Limit	Units			%REC	Limits	RPD	Limit	

Batch BHG0370 - General Preparation

LCS (BHG0370-BS1)

Prepared: 07/12/24 Analyzed: 07/15/24

pH	9.13	pH Units	9.18	99.5	95-105

Duplicate (BHG0370-DUP1)

Source: 2407160-01

Prepared: 07/12/24 Analyzed: 07/15/24

pH	8.44	pH Units	8.42	0.237	20

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/17/24 11:20

Notes and Definitions

QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
QM-05	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The associated LCS and/or LCSD were within acceptance limits, therefore the data are considered valid.
QM-01	The spike recovery for this QC sample is outside of established control limits due to sample matrix interference.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

July 18, 2024

Karen Olson

Tasman Geosciences

6855 W. 119th Ave.

Broomfield, CO 80020

RE: PDC - Merritt Wellhead Pad

Work Order #2407176

Enclosed are the results of analyses for samples received by Summit Scientific on 07/15/24 18:27. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Natalie Tessier". The signature is fluid and cursive, with the first name being more prominent.

Natalie Tessier For Paul Shrewsbury

President



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/18/24 11:43

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS28@1'	2407176-01	Soil	07/15/24 00:00	07/15/24 18:27
SS29@1'	2407176-02	Soil	07/15/24 00:00	07/15/24 18:27
SS30@1.5'	2407176-03	Soil	07/15/24 00:00	07/15/24 18:27
SS31@1.5'	2407176-04	Soil	07/15/24 00:00	07/15/24 18:27
SS32@1.5'	2407176-05	Soil	07/15/24 00:00	07/15/24 18:27

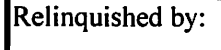
Case Narrative

Client requested samples 3-5 be renamed on 7/18/24.

This is a revision of the report originally sent on 7/17/24 at 17:31 MT.

Client: PDC/Tasman		Send Data To: Project Manager: Karen Olson		Send Invoice To: Company: PDC Energy	
Address: 6855 W 119th Ave		E-Mail: karen.olson@chevron.com		Project Name/Location:	
City/State/Zip: Broomfield / CO / 80020				AFE#:	
Phone: 970-214-7901		Project Name: Merritt Wellhead Pad		PO/Billing Codes:	
Sampler Name: Lillian Buck		Project Number:		Contact: Karen Olson	

					Preservative				Matrix			Analysis Requested								Special Instructions	
ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO3	None	Other _____	Water	Soil	Air-Canister #	Other _____	VOC - 915	TPH - 915	PAH - 915	pH, EC, SAR	Boron - HWS	Metals - 915	HOLD		
1	SS28 e1'	7/15/24		3			X			X			X	X	X	X	X	X			* VOC + TPH: SAME DAY ** Everything else: 48hr
2	SS29 e1'																				pH, EC, SAR by saturated paste
3	SS30 e1'																				
4	SS31 e1'																				
5	SS32 e1'																				
6																					
7																					
8																					
9																					
10																					
11																					
12																					
13																					
14																					
15																					

Relinquished by:  7/15/24 1410	Received by: Tasman Lockbox 7/15/24 1410	TAT Business Days	Field DO	Notes:
Relinquished by:  7/15/24 1327	Received by:  7/15/24 1327	Same Day ☒	Field EC	
		1 Day ☐	Field ORP	
		2 Days ☐	Field pH	
		3 Days ☐	Field Temp.	
Relinquished by:  7/15/24 1327	Received by:  7/15/24 1327	Standard ☐	Field Turb.	
Temperature Upon Receipt: 84	Corrected Temperature: 8	IR gun #: 1	HNO3 lot #:	

S₂

Sample Receipt Checklist

S2 Work Order# 2407176Client: Poc / CasmanClient Project ID: Memitt wellhead PadShipped Via: H.D./P.U./FedEx/UPS/USPS/Other ☐

Airbill #: _____

☐	☒	☐	☐	☐

Matrix (Check all that apply)

Air

☐

Soil/Solid

☒

Water

☐

Other

☐

Temp (°C)

8.4

Thermometer #

1

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	☒	☐	☐	<u>On 2 CE</u>
If custody seals are present, are they intact? ⁽¹⁾	☒	☐	☐	
Are samples due within 48 hours present?	☒	☐	☐	<u>Same day</u>
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe ²⁺), Hexavalent Chromium (Cr ⁶⁺ , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	☐	☒	☐	
Is a chain-of-custody (COC) form present and filled out Completely? ⁽¹⁾	☒	☐	☐	
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	☒	☐	☐	
Were all samples received intact? ⁽¹⁾	☒	☐	☐	
Was adequate sample volume provided? ⁽¹⁾	☒	☐	☐	
Does the COC agree with the number and type of sample bottles received? ⁽¹⁾	☒	☐	☐	
Do the sample IDs on the bottle labels match the COC? ⁽¹⁾	☒	☐	☐	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	☐	☐	☒	
Are samples preserved that require preservation (excluding cooling)? ⁽¹⁾ Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	☐	☐	☒	
If samples are acid preserved for metals, is the pH ≤ 2? ⁽¹⁾ Record the pH in Comments.	☐	☐	☒	
If dissolved metals are requested, were samples field filtered?	☐	☐	☒	
Additional Comments (if any):				
⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.				

AS
Custodian Printed Name

7/15/24
Date/Time



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/18/24 11:43

SS28@1'
2407176-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHG0406	07/15/24	07/15/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **07/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0415	104 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0400	100 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0404	101 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	120	50	mg/kg	1	BHG0407	07/15/24	07/15/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	8.06	64.5 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/18/24 11:43

SS28@1'
2407176-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHG0410	07/16/24	07/16/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	0.00883	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	0.0154	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	0.0178	0.00500	"	"	"	"	"	"	

Date Sampled: **07/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0351	105 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0201	60.3 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHG0416	07/16/24	07/17/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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6855 W. 119th Ave.
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Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/18/24 11:43

SS28@1'
2407176-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	4.45	0.200	mg/kg dry	1	BHG0415	07/16/24	07/17/24	EPA 6020B
Barium	471	0.400	"	"	"	"	"	"
Cadmium	0.251	0.200	"	"	"	"	"	"
Copper	5.19	0.400	"	"	"	"	"	"
Lead	6.21	0.200	"	"	"	"	"	"
Nickel	5.22	0.400	"	"	"	"	"	"
Silver	0.0400	0.0200	"	"	"	"	"	"
Zinc	22.8	0.400	"	"	"	"	"	"
Selenium	0.335	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **07/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHG0419	07/16/24	07/16/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **07/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	502	0.0500	mg/L dry	1	BHG0392	07/15/24	07/16/24	EPA 6020B	
Magnesium	78.4	0.0500	"	"	"	"	"	"	
Sodium	223	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.44	0.00100	units	1	BHG0443	07/17/24	07/17/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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Tasman Geosciences
6855 W. 119th Ave.
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Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/18/24 11:43

SS28@1'
2407176-01 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	93.0	%	1	BHG0418	07/16/24	07/16/24	Calculation

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	3.65	0.0100	mmhos/cm	1	BHG0395	07/15/24	07/16/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **07/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.93		pH Units	1	BHG0394	07/15/24	07/16/24	EPA 9045D	

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Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/18/24 11:43

SS29@1'
2407176-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/15/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHG0406	07/15/24	07/15/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **07/15/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0508	127 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0413	103 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0443	111 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/15/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHG0407	07/15/24	07/15/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/15/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	9.55	76.4 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
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Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/18/24 11:43

SS29@1'
2407176-02 (Soil)

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PAH by EPA Method 8270D SIM

Date Sampled: **07/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHG0410	07/16/24	07/16/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	0.00919	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	0.00900	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	0.0125	0.00500	"	"	"	"	"	"	

Date Sampled: **07/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0282	84.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0192	57.6 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHG0416	07/16/24	07/17/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/18/24 11:43

SS29@1'
2407176-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	4.50	0.200	mg/kg dry	1	BHG0415	07/16/24	07/17/24	EPA 6020B	
Barium	457	0.400	"	"	"	"	"	"	
Cadmium	0.253	0.200	"	"	"	"	"	"	
Copper	5.17	0.400	"	"	"	"	"	"	
Lead	6.62	0.200	"	"	"	"	"	"	
Nickel	5.21	0.400	"	"	"	"	"	"	
Silver	0.0451	0.0200	"	"	"	"	"	"	
Zinc	23.0	0.400	"	"	"	"	"	"	
Selenium	0.312	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: 07/15/24 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHG0419	07/16/24	07/16/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: 07/15/24 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	536	0.0500	mg/L dry	1	BHG0392	07/15/24	07/16/24	EPA 6020B	
Magnesium	86.5	0.0500	"	"	"	"	"	"	
Sodium	193	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: 07/15/24 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.04	0.00100	units	1	BHG0443	07/17/24	07/17/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: 07/15/24 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/18/24 11:43

SS29@1'
2407176-02 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	90.3	%	1	BHG0418	07/16/24	07/16/24	Calculation

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	3.50	0.0100	mmhos/cm	1	BHG0395	07/15/24	07/16/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **07/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.86		pH Units	1	BHG0394	07/15/24	07/16/24	EPA 9045D	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/18/24 11:43

SS30@1.5'
2407176-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/15/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHG0406	07/15/24	07/15/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **07/15/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0500	125 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0406	102 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0442	111 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/15/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHG0407	07/15/24	07/15/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/15/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	10.0	80.2 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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6855 W. 119th Ave.
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Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/18/24 11:43

SS30@1.5'
2407176-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHG0410	07/16/24	07/16/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **07/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0239	71.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0208	62.3 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHG0416	07/16/24	07/17/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/18/24 11:43

SS30@1.5'
2407176-03 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	4.95	0.200	mg/kg dry	1	BHG0415	07/16/24	07/17/24	EPA 6020B
Barium	257	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	3.27	0.400	"	"	"	"	"	"
Lead	6.37	0.200	"	"	"	"	"	"
Nickel	4.46	0.400	"	"	"	"	"	"
Silver	0.0260	0.0200	"	"	"	"	"	"
Zinc	22.7	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **07/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHG0419	07/16/24	07/16/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **07/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	228	0.0500	mg/L dry	1	BHG0392	07/15/24	07/16/24	EPA 6020B	
Magnesium	45.4	0.0500	"	"	"	"	"	"	
Sodium	132	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.09	0.00100	units	1	BHG0443	07/17/24	07/17/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/18/24 11:43

SS30@1.5'
2407176-03 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	89.0		%	1	BHG0418	07/16/24	07/16/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.83	0.0100	mmhos/cm	1	BHG0395	07/15/24	07/16/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **07/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.87		pH Units	1	BHG0394	07/15/24	07/16/24	EPA 9045D	

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6855 W. 119th Ave.
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Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/18/24 11:43

SS31@1.5'
2407176-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/15/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHG0406	07/15/24	07/15/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **07/15/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0437	109 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0408	102 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0427	107 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/15/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHG0407	07/15/24	07/15/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/15/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	8.80	70.4 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/18/24 11:43

SS31@1.5'
2407176-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHG0410	07/16/24	07/16/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **07/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0234	70.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0177	53.2 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHG0416	07/16/24	07/17/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/18/24 11:43

SS31@1.5'
2407176-04 (Soil)

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Total Metals by EPA 6020B

Arsenic	4.02	0.200	mg/kg dry	1	BHG0415	07/16/24	07/17/24	EPA 6020B
Barium	128	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	3.94	0.400	"	"	"	"	"	"
Lead	6.57	0.200	"	"	"	"	"	"
Nickel	5.66	0.400	"	"	"	"	"	"
Silver	0.0230	0.0200	"	"	"	"	"	"
Zinc	25.8	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **07/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHG0419	07/16/24	07/16/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **07/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	564	0.0500	mg/L dry	1	BHG0392	07/15/24	07/16/24	EPA 6020B	
Magnesium	56.5	0.0500	"	"	"	"	"	"	
Sodium	121	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.30	0.00100	units	1	BHG0443	07/17/24	07/17/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Tasman Geosciences
6855 W. 119th Ave.
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Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/18/24 11:43

SS31@1.5'
2407176-04 (Soil)

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Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	90.1		%	1	BHG0418	07/16/24	07/16/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	3.12	0.0100	mmhos/cm	1	BHG0395	07/15/24	07/16/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **07/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.91		pH Units	1	BHG0394	07/15/24	07/16/24	EPA 9045D	

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Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/18/24 11:43

SS32@1.5'
2407176-05 (Soil)

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Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/15/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHG0406	07/15/24	07/15/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **07/15/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0424	106 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0394	98.6 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0432	108 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/15/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHG0407	07/15/24	07/15/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/15/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	9.91	79.3 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/18/24 11:43

SS32@1.5'
2407176-05 (Soil)

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PAH by EPA Method 8270D SIM

Date Sampled: **07/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHG0410	07/16/24	07/16/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **07/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0266	79.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0222	66.6 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHG0416	07/16/24	07/17/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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6855 W. 119th Ave.
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Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/18/24 11:43

SS32@1.5'
2407176-05 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	4.80	0.200	mg/kg dry	1	BHG0415	07/16/24	07/17/24	EPA 6020B
Barium	194	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	3.83	0.400	"	"	"	"	"	"
Lead	6.70	0.200	"	"	"	"	"	"
Nickel	5.08	0.400	"	"	"	"	"	"
Silver	0.0246	0.0200	"	"	"	"	"	"
Zinc	22.0	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **07/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHG0419	07/16/24	07/16/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **07/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	195	0.0500	mg/L dry	1	BHG0392	07/15/24	07/16/24	EPA 6020B	
Magnesium	39.1	0.0500	"	"	"	"	"	"	
Sodium	137	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.34	0.00100	units	1	BHG0443	07/17/24	07/17/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/18/24 11:43

SS32@1.5'
2407176-05 (Soil)

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Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	87.7		%	1	BHG0418	07/16/24	07/16/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.61	0.0100	mmhos/cm	1	BHG0395	07/15/24	07/16/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **07/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.96		pH Units	1	BHG0394	07/15/24	07/16/24	EPA 9045D	

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/18/24 11:43

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0406 - EPA 5030 Soil MS

Blank (BHG0406-BLK1)

Prepared: 07/15/24 Analyzed: 07/16/24

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0428		"	0.0400		107	50-150			
Surrogate: Toluene-d8	0.0412		"	0.0400		103	50-150			
Surrogate: 4-Bromofluorobenzene	0.0424		"	0.0400		106	50-150			

LCS (BHG0406-BS1)

Prepared: 07/15/24 Analyzed: 07/16/24

Benzene	0.0845	0.0020	mg/kg	0.100		84.5	70-130			
Toluene	0.0994	0.0050	"	0.100		99.4	70-130			
Ethylbenzene	0.0982	0.0050	"	0.100		98.2	70-130			
m,p-Xylene	0.196	0.010	"	0.200		98.1	70-130			
o-Xylene	0.0976	0.0050	"	0.100		97.6	70-130			
1,2,4-Trimethylbenzene	0.0970	0.0050	"	0.100		97.0	70-130			
1,3,5-Trimethylbenzene	0.0960	0.0050	"	0.100		96.0	70-130			
Naphthalene	0.0755	0.0038	"	0.100		75.5	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0396		"	0.0400		99.0	50-150			
Surrogate: Toluene-d8	0.0409		"	0.0400		102	50-150			
Surrogate: 4-Bromofluorobenzene	0.0400		"	0.0400		100	50-150			

Matrix Spike (BHG0406-MS1)

Source: 2407176-01

Prepared: 07/15/24 Analyzed: 07/16/24

Benzene	0.0858	0.0020	mg/kg	0.100	ND	85.8	70-130			
Toluene	0.0994	0.0050	"	0.100	ND	99.4	70-130			
Ethylbenzene	0.0813	0.0050	"	0.100	ND	81.3	70-130			
m,p-Xylene	0.168	0.010	"	0.200	ND	83.8	70-130			
o-Xylene	0.0830	0.0050	"	0.100	ND	83.0	70-130			
1,2,4-Trimethylbenzene	0.0738	0.0050	"	0.100	ND	73.8	70-130			
1,3,5-Trimethylbenzene	0.0744	0.0050	"	0.100	ND	74.4	70-130			
Naphthalene	0.0669	0.0038	"	0.100	ND	66.9	70-130			QM-01
Surrogate: 1,2-Dichloroethane-d4	0.0456		"	0.0400		114	50-150			
Surrogate: Toluene-d8	0.0430		"	0.0400		107	50-150			
Surrogate: 4-Bromofluorobenzene	0.0406		"	0.0400		101	50-150			

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/18/24 11:43

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0406 - EPA 5030 Soil MS

Matrix Spike Dup (BHG0406-MSD1)		Source: 2407176-01			Prepared: 07/15/24 Analyzed: 07/16/24					
Benzene	0.0824	0.0020	mg/kg	0.100	ND	82.4	70-130	3.99	30	
Toluene	0.102	0.0050	"	0.100	ND	102	70-130	2.77	30	
Ethylbenzene	0.0830	0.0050	"	0.100	ND	83.0	70-130	2.01	30	
m,p-Xylene	0.170	0.010	"	0.200	ND	85.1	70-130	1.54	30	
o-Xylene	0.0847	0.0050	"	0.100	ND	84.7	70-130	2.04	30	
1,2,4-Trimethylbenzene	0.0764	0.0050	"	0.100	ND	76.4	70-130	3.36	30	
1,3,5-Trimethylbenzene	0.0755	0.0050	"	0.100	ND	75.5	70-130	1.44	30	
Naphthalene	0.0654	0.0038	"	0.100	ND	65.4	70-130	2.27	30	QM-01
Surrogate: 1,2-Dichloroethane-d4	0.0416		"	0.0400		104	50-150			
Surrogate: Toluene-d8	0.0448		"	0.0400		112	50-150			
Surrogate: 4-Bromofluorobenzene	0.0411		"	0.0400		103	50-150			

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/18/24 11:43

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0407 - EPA 3550A

Blank (BHG0407-BLK1)

Prepared: 07/15/24 Analyzed: 07/16/24

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: o-Terphenyl	13.6		"	12.5		109	30-150			

LCS (BHG0407-BS1)

Prepared: 07/15/24 Analyzed: 07/16/24

C10-C28 (DRO)	503	50	mg/kg	500		101	70-130			
Surrogate: o-Terphenyl	13.2		"	12.5		105	30-150			

Matrix Spike (BHG0407-MS1)

Source: 2407176-01

Prepared: 07/15/24 Analyzed: 07/16/24

C10-C28 (DRO)	527	50	mg/kg	500	117	82.1	70-130			
Surrogate: o-Terphenyl	10.2		"	12.5		81.5	30-150			

Matrix Spike Dup (BHG0407-MSD1)

Source: 2407176-01

Prepared: 07/15/24 Analyzed: 07/16/24

C10-C28 (DRO)	438	50	mg/kg	500	117	64.2	70-130	18.5	20	QM-01
Surrogate: o-Terphenyl	10.6		"	12.5		85.1	30-150			

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Project: PDC - Merritt Wellhead Pad
Project Number: [none]
Project Manager: Karen Olson

Reported:
07/18/24 11:43

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Reporting			Spike		Source		%REC		RPD	
	Result	Limit	Units	Level		Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0410 - EPA 5030 Soil MS

Blank (BHG0410-BLK1)

Prepared & Analyzed: 07/16/24

Acenaphthene	ND	0.00500	mg/kg								
Anthracene	ND	0.00500	"								
Benzo (a) anthracene	ND	0.00500	"								
Benzo (a) pyrene	ND	0.00500	"								
Benzo (b) fluoranthene	ND	0.00500	"								
Benzo (k) fluoranthene	ND	0.00500	"								
Chrysene	ND	0.00500	"								
Dibenz (a,h) anthracene	ND	0.00500	"								
Fluoranthene	ND	0.00500	"								
Fluorene	ND	0.00500	"								
Indeno (1,2,3-cd) pyrene	ND	0.00500	"								
Pyrene	ND	0.00500	"								
1-Methylnaphthalene	ND	0.00500	"								
2-Methylnaphthalene	ND	0.00500	"								
Surrogate: 2-Methylnaphthalene-d10	0.0420		"	0.0333		126		40-150			
Surrogate: Fluoranthene-d10	0.0310		"	0.0333		93.0		40-150			

LCS (BHG0410-BS1)

Prepared & Analyzed: 07/16/24

Acenaphthene	0.0236	0.00500	mg/kg	0.0333		70.7		31-137			
Anthracene	0.0237	0.00500	"	0.0333		71.0		30-120			
Benzo (a) anthracene	0.0241	0.00500	"	0.0333		72.2		30-120			
Benzo (a) pyrene	0.0214	0.00500	"	0.0333		64.1		30-120			
Benzo (b) fluoranthene	0.0217	0.00500	"	0.0333		65.1		30-120			
Benzo (k) fluoranthene	0.0221	0.00500	"	0.0333		66.2		30-120			
Chrysene	0.0234	0.00500	"	0.0333		70.3		30-120			
Dibenz (a,h) anthracene	0.0219	0.00500	"	0.0333		65.7		30-120			
Fluoranthene	0.0236	0.00500	"	0.0333		70.9		30-120			
Fluorene	0.0235	0.00500	"	0.0333		70.5		30-120			
Indeno (1,2,3-cd) pyrene	0.0142	0.00500	"	0.0333		42.6		30-120			
Pyrene	0.0279	0.00500	"	0.0333		83.6		35-142			
1-Methylnaphthalene	0.0324	0.00500	"	0.0333		97.2		35-142			
2-Methylnaphthalene	0.0294	0.00500	"	0.0333		88.1		35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0302		"	0.0333		90.6		40-150			
Surrogate: Fluoranthene-d10	0.0249		"	0.0333		74.7		40-150			

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/18/24 11:43

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Reporting			Spike		Source		%REC		RPD	
	Result	Limit	Units	Level		Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0410 - EPA 5030 Soil MS

Matrix Spike (BHG0410-MS1)

Source: 2407158-01

Prepared & Analyzed: 07/16/24

Acenaphthene	0.0242	0.00500	mg/kg	0.0333	ND	72.5	31-137				
Anthracene	0.0226	0.00500	"	0.0333	ND	67.8	30-120				
Benzo (a) anthracene	0.0244	0.00500	"	0.0333	ND	73.2	30-120				
Benzo (a) pyrene	0.0215	0.00500	"	0.0333	ND	64.6	30-120				
Benzo (b) fluoranthene	0.0219	0.00500	"	0.0333	ND	65.7	30-120				
Benzo (k) fluoranthene	0.0222	0.00500	"	0.0333	ND	66.5	30-120				
Chrysene	0.0238	0.00500	"	0.0333	ND	71.5	30-120				
Dibenz (a,h) anthracene	0.0224	0.00500	"	0.0333	ND	67.1	30-120				
Fluoranthene	0.0228	0.00500	"	0.0333	ND	68.3	30-120				
Fluorene	0.0242	0.00500	"	0.0333	ND	72.6	30-120				
Indeno (1,2,3-cd) pyrene	0.0301	0.00500	"	0.0333	ND	90.2	30-120				
Pyrene	0.0284	0.00500	"	0.0333	ND	85.2	35-142				
1-Methylnaphthalene	0.0330	0.00500	"	0.0333	ND	99.1	15-130				
2-Methylnaphthalene	0.0304	0.00500	"	0.0333	ND	91.2	15-130				
Surrogate: 2-Methylnaphthalene-d10	0.0328		"	0.0333		98.3	40-150				
Surrogate: Fluoranthene-d10	0.0246		"	0.0333		73.8	40-150				

Matrix Spike Dup (BHG0410-MSD1)

Source: 2407158-01

Prepared & Analyzed: 07/16/24

Acenaphthene	0.0243	0.00500	mg/kg	0.0333	ND	72.8	31-137	0.365	30		
Anthracene	0.0223	0.00500	"	0.0333	ND	66.8	30-120	1.48	30		
Benzo (a) anthracene	0.0235	0.00500	"	0.0333	ND	70.5	30-120	3.77	30		
Benzo (a) pyrene	0.0208	0.00500	"	0.0333	ND	62.4	30-120	3.52	30		
Benzo (b) fluoranthene	0.0212	0.00500	"	0.0333	ND	63.5	30-120	3.44	30		
Benzo (k) fluoranthene	0.0211	0.00500	"	0.0333	ND	63.4	30-120	4.71	30		
Chrysene	0.0229	0.00500	"	0.0333	ND	68.8	30-120	3.87	30		
Dibenz (a,h) anthracene	0.0207	0.00500	"	0.0333	ND	62.1	30-120	7.71	30		
Fluoranthene	0.0224	0.00500	"	0.0333	ND	67.1	30-120	1.85	30		
Fluorene	0.0235	0.00500	"	0.0333	ND	70.4	30-120	3.03	30		
Indeno (1,2,3-cd) pyrene	0.0293	0.00500	"	0.0333	ND	88.0	30-120	2.45	30		
Pyrene	0.0261	0.00500	"	0.0333	ND	78.3	35-142	8.42	30		
1-Methylnaphthalene	0.0319	0.00500	"	0.0333	ND	95.8	15-130	3.37	50		
2-Methylnaphthalene	0.0297	0.00500	"	0.0333	ND	89.1	15-130	2.26	50		
Surrogate: 2-Methylnaphthalene-d10	0.0309		"	0.0333		92.8	40-150				
Surrogate: Fluoranthene-d10	0.0240		"	0.0333		72.0	40-150				

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/18/24 11:43

Total Metals by EPA 6020B Hot Water Soluble Extraction - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0416 - EPA 3050B

Blank (BHG0416-BLK1)

Prepared: 07/16/24 Analyzed: 07/17/24

Boron ND 2.00 mg/L

LCS (BHG0416-BS1)

Prepared: 07/16/24 Analyzed: 07/17/24

Boron 4.89 2.00 mg/L 5.00 97.9 80-120

Duplicate (BHG0416-DUP1)

Source: 2407160-01

Prepared: 07/16/24 Analyzed: 07/17/24

Boron 0.170 2.00 mg/L 0.182 6.82 20

Matrix Spike (BHG0416-MS1)

Source: 2407160-01

Prepared: 07/16/24 Analyzed: 07/17/24

Boron 5.06 2.00 mg/L 5.04 0.182 96.9 75-125

Matrix Spike Dup (BHG0416-MSD1)

Source: 2407160-01

Prepared: 07/16/24 Analyzed: 07/17/24

Boron 5.77 2.00 mg/L 5.04 0.182 111 75-125 13.0 25

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Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/18/24 11:43

Total Metals by EPA 6020B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0415 - EPA 3050B

Blank (BHG0415-BLK1)

Prepared: 07/16/24 Analyzed: 07/17/24

Arsenic	ND	0.200	mg/kg wet
Barium	ND	0.400	"
Cadmium	ND	0.200	"
Copper	ND	0.400	"
Lead	ND	0.200	"
Nickel	ND	0.400	"
Silver	ND	0.0200	"
Zinc	ND	0.400	"
Selenium	ND	0.260	"

LCS (BHG0415-BS1)

Prepared: 07/16/24 Analyzed: 07/17/24

Arsenic	39.3	0.200	mg/kg wet	40.0	98.2	80-120
Barium	41.0	0.400	"	40.0	103	80-120
Cadmium	1.97	0.200	"	2.00	98.3	80-120
Copper	40.1	0.400	"	40.0	100	80-120
Lead	19.9	0.200	"	20.0	99.5	80-120
Nickel	40.1	0.400	"	40.0	100	80-120
Silver	1.97	0.0200	"	2.00	98.5	80-120
Zinc	39.7	0.400	"	40.0	99.2	80-120
Selenium	3.60	0.260	"	4.00	90.1	80-120

Duplicate (BHG0415-DUP1)

Source: 2407157-01

Prepared: 07/16/24 Analyzed: 07/17/24

Arsenic	2.18	0.200	mg/kg dry	2.25	3.12	20	
Barium	59.2	0.400	"	47.3	22.4	20	QR-03
Cadmium	0.158	0.200	"	0.158	0.487	20	
Copper	3.23	0.400	"	3.41	5.46	20	
Lead	7.26	0.200	"	5.27	31.8	20	QR-03
Nickel	3.09	0.400	"	3.00	2.96	20	
Silver	0.0156	0.0200	"	0.0170	8.54	20	
Zinc	12.5	0.400	"	13.4	7.36	20	
Selenium	ND	0.260	"	ND		20	

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/18/24 11:43

Total Metals by EPA 6020B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0415 - EPA 3050B

Matrix Spike (BHG0415-MS1)		Source: 2407157-01			Prepared: 07/16/24 Analyzed: 07/17/24					
Arsenic	42.8	0.200	mg/kg dry	42.4	2.25	95.7	75-125			
Barium	92.7	0.400	"	42.4	47.3	107	75-125			
Cadmium	2.34	0.200	"	2.12	0.158	103	75-125			
Copper	31.5	0.400	"	42.4	3.41	66.2	75-125			QM-05
Lead	26.2	0.200	"	21.2	5.27	98.7	75-125			
Nickel	31.1	0.400	"	42.4	3.00	66.3	75-125			QM-07
Silver	2.09	0.0200	"	2.12	0.0170	97.8	75-125			
Zinc	42.0	0.400	"	42.4	13.4	67.3	75-125			QM-07
Selenium	3.24	0.260	"	4.24	ND	76.4	75-125			

Matrix Spike Dup (BHG0415-MSD1)		Source: 2407157-01			Prepared: 07/16/24 Analyzed: 07/17/24					
Arsenic	41.0	0.200	mg/kg dry	40.5	2.25	95.5	75-125	4.45	25	
Barium	88.0	0.400	"	40.5	47.3	101	75-125	5.14	25	
Cadmium	2.23	0.200	"	2.03	0.158	102	75-125	4.93	25	
Copper	30.3	0.400	"	40.5	3.41	66.4	75-125	3.69	25	QM-05
Lead	25.5	0.200	"	20.3	5.27	99.7	75-125	2.81	25	
Nickel	30.4	0.400	"	40.5	3.00	67.5	75-125	2.41	25	QM-07
Silver	1.99	0.0200	"	2.03	0.0170	97.3	75-125	5.03	25	
Zinc	40.5	0.400	"	40.5	13.4	66.8	75-125	3.56	25	QM-07
Selenium	3.12	0.260	"	4.05	ND	76.9	75-125	3.89	25	

Post Spike (BHG0415-PS1)		Source: 2407157-01			Prepared: 07/16/24 Analyzed: 07/17/24					
Arsenic	112		ug/l	100	5.15	107	75-125			
Barium	211		"	100	108	103	75-125			
Cadmium	5.70		"	5.00	0.360	107	75-125			
Copper	82.4		"	100	7.79	74.6	75-125			QM-01
Lead	63.6		"	50.0	12.0	103	75-125			
Nickel	82.1		"	100	6.85	75.3	75-125			
Silver	5.27		"	5.00	0.0388	105	75-125			
Zinc	108		"	100	30.7	77.2	75-125			
Selenium	9.23		"	10.0	0.159	90.7	75-125			

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Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/18/24 11:43

Hexavalent Chromium by EPA Method 7196 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0419 - 3060A Mod

Blank (BHG0419-BLK1)

Prepared & Analyzed: 07/16/24

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BHG0419-BS1)

Prepared & Analyzed: 07/16/24

Chromium, Hexavalent 25.0 0.30 mg/kg wet 25.0 100 80-120

Duplicate (BHG0419-DUP1)

Source: 2407149-01

Prepared & Analyzed: 07/16/24

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BHG0419-MS1)

Source: 2407149-01

Prepared & Analyzed: 07/16/24

Chromium, Hexavalent 31.1 0.30 mg/kg dry 30.4 ND 102 75-125

Matrix Spike Dup (BHG0419-MSD1)

Source: 2407149-01

Prepared & Analyzed: 07/16/24

Chromium, Hexavalent 30.9 0.30 mg/kg dry 30.4 ND 102 75-125 0.392 20

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Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/18/24 11:43

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD	
		Limit	Units		Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0392 - General Preparation

Blank (BHG0392-BLK1)

Prepared: 07/15/24 Analyzed: 07/16/24

Calcium	ND	0.0500	mg/L wet
Magnesium	ND	0.0500	"
Sodium	ND	0.0500	"

LCS (BHG0392-BS1)

Prepared: 07/15/24 Analyzed: 07/16/24

Calcium	5.09	0.0500	mg/L wet	5.00	102	70-130
Magnesium	5.59	0.0500	"	5.00	112	70-130
Sodium	5.62	0.0500	"	5.00	112	70-130

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Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/18/24 11:43

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD	
		Limit	Units		Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0418 - General Preparation

Duplicate (BHG0418-DUP1)

Source: 2407176-01

Prepared & Analyzed: 07/16/24

% Solids	91.6	%		93.0		1.59	20

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Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/18/24 11:43

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD	
		Limit	Units		Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0395 - General Preparation

Blank (BHG0395-BLK1)

Prepared: 07/15/24 Analyzed: 07/16/24

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BHG0395-BS1)

Prepared: 07/15/24 Analyzed: 07/16/24

Specific Conductance (EC) 0.154 0.0100 mmhos/cm 0.150 102 95-105

Duplicate (BHG0395-DUP1)

Source: 2407158-01

Prepared: 07/15/24 Analyzed: 07/16/24

Specific Conductance (EC) 0.141 0.0100 mmhos/cm 0.142 0.566 20

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Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/18/24 11:43

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source Result	%REC		RPD		Notes
		Limit	Units			%REC	Limits	RPD	Limit	

Batch BHG0394 - General Preparation

LCS (BHG0394-BS1)

Prepared: 07/15/24 Analyzed: 07/16/24

pH	9.17	pH Units	9.18	99.9	95-105

Duplicate (BHG0394-DUP1)

Source: 2407158-01

Prepared: 07/15/24 Analyzed: 07/16/24

pH	8.45	pH Units	8.55	1.18	20

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/18/24 11:43

Notes and Definitions

QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
QM-05	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The associated LCS and/or LCSD were within acceptance limits, therefore the data are considered valid.
QM-01	The spike recovery for this QC sample is outside of established control limits due to sample matrix interference.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

July 19, 2024

Karen Olson

Tasman Geosciences

6855 W. 119th Ave.

Broomfield, CO 80020

RE: PDC - Merritt Sec 9 Wellhead Pad

Work Order #2407197

Enclosed are the results of analyses for samples received by Summit Scientific on 07/16/24 17:41. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Natalie Tessier". The signature is fluid and cursive, written in a professional style.

Natalie Tessier For Paul Shrewsbury

President



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Sec 9 Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/19/24 11:28

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS33@1'	2407197-01	Soil	07/16/24 09:32	07/16/24 17:41

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

SUMMIT SCIENTIFIC

4653 Table Mountain Drive
Golden, CO 80403
303-277-9310

Lab ID	Page 1 of 1
2407197	

Client: PDC/Tasman				Send Data To: Project Manager: Karen Olson				Send Invoice To: Company: PDC Energy													
Address: 6855 W 119th Ave				E-Mail: karen.olson@chevron.com				Project Name/Location:													
City/State/Zip: Broomfield / CO / 80020								AFE#:													
Phone: 970-214-7901				Project Name: Merritt Section 9 Wellhead Pad				PO/Billing Codes:													
Sampler Name: Lillian Buck				Project Number:				Contact: Karen Olson													
ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative	Matrix	Analysis Requested	Special Instructions													
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	VOC - 915	TPH - 915	PAH - 915	pH, EC, SAR	Boron - HWS	Metals - 915	HOLD		
1	SS33el'	7/16/24	0932	3			X			X			X	X	X	X	X	X			*VOC, TPH on same day *everything else on 48hr pH, EC, SAR by saturated paste
2																					
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					
13																					
14																					
15																					

Relinquished by: <i>[Signature]</i>	Date/Time: 7/16/24 1059	Received by: Tasman Lochbox	Date/Time: 7/16/24 1059	TAT Business Days	Field DO	Notes:	
Relinquished by: Tasman Lochbox	Date/Time: 7/16/24 1741	Received by: <i>[Signature]</i>	Date/Time: 7/16/24 1741	Same Day ☒	Field EC		
Relinquished by:	Date/Time:	Received by:	Date/Time:	1 Day ☐	Field ORP		
Relinquished by:	Date/Time:	Received by:	Date/Time:	2 Days ☐	Field pH		
Relinquished by:	Date/Time:	Received by:	Date/Time:	3 Days ☐	Field Temp.		
Temperature Upon Receipt: 8.8				Corrected Temperature: 9	IR gun #: 1	HNO3 lot #:	Field Turb.

S₂

Sample Receipt Checklist

S2 Work Order# 2407197Client: PDC/Tarman Client Project ID: Merritt section 9 wellhead padShipped Via: H.D./P.U./FedEx/UPS/USPS/Other ☐ Airbill #: _____

☐	☒	☐	☐	☐

Matrix (Check all that apply) Air ☐ Soil ☒ Solid ☐ Water ☐ Other ☐Temp (°C) 8.8 Thermometer # 1

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	☒	☐	☐	<u>on ice</u>
If custody seals are present, are they intact? ⁽¹⁾	☒	☐	☐	
Are samples due within 48 hours present?	☒	☐	☐	<u>Same day</u>
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe ²⁺), Hexavalent Chromium (Cr ⁶⁺ , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	☐	☒	☐	
Is a chain-of-custody (COC) form present and filled out Completely? ⁽¹⁾	☒	☐	☐	
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	☒	☐	☐	
Were all samples received intact? ⁽¹⁾	☒	☐	☐	
Was adequate sample volume provided? ⁽¹⁾	☒	☐	☐	
Does the COC agree with the number and type of sample bottles received? ⁽¹⁾	☒	☐	☐	
Do the sample IDs on the bottle labels match the COC? ⁽¹⁾	☒	☐	☐	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	☐	☐	☒	
Are samples preserved that require preservation (excluding cooling)? ⁽¹⁾ Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	☐	☐	☒	
If samples are acid preserved for metals, is the pH ≤ 2? ⁽¹⁾ Record the pH in Comments.	☐	☐	☒	
If dissolved metals are requested, were samples field filtered?	☐	☐	☒	
Additional Comments (if any):				

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.
AS
Custodian Printed Name

7/16/24
Date/Time



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Sec 9 Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/19/24 11:28

SS33@1'
2407197-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/16/24 09:32**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHG0436	07/16/24	07/17/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **07/16/24 09:32**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0428	107 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0396	98.9 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0406	102 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/16/24 09:32**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHG0437	"	07/17/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/16/24 09:32**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	13.2	106 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Sec 9 Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/19/24 11:28

SS33@1'
2407197-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/16/24 09:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHG0442	07/17/24	07/18/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **07/16/24 09:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0173	51.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.00973	29.2 %	40-150		"	"	"	"	S-04

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/16/24 09:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHG0496	07/18/24	07/19/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/16/24 09:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Sec 9 Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/19/24 11:28

SS33@1'
2407197-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	4.07	0.200	mg/kg dry	1	BHG0468	07/17/24	07/18/24	EPA 6020B
Barium	71.4	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	5.65	0.400	"	"	"	"	"	"
Lead	4.90	0.200	"	"	"	"	"	"
Nickel	5.06	0.400	"	"	"	"	"	"
Silver	0.0314	0.0200	"	"	"	"	"	"
Zinc	22.8	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **07/16/24 09:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHG0444	07/17/24	07/17/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **07/16/24 09:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	607	0.0500	mg/L dry	1	BHG0423	07/16/24	07/17/24	EPA 6020B	
Magnesium	78.5	0.0500	"	"	"	"	"	"	
Sodium	84.1	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/16/24 09:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.853	0.00100	units	1	BHG0491	07/18/24	07/18/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Sec 9 Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/19/24 11:28

SS33@1'
2407197-01 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/16/24 09:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	80.8		%	1	BHG0441	07/17/24	07/17/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/16/24 09:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	3.16	0.0100	mmhos/cm	1	BHG0433	07/16/24	07/17/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **07/16/24 09:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.67		pH Units	1	BHG0432	07/16/24	07/17/24	EPA 9045D	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Sec 9 Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/19/24 11:28

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0436 - EPA 5030 Soil MS

Blank (BHG0436-BLK1)

Prepared & Analyzed: 07/16/24

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0375		"	0.0400		93.8	50-150			
Surrogate: Toluene-d8	0.0392		"	0.0400		98.0	50-150			
Surrogate: 4-Bromofluorobenzene	0.0380		"	0.0400		94.9	50-150			

LCS (BHG0436-BS1)

Prepared & Analyzed: 07/16/24

Benzene	0.157	0.0020	mg/kg	0.150		105	70-130			
Toluene	0.157	0.0050	"	0.150		105	70-130			
Ethylbenzene	0.166	0.0050	"	0.150		111	70-130			
m,p-Xylene	0.333	0.010	"	0.300		111	70-130			
o-Xylene	0.152	0.0050	"	0.150		101	70-130			
1,2,4-Trimethylbenzene	0.156	0.0050	"	0.150		104	70-130			
1,3,5-Trimethylbenzene	0.158	0.0050	"	0.150		105	70-130			
Naphthalene	0.144	0.0038	"	0.150		96.1	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0388		"	0.0400		97.0	50-150			
Surrogate: Toluene-d8	0.0400		"	0.0400		100	50-150			
Surrogate: 4-Bromofluorobenzene	0.0407		"	0.0400		102	50-150			

Matrix Spike (BHG0436-MS1)

Source: 2407190-01

Prepared & Analyzed: 07/16/24

Benzene	0.120	0.0020	mg/kg	0.120	ND	100	70-130			
Toluene	0.103	0.0050	"	0.120	ND	86.0	70-130			
Ethylbenzene	0.0970	0.0050	"	0.120	ND	80.8	70-130			
m,p-Xylene	0.183	0.010	"	0.240	ND	76.1	70-130			
o-Xylene	0.0890	0.0050	"	0.120	ND	74.1	70-130			
1,2,4-Trimethylbenzene	0.0827	0.0050	"	0.120	ND	68.9	70-130			QM-07
1,3,5-Trimethylbenzene	0.0890	0.0050	"	0.120	ND	74.1	70-130			
Naphthalene	0.103	0.0038	"	0.120	ND	85.8	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0404		"	0.0400		101	50-150			
Surrogate: Toluene-d8	0.0402		"	0.0400		101	50-150			
Surrogate: 4-Bromofluorobenzene	0.0379		"	0.0400		94.6	50-150			

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Sec 9 Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/19/24 11:28

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0436 - EPA 5030 Soil MS

Matrix Spike Dup (BHG0436-MSD1)		Source: 2407190-01			Prepared & Analyzed: 07/16/24					
Benzene	0.105	0.0020	mg/kg	0.120	ND	87.5	70-130	13.7	30	
Toluene	0.0853	0.0050	"	0.120	ND	71.1	70-130	19.0	30	
Ethylbenzene	0.0777	0.0050	"	0.120	ND	64.8	70-130	22.1	30	QM-07
m,p-Xylene	0.206	0.010	"	0.240	ND	85.8	70-130	12.0	30	
o-Xylene	0.0744	0.0050	"	0.120	ND	62.0	70-130	17.8	30	QM-07
1,2,4-Trimethylbenzene	0.0622	0.0050	"	0.120	ND	51.9	70-130	28.2	30	QM-07
1,3,5-Trimethylbenzene	0.0693	0.0050	"	0.120	ND	57.8	70-130	24.8	30	QM-07
Naphthalene	0.0919	0.0038	"	0.120	ND	76.6	70-130	11.3	30	
Surrogate: 1,2-Dichloroethane-d4		0.0408	"	0.0400		102	50-150			
Surrogate: Toluene-d8		0.0395	"	0.0400		98.8	50-150			
Surrogate: 4-Bromofluorobenzene		0.0371	"	0.0400		92.8	50-150			

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Sec 9 Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/19/24 11:28

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0437 - EPA 3550A

Blank (BHG0437-BLK1)

Prepared: 07/16/24 Analyzed: 07/17/24

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: o-Terphenyl	11.7		"	12.5		93.7	30-150			

LCS (BHG0437-BS1)

Prepared: 07/16/24 Analyzed: 07/17/24

C10-C28 (DRO)	508	50	mg/kg	500		102	70-130			
Surrogate: o-Terphenyl	11.8		"	12.5		94.3	30-150			

Matrix Spike (BHG0437-MS1)

Source: 2407190-01

Prepared: 07/16/24 Analyzed: 07/17/24

C10-C28 (DRO)	485	50	mg/kg	500	ND	97.0	70-130			
Surrogate: o-Terphenyl	8.51		"	12.5		68.0	30-150			

Matrix Spike Dup (BHG0437-MSD1)

Source: 2407190-01

Prepared: 07/16/24 Analyzed: 07/17/24

C10-C28 (DRO)	466	50	mg/kg	500	ND	93.2	70-130	3.97	20	
Surrogate: o-Terphenyl	6.64		"	12.5		53.1	30-150			

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Sec 9 Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/19/24 11:28

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Reporting			Spike		Source		%REC		RPD	
	Result	Limit	Units	Level		Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0442 - EPA 5030 Soil MS

Blank (BHG0442-BLK1)

Prepared & Analyzed: 07/17/24

Acenaphthene	ND	0.00500	mg/kg								
Anthracene	ND	0.00500	"								
Benzo (a) anthracene	ND	0.00500	"								
Benzo (a) pyrene	ND	0.00500	"								
Benzo (b) fluoranthene	ND	0.00500	"								
Benzo (k) fluoranthene	ND	0.00500	"								
Chrysene	ND	0.00500	"								
Dibenz (a,h) anthracene	ND	0.00500	"								
Fluoranthene	ND	0.00500	"								
Fluorene	ND	0.00500	"								
Indeno (1,2,3-cd) pyrene	ND	0.00500	"								
Pyrene	ND	0.00500	"								
1-Methylnaphthalene	ND	0.00500	"								
2-Methylnaphthalene	ND	0.00500	"								
Surrogate: 2-Methylnaphthalene-d10	0.0292		"	0.0333		87.6		40-150			
Surrogate: Fluoranthene-d10	0.0257		"	0.0333		77.2		40-150			

LCS (BHG0442-BS1)

Prepared & Analyzed: 07/17/24

Acenaphthene	0.0181	0.00500	mg/kg	0.0333		54.4		31-137			
Anthracene	0.0174	0.00500	"	0.0333		52.1		30-120			
Benzo (a) anthracene	0.0182	0.00500	"	0.0333		54.5		30-120			
Benzo (a) pyrene	0.0164	0.00500	"	0.0333		49.1		30-120			
Benzo (b) fluoranthene	0.0170	0.00500	"	0.0333		51.0		30-120			
Benzo (k) fluoranthene	0.0180	0.00500	"	0.0333		54.1		30-120			
Chrysene	0.0182	0.00500	"	0.0333		54.7		30-120			
Dibenz (a,h) anthracene	0.0162	0.00500	"	0.0333		48.7		30-120			
Fluoranthene	0.0177	0.00500	"	0.0333		53.1		30-120			
Fluorene	0.0179	0.00500	"	0.0333		53.7		30-120			
Indeno (1,2,3-cd) pyrene	0.0232	0.00500	"	0.0333		69.7		30-120			
Pyrene	0.0218	0.00500	"	0.0333		65.5		35-142			
1-Methylnaphthalene	0.0229	0.00500	"	0.0333		68.8		35-142			
2-Methylnaphthalene	0.0220	0.00500	"	0.0333		66.0		35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0221		"	0.0333		66.3		40-150			
Surrogate: Fluoranthene-d10	0.0185		"	0.0333		55.4		40-150			

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Sec 9 Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/19/24 11:28

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Reporting			Spike		Source		%REC		RPD	
	Result	Limit	Units	Level		Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0442 - EPA 5030 Soil MS

Matrix Spike (BHG0442-MS1)

Source: 2407198-01

Prepared & Analyzed: 07/17/24

Acenaphthene	0.0149	0.00500	mg/kg	0.0333	ND	44.8	31-137		
Anthracene	0.0146	0.00500	"	0.0333	ND	43.8	30-120		
Benzo (a) anthracene	0.0160	0.00500	"	0.0333	ND	48.0	30-120		
Benzo (a) pyrene	0.0146	0.00500	"	0.0333	ND	43.9	30-120		
Benzo (b) fluoranthene	0.0136	0.00500	"	0.0333	ND	40.8	30-120		
Benzo (k) fluoranthene	0.0158	0.00500	"	0.0333	ND	47.4	30-120		
Chrysene	0.0157	0.00500	"	0.0333	ND	47.1	30-120		
Dibenz (a,h) anthracene	0.0148	0.00500	"	0.0333	ND	44.3	30-120		
Fluoranthene	0.0140	0.00500	"	0.0333	ND	42.1	30-120		
Fluorene	0.0149	0.00500	"	0.0333	ND	44.7	30-120		
Indeno (1,2,3-cd) pyrene	0.0181	0.00500	"	0.0333	ND	54.4	30-120		
Pyrene	0.0145	0.00500	"	0.0333	ND	43.4	35-142		
1-Methylnaphthalene	0.0148	0.00500	"	0.0333	ND	44.4	15-130		
2-Methylnaphthalene	0.0137	0.00500	"	0.0333	ND	41.1	15-130		
Surrogate: 2-Methylnaphthalene-d10	0.0138		"	0.0333		41.3	40-150		
Surrogate: Fluoranthene-d10	0.0148		"	0.0333		44.5	40-150		

Matrix Spike Dup (BHG0442-MSD1)

Source: 2407198-01

Prepared & Analyzed: 07/17/24

Acenaphthene	0.0164	0.00500	mg/kg	0.0333	ND	49.2	31-137	9.42	30
Anthracene	0.0158	0.00500	"	0.0333	ND	47.5	30-120	8.04	30
Benzo (a) anthracene	0.0170	0.00500	"	0.0333	ND	50.9	30-120	5.92	30
Benzo (a) pyrene	0.0146	0.00500	"	0.0333	ND	43.7	30-120	0.433	30
Benzo (b) fluoranthene	0.0138	0.00500	"	0.0333	ND	41.3	30-120	1.24	30
Benzo (k) fluoranthene	0.0142	0.00500	"	0.0333	ND	42.5	30-120	10.8	30
Chrysene	0.0161	0.00500	"	0.0333	ND	48.2	30-120	2.28	30
Dibenz (a,h) anthracene	0.0161	0.00500	"	0.0333	ND	48.3	30-120	8.74	30
Fluoranthene	0.0154	0.00500	"	0.0333	ND	46.1	30-120	9.11	30
Fluorene	0.0164	0.00500	"	0.0333	ND	49.2	30-120	9.67	30
Indeno (1,2,3-cd) pyrene	0.0176	0.00500	"	0.0333	ND	52.8	30-120	2.99	30
Pyrene	0.0189	0.00500	"	0.0333	ND	56.7	35-142	26.6	30
1-Methylnaphthalene	0.0178	0.00500	"	0.0333	ND	53.5	15-130	18.6	50
2-Methylnaphthalene	0.0176	0.00500	"	0.0333	ND	52.7	15-130	24.9	50
Surrogate: 2-Methylnaphthalene-d10	0.0186		"	0.0333		55.8	40-150		
Surrogate: Fluoranthene-d10	0.0162		"	0.0333		48.5	40-150		

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Sec 9 Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/19/24 11:28

Total Metals by EPA 6020B Hot Water Soluble Extraction - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0496 - EPA 3050B

Blank (BHG0496-BLK1)

Prepared: 07/18/24 Analyzed: 07/19/24

Boron ND 2.00 mg/L

LCS (BHG0496-BS1)

Prepared: 07/18/24 Analyzed: 07/19/24

Boron 4.95 2.00 mg/L 5.00 99.0 80-120

Duplicate (BHG0496-DUP1)

Source: 2407197-01

Prepared: 07/18/24 Analyzed: 07/19/24

Boron 0.234 2.00 mg/L 0.226 3.49 20

Matrix Spike (BHG0496-MS1)

Source: 2407197-01

Prepared: 07/18/24 Analyzed: 07/19/24

Boron 5.11 2.00 mg/L 5.02 0.226 97.2 75-125

Matrix Spike Dup (BHG0496-MSD1)

Source: 2407197-01

Prepared: 07/18/24 Analyzed: 07/19/24

Boron 5.77 2.00 mg/L 5.02 0.226 110 75-125 12.1 25

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Sec 9 Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/19/24 11:28

Total Metals by EPA 6020B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0468 - EPA 3050B

Blank (BHG0468-BLK1)

Prepared: 07/17/24 Analyzed: 07/18/24

Arsenic	ND	0.181	mg/kg wet
Barium	ND	0.362	"
Cadmium	ND	0.181	"
Copper	ND	0.362	"
Lead	ND	0.181	"
Nickel	ND	0.362	"
Silver	ND	0.0181	"
Zinc	ND	0.362	"
Selenium	ND	0.236	"

LCS (BHG0468-BS1)

Prepared: 07/17/24 Analyzed: 07/18/24

Arsenic	36.3	0.200	mg/kg wet	37.6	96.7	80-120	QM-07
Barium	45.6	0.400	"	37.6	121	80-120	
Cadmium	1.74	0.200	"	1.88	92.7	80-120	
Copper	37.8	0.400	"	37.6	100	80-120	
Lead	18.1	0.200	"	18.8	96.5	80-120	
Nickel	38.0	0.400	"	37.6	101	80-120	
Silver	1.78	0.0200	"	1.88	94.7	80-120	
Zinc	36.2	0.400	"	37.6	96.3	80-120	
Selenium	3.52	0.260	"	3.76	93.6	80-120	

Duplicate (BHG0468-DUP1)

Source: 2405048-25

Prepared: 07/17/24 Analyzed: 07/18/24

Arsenic	3.76	0.200	mg/kg dry	3.56	5.47	20
Barium	17.1	0.400	"	17.0	0.816	20
Cadmium	0.143	0.200	"	0.147	2.49	20
Copper	7.68	0.400	"	7.59	1.23	20
Lead	10.8	0.200	"	11.5	6.33	20
Nickel	6.41	0.400	"	6.43	0.331	20
Silver	0.0226	0.0200	"	0.0190	17.4	20
Zinc	27.5	0.400	"	27.6	0.380	20
Selenium	ND	0.260	"	ND		20

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Sec 9 Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/19/24 11:28

Total Metals by EPA 6020B - Quality Control
Summit Scientific

Reporting				Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0468 - EPA 3050B

Matrix Spike (BHG0468-MS1)		Source: 2405048-25			Prepared: 07/17/24 Analyzed: 07/18/24						
Arsenic	39.8	0.200	mg/kg dry	44.2	3.56	82.1	75-125				
Barium	52.7	0.400	"	44.2	17.0	80.7	75-125				
Cadmium	2.19	0.200	"	2.21	0.147	92.6	75-125				
Copper	25.5	0.400	"	44.2	7.59	40.6	75-125				QM-05
Lead	28.3	0.200	"	22.1	11.5	76.3	75-125				
Nickel	24.3	0.400	"	44.2	6.43	40.5	75-125				QM-05
Silver	2.10	0.0200	"	2.21	0.0190	94.3	75-125				
Zinc	42.8	0.400	"	44.2	27.6	34.5	75-125				QM-05
Selenium	3.17	0.260	"	4.42	ND	71.8	75-125				QM-07

Matrix Spike Dup (BHG0468-MSD1)		Source: 2405048-25			Prepared: 07/17/24 Analyzed: 07/18/24						
Arsenic	40.0	0.200	mg/kg dry	43.5	3.56	83.7	75-125	0.336	25		
Barium	51.7	0.400	"	43.5	17.0	79.6	75-125	1.95	25		
Cadmium	2.13	0.200	"	2.18	0.147	91.2	75-125	2.84	25		
Copper	25.9	0.400	"	43.5	7.59	42.0	75-125	1.34	25		QM-05
Lead	29.1	0.200	"	21.8	11.5	80.9	75-125	2.58	25		
Nickel	24.3	0.400	"	43.5	6.43	41.1	75-125	0.0386	25		QM-05
Silver	2.05	0.0200	"	2.18	0.0190	93.4	75-125	2.48	25		
Zinc	42.9	0.400	"	43.5	27.6	35.1	75-125	0.101	25		QM-05
Selenium	3.07	0.260	"	4.35	ND	70.6	75-125	3.28	25		QM-07

Post Spike (BHG0468-PS1)		Source: 2405048-25			Prepared: 07/17/24 Analyzed: 07/18/24						
Arsenic	105		ug/l	100	7.74	97.2	75-125				
Barium	124		"	100	37.0	86.7	75-125				
Cadmium	5.25		"	5.00	0.320	98.6	75-125				
Copper	62.3		"	100	16.5	45.8	75-125				QM-01
Lead	71.2		"	50.0	25.0	92.3	75-125				
Nickel	59.9		"	100	14.0	45.9	75-125				QM-01
Silver	5.06		"	5.00	0.0413	100	75-125				
Zinc	105		"	100	60.0	45.2	75-125				QM-01
Selenium	8.62		"	10.0	0.267	83.5	75-125				

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Sec 9 Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/19/24 11:28

Hexavalent Chromium by EPA Method 7196 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0444 - 3060A Mod

Blank (BHG0444-BLK1)

Prepared & Analyzed: 07/17/24

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BHG0444-BS1)

Prepared & Analyzed: 07/17/24

Chromium, Hexavalent 25.2 0.30 mg/kg wet 25.0 101 80-120

Duplicate (BHG0444-DUP1)

Source: 2407183-01

Prepared & Analyzed: 07/17/24

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BHG0444-MS1)

Source: 2407183-01

Prepared & Analyzed: 07/17/24

Chromium, Hexavalent 27.7 0.30 mg/kg dry 27.7 ND 100 75-125

Matrix Spike Dup (BHG0444-MSD1)

Source: 2407183-01

Prepared & Analyzed: 07/17/24

Chromium, Hexavalent 27.1 0.30 mg/kg dry 27.7 ND 97.8 75-125 2.22 20

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Sec 9 Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/19/24 11:28

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0423 - General Preparation

Blank (BHG0423-BLK1)

Prepared: 07/16/24 Analyzed: 07/17/24

Calcium	ND	0.0500	mg/L wet
Magnesium	ND	0.0500	"
Sodium	ND	0.0500	"

LCS (BHG0423-BS1)

Prepared: 07/16/24 Analyzed: 07/17/24

Calcium	5.63	0.0500	mg/L wet	5.00	113	70-130
Magnesium	5.02	0.0500	"	5.00	100	70-130
Sodium	4.80	0.0500	"	5.00	95.9	70-130

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Sec 9 Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/19/24 11:28

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control
Summit Scientific

Reporting				Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0441 - General Preparation

Duplicate (BHG0441-DUP1)			Source: 2405019-02			Prepared & Analyzed: 07/17/24				
% Solids	88.9		%			88.3		0.646		20

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Sec 9 Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/19/24 11:28

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD	
		Limit	Units		Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0433 - General Preparation

Blank (BHG0433-BLK1)

Prepared: 07/16/24 Analyzed: 07/17/24

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BHG0433-BS1)

Prepared: 07/16/24 Analyzed: 07/17/24

Specific Conductance (EC) 0.152 0.0100 mmhos/cm 0.150 102 95-105

Duplicate (BHG0433-DUP1)

Source: 2407179-01

Prepared: 07/16/24 Analyzed: 07/17/24

Specific Conductance (EC) 0.146 0.0100 mmhos/cm 0.148 0.680 20

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Sec 9 Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/19/24 11:28

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source Result	%REC		RPD		Notes
		Limit	Units			%REC	Limits	RPD	Limit	

Batch BHG0432 - General Preparation

LCS (BHG0432-BS1)

Prepared: 07/16/24 Analyzed: 07/17/24

pH	9.15	pH Units	9.18	99.7	95-105

Duplicate (BHG0432-DUP1)

Source: 2407179-01

Prepared: 07/16/24 Analyzed: 07/17/24

pH	8.92	pH Units	8.99	0.782	20

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Sec 9 Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/19/24 11:28

Notes and Definitions

S-04	A sample matrix effect prevented complete surrogate recovery.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
QM-05	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The associated LCS and/or LCSD were within acceptance limits, therefore the data are considered valid.
QM-01	The spike recovery for this QC sample is outside of established control limits due to sample matrix interference.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

July 22, 2024

Karen Olson

Tasman Geosciences

6855 W. 119th Ave.

Broomfield, CO 80020

RE: PDC - Merritt Wellhead Pad

Work Order #2407209

Enclosed are the results of analyses for samples received by Summit Scientific on 07/17/24 16:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Natalie Tessier". The signature is fluid and cursive, with the first name being more prominent.

Natalie Tessier For Paul Shrewsbury

President



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/22/24 09:12

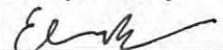
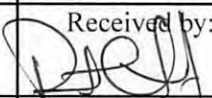
ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS34@1'	2407209-01	Soil	07/17/24 09:30	07/17/24 16:30
SS35@1'	2407209-02	Soil	07/17/24 09:35	07/17/24 16:30
SS36@1'	2407209-03	Soil	07/17/24 09:40	07/17/24 16:30
SS37@1'	2407209-04	Soil	07/17/24 09:45	07/17/24 16:30
SS38@1'	2407209-05	Soil	07/17/24 09:50	07/17/24 16:30
SS39@4'	2407209-06	Soil	07/17/24 10:20	07/17/24 16:30
SS40@2'	2407209-07	Soil	07/17/24 10:24	07/17/24 16:30
SS41@3'	2407209-08	Soil	07/17/24 10:30	07/17/24 16:30

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client: PDC / Tasman				Send Data To: Project Manager: Karen Olson				Send Invoice To: Company: PDC Energy													
Address: 6855 W 119th Ave				E-Mail: karen.olson@chevron.com				Project Name/Location:													
City/State/Zip: Broomfield / CO / 80020								AFE#:													
Phone: 303-487-1228				Project Name: Merritt Wellhead Pad				PO/Billing Codes:													
Sampler Name: Elizabeth Brauer				Project Number:				Contact: Karen Olson													
				Preservative		Matrix		Analysis Requested				Special Instructions									
ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEXN - 8260B	TPH - (C6 - C36)	1,2,4 & 1,3,5-TMB	Boron - HWS	pH, EC, SAR	PAHs	Metals - 915		
1	SS34 @ 1'	7/17/24	930	2			X			X			X	X	X	X	X	X	X		*48 hour turnaround
2	SS35 @ 1'		935																		
3	SS36 @ 1'		940																		
4	SS37 @ 1'		945																		
5	SS38 @ 1'		950																		
6	SS39 @ 4'		1020																		
7	SS40 @ 2'		1024																		
8	SS41 @ 3'		1030																		
9																					
10																					
11																					
12																					
13																					
14																					
15																					

Relinquished by: 	Date/Time: 7/17/24 1315	Received by: Summit North	Date/Time: 7/17/24 1315	TAT Business Days	Field DO	Notes:
Relinquished by: 52	Date/Time: 7/17/24 1030	Received by: 	Date/Time: 7/17/24 1430	Same Day ☒	Field EC	
Relinquished by:	Date/Time:	Received by:	Date/Time:	1 Day	Field ORP	
				2 Days	Field pH	
				3 Days	Field Temp.	
				Standard	Field Turb.	
Temperature Upon Receipt: 8.4	Corrected Temperature: 8	IR gun #:	HNO3 lot #:			

S₂

Sample Receipt Checklist

S2 Work Order# 2407209Client: Doc Trisman Client Project ID: Meritt wellhead padShipped Via: H.D./P.U./FedEx/UPS/USPS/Other ☐ Airbill #: ☐

☐	☒	☐	☐	☐

Matrix (Check all that apply) Air ☐ Soil/Solid ☒ Water ☐ Other ☐Temp (°C) 8.4 Thermometer # 1

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	☒	☐	☐	on 2/15
If custody seals are present, are they intact? ⁽¹⁾	☒	☐	☐	
Are samples due within 48 hours present?	☒	☐	☐	Same day
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe ²⁺), Hexavalent Chromium (Cr ⁶⁺ , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	☐	☒	☐	
Is a chain-of-custody (COC) form present and filled out Completely? ⁽¹⁾	☒	☐	☐	
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	☒	☐	☐	
Were all samples received intact? ⁽¹⁾	☒	☐	☐	
Was adequate sample volume provided? ⁽¹⁾	☒	☐	☐	
Does the COC agree with the number and type of sample bottles received? ⁽¹⁾	☒	☐	☐	
Do the sample IDs on the bottle labels match the COC? ⁽¹⁾	☒	☐	☐	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	☐	☐	☒	
Are samples preserved that require preservation (excluding cooling)? ⁽¹⁾ Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	☐	☐	☒	
If samples are acid preserved for metals, is the pH ≤ 2? ⁽¹⁾ Record the pH in Comments.	☐	☐	☒	
If dissolved metals are requested, were samples field filtered?	☐	☐	☒	

Additional Comments (if any):

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.
AS
Custodian Printed Name

7/17/24
Date/Time



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/22/24 09:12

SS34@1'
2407209-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/17/24 09:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHG0475	07/17/24	07/17/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **07/17/24 09:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0366	91.5 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0403	101 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0383	95.8 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/17/24 09:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHG0478	07/17/24	07/17/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/17/24 09:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	11.3	90.5 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
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Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/22/24 09:12

SS34@1'
2407209-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/17/24 09:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHG0490	07/18/24	07/18/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **07/17/24 09:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0162	48.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0154	46.1 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/17/24 09:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHG0498	07/18/24	07/19/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/17/24 09:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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Project Manager: Karen Olson

Reported:
07/22/24 09:12

SS34@1'
2407209-01 (Soil)

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Total Metals by EPA 6020B

Arsenic	1.13	0.200	mg/kg dry	1	BHG0504	07/18/24	07/18/24	EPA 6020B
Barium	19.2	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	4.41	0.400	"	"	"	"	"	"
Lead	4.51	0.200	"	"	"	"	"	"
Nickel	7.90	0.400	"	"	"	"	"	"
Silver	0.0200	0.0200	"	"	"	"	"	"
Zinc	32.1	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **07/17/24 09:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHG0492	07/18/24	07/18/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **07/17/24 09:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	584	0.0500	mg/L dry	1	BHG0507	07/18/24	07/19/24	EPA 6020B	
Magnesium	38.7	0.0500	"	"	"	"	"	"	
Sodium	68.4	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/17/24 09:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.740	0.00100	units	1	BHG0575	07/22/24	07/22/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Project: PDC - Merritt Wellhead Pad

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07/22/24 09:12

SS34@1'
2407209-01 (Soil)

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Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/17/24 09:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	84.4			%	1	BHG0500	07/18/24	07/19/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/17/24 09:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	3.26	0.0100		mmhos/cm	1	BHG0510	07/18/24	07/19/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **07/17/24 09:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	7.93			pH Units	1	BHG0511	07/18/24	07/19/24	EPA 9045D	

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Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/22/24 09:12

SS35@1'
2407209-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/17/24 09:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHG0475	07/17/24	07/17/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **07/17/24 09:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0365	91.4 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0405	101 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0390	97.4 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/17/24 09:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHG0478	07/17/24	07/17/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/17/24 09:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	10.5	84.0 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
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Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/22/24 09:12

SS35@1'
2407209-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/17/24 09:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHG0490	07/18/24	07/18/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **07/17/24 09:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0136	40.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0155	46.5 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/17/24 09:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHG0498	07/18/24	07/19/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/17/24 09:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/22/24 09:12

SS35@1'
2407209-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	1.38	0.200	mg/kg dry	1	BHG0504	07/18/24	07/18/24	EPA 6020B
Barium	26.6	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	2.77	0.400	"	"	"	"	"	"
Lead	6.60	0.200	"	"	"	"	"	"
Nickel	3.95	0.400	"	"	"	"	"	"
Silver	0.0210	0.0200	"	"	"	"	"	"
Zinc	20.5	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **07/17/24 09:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHG0492	07/18/24	07/18/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **07/17/24 09:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	420	0.0500	mg/L dry	1	BHG0507	07/18/24	07/19/24	EPA 6020B	
Magnesium	52.7	0.0500	"	"	"	"	"	"	
Sodium	72.1	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/17/24 09:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.882	0.00100	units	1	BHG0575	07/22/24	07/22/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/22/24 09:12

SS35@1'
2407209-02 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/17/24 09:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	89.0			%	1	BHG0500	07/18/24	07/19/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/17/24 09:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	2.68	0.0100		mmhos/cm	1	BHG0510	07/18/24	07/19/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **07/17/24 09:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	7.96			pH Units	1	BHG0511	07/18/24	07/19/24	EPA 9045D	

Summit Scientific

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/22/24 09:12

SS36@1'
2407209-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/17/24 09:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHG0475	07/17/24	07/17/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **07/17/24 09:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0364	91.1 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0399	99.8 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0376	94.0 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/17/24 09:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHG0478	07/17/24	07/17/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/17/24 09:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	9.48	75.8 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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07/22/24 09:12

SS36@1'
2407209-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/17/24 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHG0490	07/18/24	07/18/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **07/17/24 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0156	46.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0178	53.5 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/17/24 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHG0498	07/18/24	07/19/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/17/24 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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6855 W. 119th Ave.
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Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/22/24 09:12

SS36@1'
2407209-03 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	2.46	0.200	mg/kg dry	1	BHG0504	07/18/24	07/18/24	EPA 6020B
Barium	210	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	4.60	0.400	"	"	"	"	"	"
Lead	5.69	0.200	"	"	"	"	"	"
Nickel	4.29	0.400	"	"	"	"	"	"
Silver	0.0258	0.0200	"	"	"	"	"	"
Zinc	22.3	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **07/17/24 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHG0492	07/18/24	07/18/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **07/17/24 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	189	0.0500	mg/L dry	1	BHG0507	07/18/24	07/19/24	EPA 6020B	
Magnesium	24.5	0.0500	"	"	"	"	"	"	
Sodium	56.7	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/17/24 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.03	0.00100	units	1	BHG0575	07/22/24	07/22/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/22/24 09:12

SS36@1'
2407209-03 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/17/24 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	96.0		%	1	BHG0500	07/18/24	07/19/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/17/24 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.70	0.0100	mmhos/cm	1	BHG0510	07/18/24	07/19/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **07/17/24 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.55		pH Units	1	BHG0511	07/18/24	07/19/24	EPA 9045D	

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Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/22/24 09:12

SS37@1'
2407209-04 (Soil)

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Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/17/24 09:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHG0475	07/17/24	07/17/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **07/17/24 09:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0355	88.7 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0392	97.9 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0374	93.4 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/17/24 09:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHG0478	07/17/24	07/17/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/17/24 09:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	8.95	71.6 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Project Manager: Karen Olson

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07/22/24 09:12

SS37@1'
2407209-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/17/24 09:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHG0490	07/18/24	07/18/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **07/17/24 09:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0190	57.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0183	55.0 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/17/24 09:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHG0498	07/18/24	07/19/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/17/24 09:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/22/24 09:12

SS37@1'
2407209-04 (Soil)

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Total Metals by EPA 6020B

Arsenic	2.64	0.200	mg/kg dry	1	BHG0504	07/18/24	07/18/24	EPA 6020B
Barium	125	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	4.42	0.400	"	"	"	"	"	"
Lead	6.99	0.200	"	"	"	"	"	"
Nickel	5.10	0.400	"	"	"	"	"	"
Silver	0.0353	0.0200	"	"	"	"	"	"
Zinc	19.3	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **07/17/24 09:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHG0492	07/18/24	07/18/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **07/17/24 09:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	75.4	0.0500	mg/L dry	1	BHG0507	07/18/24	07/19/24	EPA 6020B	
Magnesium	16.3	0.0500	"	"	"	"	"	"	
Sodium	23.3	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/17/24 09:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.634	0.00100	units	1	BHG0575	07/22/24	07/22/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/22/24 09:12

SS37@1'
2407209-04 (Soil)

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Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/17/24 09:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	90.5			%	1	BHG0500	07/18/24	07/19/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/17/24 09:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	0.637	0.0100		mmhos/cm	1	BHG0510	07/18/24	07/19/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **07/17/24 09:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	8.22			pH Units	1	BHG0511	07/18/24	07/19/24	EPA 9045D	

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Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/22/24 09:12

SS38@1'
2407209-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/17/24 09:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHG0475	07/17/24	07/17/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **07/17/24 09:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0370	92.4 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0396	98.9 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0385	96.2 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/17/24 09:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHG0478	07/17/24	07/17/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/17/24 09:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	8.82	70.6 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/22/24 09:12

SS38@1'
2407209-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/17/24 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHG0490	07/18/24	07/18/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **07/17/24 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0152	45.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0161	48.3 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/17/24 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHG0498	07/18/24	07/19/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/17/24 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/22/24 09:12

SS38@1'
2407209-05 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	2.96	0.200	mg/kg dry	1	BHG0504	07/18/24	07/18/24	EPA 6020B
Barium	627	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	4.59	0.400	"	"	"	"	"	"
Lead	6.25	0.200	"	"	"	"	"	"
Nickel	5.03	0.400	"	"	"	"	"	"
Silver	0.0373	0.0200	"	"	"	"	"	"
Zinc	18.6	0.400	"	"	"	"	"	"
Selenium	0.260	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **07/17/24 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHG0492	07/18/24	07/18/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **07/17/24 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	29.5	0.0500	mg/L dry	1	BHG0507	07/18/24	07/19/24	EPA 6020B	
Magnesium	6.25	0.0500	"	"	"	"	"	"	
Sodium	5.08	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/17/24 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.222	0.00100	units	1	BHG0575	07/22/24	07/22/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/17/24 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/22/24 09:12

SS38@1'
2407209-05 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	92.4	%	1	BHG0500	07/18/24	07/19/24	Calculation

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/17/24 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.189	0.0100	mmhos/cm	1	BHG0510	07/18/24	07/19/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **07/17/24 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.55		pH Units	1	BHG0511	07/18/24	07/19/24	EPA 9045D	

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Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/22/24 09:12

SS39@4'
2407209-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/17/24 10:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHG0475	07/17/24	07/17/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **07/17/24 10:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0376	94.1 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0394	98.4 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0371	92.8 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/17/24 10:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHG0478	07/17/24	07/17/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/17/24 10:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	11.2	89.8 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/22/24 09:12

SS39@4'
2407209-06 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/17/24 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHG0490	07/18/24	07/18/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **07/17/24 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0152	45.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0175	52.6 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/17/24 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHG0498	07/18/24	07/19/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/17/24 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/22/24 09:12

SS39@4'
2407209-06 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	1.43	0.200	mg/kg dry	1	BHG0504	07/18/24	07/18/24	EPA 6020B
Barium	10.9	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	2.55	0.400	"	"	"	"	"	"
Lead	3.60	0.200	"	"	"	"	"	"
Nickel	4.00	0.400	"	"	"	"	"	"
Silver	ND	0.0200	"	"	"	"	"	"
Zinc	21.4	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **07/17/24 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHG0492	07/18/24	07/18/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **07/17/24 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	246	0.0500	mg/L dry	1	BHG0507	07/18/24	07/19/24	EPA 6020B	
Magnesium	30.8	0.0500	"	"	"	"	"	"	
Sodium	18.9	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/17/24 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.302	0.00100	units	1	BHG0575	07/22/24	07/22/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Broomfield CO, 80020

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Project Number: [none]
Project Manager: Karen Olson

Reported:
07/22/24 09:12

SS39@4'
2407209-06 (Soil)

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Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/17/24 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	89.2		%	1	BHG0500	07/18/24	07/19/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/17/24 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.58	0.0100	mmhos/cm	1	BHG0510	07/18/24	07/19/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **07/17/24 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.76		pH Units	1	BHG0511	07/18/24	07/19/24	EPA 9045D	

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Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/22/24 09:12

SS40@2'
2407209-07 (Soil)

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Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/17/24 10:24**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHG0475	07/17/24	07/18/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **07/17/24 10:24**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0366	91.4 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0393	98.2 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0380	95.0 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/17/24 10:24**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHG0478	07/17/24	07/17/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/17/24 10:24**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	9.50	76.0 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Tasman Geosciences
6855 W. 119th Ave.
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Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/22/24 09:12

SS40@2'
2407209-07 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/17/24 10:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHG0490	07/18/24	07/18/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **07/17/24 10:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0178	53.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0172	51.6 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/17/24 10:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHG0498	07/18/24	07/19/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/17/24 10:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/22/24 09:12

SS40@2'
2407209-07 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	2.69	0.200	mg/kg dry	1	BHG0504	07/18/24	07/18/24	EPA 6020B
Barium	297	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	3.82	0.400	"	"	"	"	"	"
Lead	6.14	0.200	"	"	"	"	"	"
Nickel	4.91	0.400	"	"	"	"	"	"
Silver	0.0284	0.0200	"	"	"	"	"	"
Zinc	18.5	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **07/17/24 10:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHG0492	07/18/24	07/18/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **07/17/24 10:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	67.1	0.0500	mg/L dry	1	BHG0507	07/18/24	07/19/24	EPA 6020B	
Magnesium	12.8	0.0500	"	"	"	"	"	"	
Sodium	32.7	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/17/24 10:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.959	0.00100	units	1	BHG0575	07/22/24	07/22/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Tasman Geosciences
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Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/22/24 09:12

SS40@2'
2407209-07 (Soil)

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Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/17/24 10:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	90.2		%	1	BHG0500	07/18/24	07/19/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/17/24 10:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.574	0.0100	mmhos/cm	1	BHG0510	07/18/24	07/19/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **07/17/24 10:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.26		pH Units	1	BHG0511	07/18/24	07/19/24	EPA 9045D	

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Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/22/24 09:12

SS41@3'
2407209-08 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/17/24 10:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHG0475	07/17/24	07/18/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **07/17/24 10:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0364	91.1 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0393	98.2 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0383	95.8 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/17/24 10:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHG0478	07/17/24	07/18/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/17/24 10:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	9.01	72.1 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Project: PDC - Merritt Wellhead Pad

Project Number: [none]
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Reported:
07/22/24 09:12

SS41@3'
2407209-08 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/17/24 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHG0490	07/18/24	07/18/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **07/17/24 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0205	61.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0199	59.7 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/17/24 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHG0498	07/18/24	07/19/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/17/24 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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Project Number: [none]
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Reported:
07/22/24 09:12

SS41@3'
2407209-08 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	1.67	0.200	mg/kg dry	1	BHG0504	07/18/24	07/18/24	EPA 6020B
Barium	105	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	4.14	0.400	"	"	"	"	"	"
Lead	6.08	0.200	"	"	"	"	"	"
Nickel	4.98	0.400	"	"	"	"	"	"
Silver	0.0265	0.0200	"	"	"	"	"	"
Zinc	25.0	0.400	"	"	"	"	"	"
Selenium	0.273	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **07/17/24 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHG0492	07/18/24	07/18/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **07/17/24 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	571	0.0500	mg/L dry	1	BHG0507	07/18/24	07/19/24	EPA 6020B	
Magnesium	52.3	0.0500	"	"	"	"	"	"	
Sodium	102	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/17/24 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.10	0.00100	units	1	BHG0575	07/22/24	07/22/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/17/24 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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Tasman Geosciences
6855 W. 119th Ave.
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Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/22/24 09:12

SS41@3'
2407209-08 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	88.0	%	1	BHG0500	07/18/24	07/19/24	Calculation

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/17/24 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	3.54	0.0100	mmhos/cm	1	BHG0510	07/18/24	07/19/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **07/17/24 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.80		pH Units	1	BHG0511	07/18/24	07/19/24	EPA 9045D	

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Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/22/24 09:12

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0475 - EPA 5030 Soil MS

Blank (BHG0475-BLK1)

Prepared: 07/17/24 Analyzed: 07/18/24

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0347		"	0.0400		86.8	50-150			
Surrogate: Toluene-d8	0.0394		"	0.0400		98.4	50-150			
Surrogate: 4-Bromofluorobenzene	0.0376		"	0.0400		94.0	50-150			

LCS (BHG0475-BS1)

Prepared: 07/17/24 Analyzed: 07/18/24

Benzene	0.141	0.0020	mg/kg	0.150		94.2	70-130			
Toluene	0.138	0.0050	"	0.150		92.1	70-130			
Ethylbenzene	0.143	0.0050	"	0.150		95.3	70-130			
m,p-Xylene	0.292	0.010	"	0.300		97.2	70-130			
o-Xylene	0.136	0.0050	"	0.150		90.9	70-130			
1,2,4-Trimethylbenzene	0.135	0.0050	"	0.150		89.9	70-130			
1,3,5-Trimethylbenzene	0.135	0.0050	"	0.150		89.7	70-130			
Naphthalene	0.131	0.0038	"	0.150		87.2	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0347		"	0.0400		86.8	50-150			
Surrogate: Toluene-d8	0.0406		"	0.0400		101	50-150			
Surrogate: 4-Bromofluorobenzene	0.0387		"	0.0400		96.8	50-150			

Matrix Spike (BHG0475-MS1)

Source: 2407209-01

Prepared: 07/17/24 Analyzed: 07/18/24

Benzene	0.118	0.0020	mg/kg	0.150	ND	78.4	70-130			
Toluene	0.115	0.0050	"	0.150	ND	77.0	70-130			
Ethylbenzene	0.120	0.0050	"	0.150	ND	79.7	70-130			
m,p-Xylene	0.244	0.010	"	0.300	ND	81.4	70-130			
o-Xylene	0.116	0.0050	"	0.150	ND	77.2	70-130			
1,2,4-Trimethylbenzene	0.116	0.0050	"	0.150	ND	77.1	70-130			
1,3,5-Trimethylbenzene	0.113	0.0050	"	0.150	ND	75.6	70-130			
Naphthalene	0.120	0.0038	"	0.150	ND	79.8	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0364		"	0.0400		91.1	50-150			
Surrogate: Toluene-d8	0.0395		"	0.0400		98.7	50-150			
Surrogate: 4-Bromofluorobenzene	0.0378		"	0.0400		94.4	50-150			

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Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/22/24 09:12

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0475 - EPA 5030 Soil MS

Matrix Spike Dup (BHG0475-MSD1)

Source: 2407209-01

Prepared: 07/17/24 Analyzed: 07/18/24

Benzene	0.121	0.0020	mg/kg	0.150	ND	80.7	70-130	2.97	30	
Toluene	0.117	0.0050	"	0.150	ND	77.8	70-130	1.11	30	
Ethylbenzene	0.119	0.0050	"	0.150	ND	79.6	70-130	0.176	30	
m,p-Xylene	0.247	0.010	"	0.300	ND	82.3	70-130	1.08	30	
o-Xylene	0.117	0.0050	"	0.150	ND	78.1	70-130	1.21	30	
1,2,4-Trimethylbenzene	0.121	0.0050	"	0.150	ND	80.3	70-130	4.12	30	
1,3,5-Trimethylbenzene	0.118	0.0050	"	0.150	ND	78.5	70-130	3.71	30	
Naphthalene	0.122	0.0038	"	0.150	ND	81.3	70-130	1.81	30	
Surrogate: 1,2-Dichloroethane-d4	0.0354		"	0.0400		88.5	50-150			
Surrogate: Toluene-d8	0.0399		"	0.0400		99.8	50-150			
Surrogate: 4-Bromofluorobenzene	0.0385		"	0.0400		96.2	50-150			

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Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/22/24 09:12

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0478 - EPA 3550A

Blank (BHG0478-BLK1)

Prepared: 07/17/24 Analyzed: 07/18/24

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: o-Terphenyl	13.1		"	12.5		105	30-150			

LCS (BHG0478-BS1)

Prepared: 07/17/24 Analyzed: 07/18/24

C10-C28 (DRO)	476	50	mg/kg	500		95.2	70-130			
Surrogate: o-Terphenyl	12.4		"	12.5		98.9	30-150			

Matrix Spike (BHG0478-MS1)

Source: 2407204-01

Prepared: 07/17/24 Analyzed: 07/18/24

C10-C28 (DRO)	467	50	mg/kg	500	5.92	92.2	70-130			
Surrogate: o-Terphenyl	12.2		"	12.5		97.3	30-150			

Matrix Spike Dup (BHG0478-MSD1)

Source: 2407204-01

Prepared: 07/17/24 Analyzed: 07/18/24

C10-C28 (DRO)	467	50	mg/kg	500	5.92	92.2	70-130	0.0221	20	
Surrogate: o-Terphenyl	12.2		"	12.5		97.4	30-150			

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Project: PDC - Merritt Wellhead Pad
Project Number: [none]
Project Manager: Karen Olson

Reported:
07/22/24 09:12

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0490 - EPA 5030 Soil MS

Blank (BHG0490-BLK1)

Prepared & Analyzed: 07/18/24

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
Surrogate: 2-Methylnaphthalene-d10	0.0246		"	0.0333		73.7	40-150			
Surrogate: Fluoranthene-d10	0.0219		"	0.0333		65.8	40-150			

LCS (BHG0490-BS1)

Prepared & Analyzed: 07/18/24

Acenaphthene	0.0244	0.00500	mg/kg	0.0333		73.2	31-137			
Anthracene	0.0246	0.00500	"	0.0333		73.7	30-120			
Benzo (a) anthracene	0.0270	0.00500	"	0.0333		81.1	30-120			
Benzo (a) pyrene	0.0240	0.00500	"	0.0333		71.9	30-120			
Benzo (b) fluoranthene	0.0246	0.00500	"	0.0333		73.8	30-120			
Benzo (k) fluoranthene	0.0248	0.00500	"	0.0333		74.5	30-120			
Chrysene	0.0265	0.00500	"	0.0333		79.6	30-120			
Dibenz (a,h) anthracene	0.0215	0.00500	"	0.0333		64.5	30-120			
Fluoranthene	0.0247	0.00500	"	0.0333		74.1	30-120			
Fluorene	0.0219	0.00500	"	0.0333		65.8	30-120			
Indeno (1,2,3-cd) pyrene	0.0130	0.00500	"	0.0333		39.0	30-120			
Pyrene	0.0277	0.00500	"	0.0333		83.2	35-142			
1-Methylnaphthalene	0.0263	0.00500	"	0.0333		78.9	35-142			
2-Methylnaphthalene	0.0202	0.00500	"	0.0333		60.6	35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0265		"	0.0333		79.4	40-150			
Surrogate: Fluoranthene-d10	0.0258		"	0.0333		77.5	40-150			

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Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/22/24 09:12

PAH by EPA Method 8270D SIM - Quality Control

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Analyte	Reporting			Spike Level	Source		%REC		RPD	
	Result	Limit	Units		Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0490 - EPA 5030 Soil MS

Matrix Spike (BHG0490-MS1)

Source: 2407209-01

Prepared & Analyzed: 07/18/24

Acenaphthene	0.0161	0.00500	mg/kg	0.0333	ND	48.4	31-137		
Anthracene	0.0153	0.00500	"	0.0333	ND	46.0	30-120		
Benzo (a) anthracene	0.0164	0.00500	"	0.0333	ND	49.1	30-120		
Benzo (a) pyrene	0.0140	0.00500	"	0.0333	ND	42.1	30-120		
Benzo (b) fluoranthene	0.0139	0.00500	"	0.0333	ND	41.7	30-120		
Benzo (k) fluoranthene	0.0143	0.00500	"	0.0333	ND	43.0	30-120		
Chrysene	0.0158	0.00500	"	0.0333	ND	47.5	30-120		
Dibenz (a,h) anthracene	0.0143	0.00500	"	0.0333	ND	42.8	30-120		
Fluoranthene	0.0141	0.00500	"	0.0333	ND	42.4	30-120		
Fluorene	0.0125	0.00500	"	0.0333	ND	37.5	30-120		
Indeno (1,2,3-cd) pyrene	0.0149	0.00500	"	0.0333	ND	44.6	30-120		
Pyrene	0.0171	0.00500	"	0.0333	ND	51.4	35-142		
1-Methylnaphthalene	0.0135	0.00500	"	0.0333	ND	40.6	15-130		
2-Methylnaphthalene	0.00926	0.00500	"	0.0333	ND	27.8	15-130		
Surrogate: 2-Methylnaphthalene-d10	0.0164		"	0.0333		49.3	40-150		
Surrogate: Fluoranthene-d10	0.0152		"	0.0333		45.5	40-150		

Matrix Spike Dup (BHG0490-MSD1)

Source: 2407209-01

Prepared & Analyzed: 07/18/24

Acenaphthene	0.0189	0.00500	mg/kg	0.0333	ND	56.7	31-137	15.8	30
Anthracene	0.0177	0.00500	"	0.0333	ND	53.2	30-120	14.4	30
Benzo (a) anthracene	0.0187	0.00500	"	0.0333	ND	56.0	30-120	13.2	30
Benzo (a) pyrene	0.0158	0.00500	"	0.0333	ND	47.4	30-120	11.9	30
Benzo (b) fluoranthene	0.0158	0.00500	"	0.0333	ND	47.5	30-120	12.9	30
Benzo (k) fluoranthene	0.0160	0.00500	"	0.0333	ND	48.0	30-120	11.0	30
Chrysene	0.0186	0.00500	"	0.0333	ND	55.9	30-120	16.2	30
Dibenz (a,h) anthracene	0.0160	0.00500	"	0.0333	ND	47.9	30-120	11.3	30
Fluoranthene	0.0175	0.00500	"	0.0333	ND	52.4	30-120	20.9	30
Fluorene	0.0172	0.00500	"	0.0333	ND	51.7	30-120	31.8	30
Indeno (1,2,3-cd) pyrene	0.0162	0.00500	"	0.0333	ND	48.6	30-120	8.64	30
Pyrene	0.0202	0.00500	"	0.0333	ND	60.5	35-142	16.2	30
1-Methylnaphthalene	0.0191	0.00500	"	0.0333	ND	57.2	15-130	34.1	50
2-Methylnaphthalene	0.0145	0.00500	"	0.0333	ND	43.6	15-130	44.4	50
Surrogate: 2-Methylnaphthalene-d10	0.0187		"	0.0333		56.0	40-150		
Surrogate: Fluoranthene-d10	0.0181		"	0.0333		54.4	40-150		

QR-02

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/22/24 09:12

Total Metals by EPA 6020B Hot Water Soluble Extraction - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0498 - EPA 3050B

Blank (BHG0498-BLK1)

Prepared & Analyzed: 07/18/24

Boron ND 2.00 mg/L

LCS (BHG0498-BS1)

Prepared & Analyzed: 07/18/24

Boron 5.07 2.00 mg/L 5.00 101 80-120

Duplicate (BHG0498-DUP1)

Source: 2407205-01

Prepared: 07/18/24 Analyzed: 07/19/24

Boron 1.15 2.00 mg/L 1.06 8.42 20

Matrix Spike (BHG0498-MS1)

Source: 2407205-01

Prepared: 07/18/24 Analyzed: 07/19/24

Boron 6.09 2.00 mg/L 4.95 1.06 102 75-125

Matrix Spike Dup (BHG0498-MSD1)

Source: 2407205-01

Prepared: 07/18/24 Analyzed: 07/19/24

Boron 6.44 2.00 mg/L 4.95 1.06 109 75-125 5.60 25

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Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/22/24 09:12

Total Metals by EPA 6020B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0504 - EPA 3050B

Blank (BHG0504-BLK1)

Prepared & Analyzed: 07/18/24

Arsenic	ND	0.200	mg/kg wet
Barium	ND	0.400	"
Cadmium	ND	0.200	"
Copper	ND	0.400	"
Lead	ND	0.200	"
Nickel	ND	0.400	"
Silver	ND	0.0200	"
Zinc	ND	0.400	"
Selenium	ND	0.260	"

LCS (BHG0504-BS1)

Prepared & Analyzed: 07/18/24

Arsenic	37.6	0.200	mg/kg wet	40.0	93.9	80-120	
Barium	49.3	0.400	"	40.0	123	80-120	QM-07
Cadmium	1.93	0.200	"	2.00	96.6	80-120	
Copper	40.7	0.400	"	40.0	102	80-120	
Lead	20.2	0.200	"	20.0	101	80-120	
Nickel	40.6	0.400	"	40.0	101	80-120	
Silver	1.98	0.0200	"	2.00	99.1	80-120	
Zinc	38.6	0.400	"	40.0	96.6	80-120	
Selenium	4.53	0.260	"	4.00	113	80-120	

Duplicate (BHG0504-DUP1)

Source: 2407204-01

Prepared & Analyzed: 07/18/24

Arsenic	1.05	0.200	mg/kg dry	0.912	14.4	20	
Barium	208	0.400	"	127	48.5	20	QR-02
Cadmium	0.188	0.200	"	0.126	39.3	20	QR-01
Copper	6.80	0.400	"	7.42	8.76	20	
Lead	16.4	0.200	"	16.6	1.36	20	
Nickel	5.96	0.400	"	5.61	5.95	20	
Silver	0.0701	0.0200	"	0.0695	0.835	20	
Zinc	21.5	0.400	"	22.2	3.15	20	
Selenium	ND	0.260	"	ND		20	

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Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/22/24 09:12

Total Metals by EPA 6020B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0504 - EPA 3050B

Matrix Spike (BHG0504-MS1)			Source: 2407204-01		Prepared & Analyzed: 07/18/24						
Arsenic	15.0	0.200	mg/kg dry	48.8	0.912	28.8	75-125				QM-05
Barium	230	0.400	"	48.8	127	212	75-125				QM-07
Cadmium	2.36	0.200	"	2.44	0.126	91.5	75-125				
Copper	24.4	0.400	"	48.8	7.42	34.9	75-125				QM-05
Lead	38.2	0.200	"	24.4	16.6	88.3	75-125				
Nickel	23.1	0.400	"	48.8	5.61	35.8	75-125				QM-05
Silver	2.39	0.0200	"	2.44	0.0695	95.0	75-125				
Zinc	36.9	0.400	"	48.8	22.2	30.0	75-125				QM-05
Selenium	4.50	0.260	"	4.88	ND	92.1	75-125				

Matrix Spike Dup (BHG0504-MSD1)			Source: 2407204-01		Prepared & Analyzed: 07/18/24						
Arsenic	14.0	0.200	mg/kg dry	50.0	0.912	26.2	75-125	6.62	25		QM-05
Barium	214	0.400	"	50.0	127	175	75-125	7.28	25		QM-07
Cadmium	2.44	0.200	"	2.50	0.126	92.7	75-125	3.47	25		
Copper	21.7	0.400	"	50.0	7.42	28.5	75-125	12.1	25		QM-05
Lead	36.4	0.200	"	25.0	16.6	79.4	75-125	4.66	25		
Nickel	20.4	0.400	"	50.0	5.61	29.5	75-125	12.5	25		QM-05
Silver	2.39	0.0200	"	2.50	0.0695	93.0	75-125	0.153	25		
Zinc	36.0	0.400	"	50.0	22.2	27.7	75-125	2.34	25		QM-05
Selenium	4.74	0.260	"	5.00	ND	94.8	75-125	5.18	25		

Post Spike (BHG0504-PS1)			Source: 2407204-01		Prepared: 07/18/24 Analyzed: 07/19/24						
Arsenic	37.3		ug/l	100	1.75	35.6	75-125				QM-01
Barium	350		"	100	244	106	75-125				
Cadmium	5.24		"	5.00	0.243	100	75-125				
Copper	53.3		"	100	14.3	39.1	75-125				QM-01
Lead	82.6		"	50.0	31.9	101	75-125				
Nickel	49.6		"	100	10.8	38.8	75-125				QM-01
Silver	5.16		"	5.00	0.134	101	75-125				
Zinc	80.3		"	100	42.7	37.6	75-125				QM-01
Selenium	11.5		"	10.0	0.116	114	75-125				

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Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/22/24 09:12

Hexavalent Chromium by EPA Method 7196 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0492 - 3060A Mod

Blank (BHG0492-BLK1)

Prepared & Analyzed: 07/18/24

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BHG0492-BS1)

Prepared & Analyzed: 07/18/24

Chromium, Hexavalent 25.3 0.30 mg/kg wet 25.0 101 80-120

Duplicate (BHG0492-DUP1)

Source: 2407206-01

Prepared & Analyzed: 07/18/24

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BHG0492-MS1)

Source: 2407206-01

Prepared & Analyzed: 07/18/24

Chromium, Hexavalent 27.2 0.30 mg/kg dry 26.4 ND 103 75-125

Matrix Spike Dup (BHG0492-MSD1)

Source: 2407206-01

Prepared & Analyzed: 07/18/24

Chromium, Hexavalent 26.9 0.30 mg/kg dry 26.4 ND 102 75-125 1.17 20

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Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/22/24 09:12

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0507 - General Preparation

Blank (BHG0507-BLK1)

Prepared: 07/18/24 Analyzed: 07/19/24

Calcium	ND	0.0500	mg/L wet
Magnesium	ND	0.0500	"
Sodium	ND	0.0500	"

LCS (BHG0507-BS1)

Prepared: 07/18/24 Analyzed: 07/19/24

Calcium	5.24	0.0500	mg/L wet	5.00	105	70-130
Magnesium	5.35	0.0500	"	5.00	107	70-130
Sodium	5.31	0.0500	"	5.00	106	70-130

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Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/22/24 09:12

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD	
		Limit	Units		Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0500 - General Preparation

Duplicate (BHG0500-DUP1)		Source: 2407205-01		Prepared: 07/18/24 Analyzed: 07/19/24	
% Solids	86.3		%	85.3	1.16 20

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Tasman Geosciences
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Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/22/24 09:12

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD	
		Limit	Units		Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0510 - General Preparation

Blank (BHG0510-BLK1)

Prepared: 07/18/24 Analyzed: 07/19/24

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BHG0510-BS1)

Prepared: 07/18/24 Analyzed: 07/19/24

Specific Conductance (EC) 0.155 0.0100 mmhos/cm 0.150 103 95-105

Duplicate (BHG0510-DUP1)

Source: 2407205-01

Prepared: 07/18/24 Analyzed: 07/19/24

Specific Conductance (EC) 0.277 0.0100 mmhos/cm 0.278 0.649 20

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/22/24 09:12

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source Result	%REC		RPD		Notes
		Limit	Units			%REC	Limits	RPD	Limit	

Batch BHG0511 - General Preparation

LCS (BHG0511-BS1)

Prepared: 07/18/24 Analyzed: 07/19/24

pH	9.13	pH Units	9.18	99.5	95-105

Duplicate (BHG0511-DUP1)

Source: 2407205-01

Prepared: 07/18/24 Analyzed: 07/19/24

pH	9.02	pH Units	9.10	0.883	20

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/22/24 09:12

Notes and Definitions

QR-02	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
QR-01	Analyses are not controlled on RPD values from sample concentrations less than 10 times the reporting limit. QC batch accepted based on LCS and/or LCSD QC results.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
QM-05	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The associated LCS and/or LCSD were within acceptance limits, therefore the data are considered valid.
QM-01	The spike recovery for this QC sample is outside of established control limits due to sample matrix interference.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

July 23, 2024

Karen Olson

Tasman Geosciences

6855 W. 119th Ave.

Broomfield, CO 80020

RE: PDC - Merritt Sec 9 Wellhead Pad

Work Order #2407229

Enclosed are the results of analyses for samples received by Summit Scientific on 07/18/24 17:45. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Natalie Tessier". The signature is fluid and cursive, with the first name being more prominent.

Natalie Tessier For Paul Shrewsbury

President



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Sec 9 Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/23/24 10:56

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS42@1'	2407229-01	Soil	07/18/24 12:00	07/18/24 17:45
SS43@1'	2407229-02	Soil	07/18/24 12:05	07/18/24 17:45
SS44@1'	2407229-03	Soil	07/18/24 12:10	07/18/24 17:45
SS45@1'	2407229-04	Soil	07/18/24 12:15	07/18/24 17:45
SS46@2'	2407229-05	Soil	07/18/24 12:20	07/18/24 17:45
SS49@2.5'	2407229-06	Soil	07/18/24 13:00	07/18/24 17:45
SS50@2.5'	2407229-07	Soil	07/18/24 13:05	07/18/24 17:45

Summit Scientific

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Client: PDC	Send Data To: Project Manager: Karen Olson	Send Invoice To: Company: PDC
Address: 6855 W. 119th Ave.	E-Mail: karen.olson@chevron.com	Project Name/Location: Merritt Sec 9 well head pad
City/State/Zip: Broomfield/CO/ 80020		AFE#:
Phone: 303-487-1228	Project Name: Merritt Sec 9 wellhead pad	PO/Billing Codes:
Sampler Name: Tanner Lacy	Project Number:	Contact: Karen Olson

					Preservative				Matrix				Analysis Requested								Special Instructions	
ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO3	None	Other _____	Water	Soil	Air-Canister #	Other _____	VOC-915	TPH-915	PAH -915	pH,EC,SAR	Boron-915	Metals-915	HOLD			
1	SS42@1'	7/18/24	1200	2			X						X	X	X	X	X	X	X			SAR, EC, pH by saturated paste
2	SS43@1'		1205																			
3	SS44@1'		1210																			
4	SS45@1'		1215																			
5	SS46@2'		1220																			
6	SS49@2.5		1300																			
7	SS50@2.5		1305																			
8																						
9																						
10																						
11																						
12																						
13																						
14																						
15																						

Relinquished by: <i>[Signature]</i>	Date/Time: 7/18/24 1600	Received by: Tasman Lock Box	Date/Time: 7/18/24 1600	TAT Business Days	Field DO	Notes: * VOC and TPH 48hr turn around T2 on quick turn, remaining analytes on 48hr turnaround
Relinquished by: Tasman Lock Box	Date/Time: 7/18/24 1745	Received by: <i>[Signature]</i>	Date/Time: 7/18/24 1745	Same Day ☒	Field EC	
				1 Day ☐	Field ORP	
				2 Days* ☒	Field pH	
				3 Days ☐	Field Temp.	
				Standard ☐	Field Turb.	
Temperature Upon Receipt: 89	Corrected Temperature: 8	IR gun #: 1	HNO3 lot #:			

S₂

Sample Receipt Checklist

S2 Work Order# 2407229Client: Poc Client Project ID: Merritt sec 9 wellhead padShipped Via: H.D./P.U./FedEx/UPS/USPS/Other ☐ Airbill #: _____

☐	☐	☐	☐	☐

Matrix (Check all that apply) Air ☐ Soil/Solid ☒ Water ☐ Other ☐Temp (°C) 8.9Thermometer # 1

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	☒	☐	☐	
If custody seals are present, are they intact? ⁽¹⁾	☒	☐	☐	
Are samples due within 48 hours present?	☒	☐	☐	<u>Same day / 2 Day</u>
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe ²⁺), Hexavalent Chromium (Cr ⁶⁺ , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	☐	☒	☐	
Is a chain-of-custody (COC) form present and filled out Completely? ⁽¹⁾	☐	☒	☐	
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	☒	☐	☐	
Were all samples received intact? ⁽¹⁾	☒	☐	☐	
Was adequate sample volume provided? ⁽¹⁾	☒	☐	☐	
Does the COC agree with the number and type of sample bottles received? ⁽¹⁾	☒	☐	☐	
Do the sample IDs on the bottle labels match the COC? ⁽¹⁾	☐	☒	☐	<u>Samples 6 + 7 names did not match</u>
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	☐	☐	☒	
Are samples preserved that require preservation (excluding cooling)? ⁽¹⁾ Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	☐	☐	☒	
If samples are acid preserved for metals, is the pH ≤ 2? ⁽¹⁾ Record the pH in Comments.	☐	☐	☒	
If dissolved metals are requested, were samples field filtered?	☐	☐	☒	
Additional Comments (if any): <u>Sample 6 on jar - SS2903</u> <u>Sample 7 on jar - SS3003</u>				
⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.				

AB
Custodian Printed Name

7/18/24
Date/Time



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Sec 9 Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/23/24 10:56

SS42@1'
2407229-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/18/24 12:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.0020	mg/kg	1	BHG0518	07/18/24	07/18/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **07/18/24 12:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4	0.0423	106 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0402	100 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0394	98.5 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/18/24 12:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (DRO)	ND	50	mg/kg	1	BHG0515	07/18/24	07/18/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/18/24 12:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: o-Terphenyl	13.1	105 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Sec 9 Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/23/24 10:56

SS42@1'
2407229-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/18/24 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHG0520	07/19/24	07/19/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **07/18/24 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0150	44.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0148	44.3 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/18/24 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHG0526	07/19/24	07/20/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/18/24 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Sec 9 Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/23/24 10:56

SS42@1'
2407229-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	6.18	0.179	mg/kg dry	1	BHG0533	07/19/24	07/20/24	EPA 6020B
Barium	318	0.357	"	"	"	"	"	"
Cadmium	ND	0.179	"	"	"	"	"	"
Copper	4.32	0.357	"	"	"	"	"	"
Lead	5.66	0.179	"	"	"	"	"	"
Nickel	4.99	0.357	"	"	"	"	"	"
Silver	0.0319	0.0179	"	"	"	"	"	"
Zinc	16.5	0.357	"	"	"	"	"	"
Selenium	ND	0.232	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **07/18/24 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHG0522	07/19/24	07/19/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **07/18/24 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	134	0.0500	mg/L dry	1	BHG0506	07/18/24	07/19/24	EPA 6020B	
Magnesium	27.2	0.0500	"	"	"	"	"	"	
Sodium	102	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/18/24 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.10	0.00100	units	1	BHG0577	07/22/24	07/22/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Sec 9 Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/23/24 10:56

SS42@1'
2407229-01 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/18/24 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	90.7		%	1	BHG0530	07/19/24	07/22/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/18/24 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.27	0.0100	mmhos/cm	1	BHG0509	07/18/24	07/19/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **07/18/24 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.95		pH Units	1	BHG0508	07/18/24	07/19/24	EPA 9045D	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Sec 9 Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/23/24 10:56

SS43@1'
2407229-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/18/24 12:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHG0518	07/18/24	07/18/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **07/18/24 12:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0372	93.0 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0396	99.1 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0374	93.4 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/18/24 12:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHG0515	07/18/24	07/18/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/18/24 12:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	10.4	83.3 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Sec 9 Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/23/24 10:56

SS43@1'
2407229-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/18/24 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHG0520	07/19/24	07/19/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **07/18/24 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0156	46.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0166	49.7 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/18/24 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHG0526	07/19/24	07/20/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/18/24 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Sec 9 Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/23/24 10:56

SS43@1'
2407229-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	6.29	0.200	mg/kg dry	1	BHG0533	07/19/24	07/20/24	EPA 6020B
Barium	573	0.400	"	"	"	"	"	"
Cadmium	0.233	0.200	"	"	"	"	"	"
Copper	4.56	0.400	"	"	"	"	"	"
Lead	6.71	0.200	"	"	"	"	"	"
Nickel	5.73	0.400	"	"	"	"	"	"
Silver	0.0268	0.0200	"	"	"	"	"	"
Zinc	21.2	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **07/18/24 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHG0522	07/19/24	07/19/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **07/18/24 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	329	0.0500	mg/L dry	1	BHG0506	07/18/24	07/19/24	EPA 6020B	
Magnesium	63.7	0.0500	"	"	"	"	"	"	
Sodium	170	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/18/24 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.25	0.00100	units	1	BHG0577	07/22/24	07/22/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/18/24 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Sec 9 Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/23/24 10:56

SS43@1'
2407229-02 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	93.4	%	1	BHG0530	07/19/24	07/22/24	Calculation

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/18/24 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.291	0.0100	mmhos/cm	1	BHG0509	07/18/24	07/19/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **07/18/24 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.85		pH Units	1	BHG0508	07/18/24	07/19/24	EPA 9045D	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Sec 9 Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/23/24 10:56

SS44@1'
2407229-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/18/24 12:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHG0518	07/18/24	07/18/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **07/18/24 12:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0356	88.9 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0400	100 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0378	94.5 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/18/24 12:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHG0515	07/18/24	07/18/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/18/24 12:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	12.5	99.6 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Sec 9 Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/23/24 10:56

SS44@1'
2407229-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/18/24 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHG0520	07/19/24	07/19/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **07/18/24 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0141	42.2 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0149	44.8 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/18/24 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHG0526	07/19/24	07/20/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/18/24 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Sec 9 Wellhead Pad
Project Number: [none]
Project Manager: Karen Olson

Reported:
07/23/24 10:56

SS44@1'
2407229-03 (Soil)

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Total Metals by EPA 6020B

Arsenic	4.17	0.200	mg/kg dry	1	BHG0533	07/19/24	07/20/24	EPA 6020B
Barium	321	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	4.10	0.400	"	"	"	"	"	"
Lead	6.01	0.200	"	"	"	"	"	"
Nickel	5.35	0.400	"	"	"	"	"	"
Silver	0.0233	0.0200	"	"	"	"	"	"
Zinc	20.3	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **07/18/24 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHG0522	07/19/24	07/19/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **07/18/24 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	81.0	0.0500	mg/L dry	1	BHG0506	07/18/24	07/19/24	EPA 6020B	
Magnesium	12.1	0.0500	"	"	"	"	"	"	
Sodium	8.36	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/18/24 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.229	0.00100	units	1	BHG0577	07/22/24	07/22/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Sec 9 Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/23/24 10:56

SS44@1'
2407229-03 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/18/24 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	90.9		%	1	BHG0530	07/19/24	07/22/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/18/24 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.574	0.0100	mmhos/cm	1	BHG0509	07/18/24	07/19/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **07/18/24 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.06		pH Units	1	BHG0508	07/18/24	07/19/24	EPA 9045D	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Sec 9 Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/23/24 10:56

SS45@1'
2407229-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/18/24 12:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHG0518	07/18/24	07/18/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **07/18/24 12:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0436	109 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0389	97.3 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0400	99.9 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/18/24 12:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHG0515	07/18/24	07/18/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/18/24 12:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	7.06	56.4 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Sec 9 Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/23/24 10:56

SS45@1'
2407229-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/18/24 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHG0520	07/19/24	07/19/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	0.00525	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **07/18/24 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0162	48.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0135	40.4 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/18/24 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHG0526	07/19/24	07/20/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/18/24 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Sec 9 Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/23/24 10:56

SS45@1'
2407229-04 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	4.76	0.181	mg/kg dry	1	BHG0533	07/19/24	07/20/24	EPA 6020B	
Barium	384	0.362	"	"	"	"	"	"	
Cadmium	0.230	0.181	"	"	"	"	"	"	
Copper	5.03	0.362	"	"	"	"	"	"	
Lead	6.40	0.181	"	"	"	"	"	"	
Nickel	5.02	0.362	"	"	"	"	"	"	
Silver	0.0308	0.0181	"	"	"	"	"	"	
Zinc	22.9	0.362	"	"	"	"	"	"	
Selenium	0.268	0.236	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **07/18/24 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHG0522	07/19/24	07/19/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **07/18/24 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	392	0.0500	mg/L dry	1	BHG0506	07/18/24	07/19/24	EPA 6020B	
Magnesium	76.6	0.0500	"	"	"	"	"	"	
Sodium	270	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/18/24 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.27	0.00100	units	1	BHG0577	07/22/24	07/22/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/18/24 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Sec 9 Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/23/24 10:56

SS45@1'
2407229-04 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	95.3	%	1	BHG0530	07/19/24	07/22/24	Calculation

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/18/24 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	2.24	0.0100	mmhos/cm	1	BHG0509	07/18/24	07/19/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **07/18/24 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.78		pH Units	1	BHG0508	07/18/24	07/19/24	EPA 9045D	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Sec 9 Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/23/24 10:56

SS46@2'
2407229-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/18/24 12:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHG0518	07/18/24	07/18/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **07/18/24 12:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0399	99.8 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0401	100 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0413	103 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/18/24 12:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHG0515	07/18/24	07/18/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/18/24 12:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	10.4	83.3 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Tasman Geosciences
6855 W. 119th Ave.
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Project: PDC - Merritt Sec 9 Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/23/24 10:56

SS46@2'
2407229-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/18/24 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHG0520	07/19/24	07/19/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **07/18/24 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0136	40.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0143	43.0 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/18/24 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHG0526	07/19/24	07/20/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/18/24 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Sec 9 Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/23/24 10:56

SS46@2'
2407229-05 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	4.49	0.200	mg/kg dry	1	BHG0533	07/19/24	07/20/24	EPA 6020B
Barium	407	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	4.03	0.400	"	"	"	"	"	"
Lead	7.10	0.200	"	"	"	"	"	"
Nickel	4.82	0.400	"	"	"	"	"	"
Silver	0.0245	0.0200	"	"	"	"	"	"
Zinc	23.4	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **07/18/24 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHG0522	07/19/24	07/19/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **07/18/24 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	585	0.0500	mg/L dry	1	BHG0506	07/18/24	07/19/24	EPA 6020B	
Magnesium	108	0.0500	"	"	"	"	"	"	
Sodium	128	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/18/24 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.28	0.00100	units	1	BHG0577	07/22/24	07/22/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Sec 9 Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/23/24 10:56

SS46@2'
2407229-05 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/18/24 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	92.0		%	1	BHG0530	07/19/24	07/22/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/18/24 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	3.11	0.0100	mmhos/cm	1	BHG0509	07/18/24	07/19/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **07/18/24 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.72		pH Units	1	BHG0508	07/18/24	07/19/24	EPA 9045D	

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Broomfield CO, 80020

Project: PDC - Merritt Sec 9 Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/23/24 10:56

SS49@2.5'
2407229-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/18/24 13:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHG0518	07/18/24	07/18/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **07/18/24 13:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0398	99.5 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0389	97.2 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0382	95.6 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/18/24 13:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHG0515	07/18/24	07/19/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/18/24 13:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	9.48	75.9 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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6855 W. 119th Ave.
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Project: PDC - Merritt Sec 9 Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/23/24 10:56

SS49@2.5'
2407229-06 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/18/24 13:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHG0520	07/19/24	07/19/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **07/18/24 13:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0136	40.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0137	41.1 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/18/24 13:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHG0526	07/19/24	07/20/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/18/24 13:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

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Project: PDC - Merritt Sec 9 Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/23/24 10:56

SS49@2.5'
2407229-06 (Soil)

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Total Metals by EPA 6020B

Arsenic	3.93	0.200	mg/kg dry	1	BHG0533	07/19/24	07/20/24	EPA 6020B
Barium	125	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	3.61	0.400	"	"	"	"	"	"
Lead	7.02	0.200	"	"	"	"	"	"
Nickel	5.22	0.400	"	"	"	"	"	"
Silver	ND	0.0200	"	"	"	"	"	"
Zinc	22.9	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **07/18/24 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHG0522	07/19/24	07/19/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **07/18/24 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	245	0.0500	mg/L dry	1	BHG0506	07/18/24	07/19/24	EPA 6020B	
Magnesium	59.7	0.0500	"	"	"	"	"	"	
Sodium	38.0	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/18/24 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.565	0.00100	units	1	BHG0577	07/22/24	07/22/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Tasman Geosciences
6855 W. 119th Ave.
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Project: PDC - Merritt Sec 9 Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/23/24 10:56

SS49@2.5'
2407229-06 (Soil)

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Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/18/24 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	86.9		%	1	BHG0530	07/19/24	07/22/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/18/24 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.64	0.0100	mmhos/cm	1	BHG0509	07/18/24	07/19/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **07/18/24 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.88		pH Units	1	BHG0508	07/18/24	07/19/24	EPA 9045D	

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Project: PDC - Merritt Sec 9 Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/23/24 10:56

SS50@2.5'
2407229-07 (Soil)

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Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/18/24 13:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHG0518	07/18/24	07/18/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **07/18/24 13:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0406	101 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0402	100 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0368	92.0 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/18/24 13:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHG0515	07/18/24	07/19/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/18/24 13:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	8.80	70.4 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Tasman Geosciences
6855 W. 119th Ave.
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Project: PDC - Merritt Sec 9 Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/23/24 10:56

SS50@2.5'
2407229-07 (Soil)

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PAH by EPA Method 8270D SIM

Date Sampled: **07/18/24 13:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHG0520	07/19/24	07/19/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **07/18/24 13:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0141	42.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0162	48.7 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/18/24 13:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHG0526	07/19/24	07/20/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/18/24 13:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

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Project: PDC - Merritt Sec 9 Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/23/24 10:56

SS50@2.5'
2407229-07 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	5.55	0.200	mg/kg dry	1	BHG0533	07/19/24	07/20/24	EPA 6020B
Barium	156	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	4.07	0.400	"	"	"	"	"	"
Lead	7.44	0.200	"	"	"	"	"	"
Nickel	5.00	0.400	"	"	"	"	"	"
Silver	0.0311	0.0200	"	"	"	"	"	"
Zinc	19.5	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **07/18/24 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHG0522	07/19/24	07/19/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **07/18/24 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	298	0.0500	mg/L dry	1	BHG0506	07/18/24	07/19/24	EPA 6020B	
Magnesium	56.4	0.0500	"	"	"	"	"	"	
Sodium	87.5	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/18/24 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.22	0.00100	units	1	BHG0577	07/22/24	07/22/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Sec 9 Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/23/24 10:56

SS50@2.5'
2407229-07 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/18/24 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	90.1		%	1	BHG0530	07/19/24	07/22/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/18/24 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.09	0.0100	mmhos/cm	1	BHG0509	07/18/24	07/19/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **07/18/24 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.72		pH Units	1	BHG0508	07/18/24	07/19/24	EPA 9045D	

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Sec 9 Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/23/24 10:56

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0518 - EPA 5030 Soil MS

Blank (BHG0518-BLK1)

Prepared: 07/18/24 Analyzed: 07/19/24

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0396		"	0.0400		98.9	50-150			
Surrogate: Toluene-d8	0.0402		"	0.0400		100	50-150			
Surrogate: 4-Bromofluorobenzene	0.0398		"	0.0400		99.6	50-150			

LCS (BHG0518-BS1)

Prepared: 07/18/24 Analyzed: 07/19/24

Benzene	0.0825	0.0020	mg/kg	0.100		82.5	70-130			
Toluene	0.0989	0.0050	"	0.100		98.9	70-130			
Ethylbenzene	0.0891	0.0050	"	0.100		89.1	70-130			
m,p-Xylene	0.185	0.010	"	0.200		92.4	70-130			
o-Xylene	0.0938	0.0050	"	0.100		93.8	70-130			
1,2,4-Trimethylbenzene	0.0861	0.0050	"	0.100		86.1	70-130			
1,3,5-Trimethylbenzene	0.0857	0.0050	"	0.100		85.7	70-130			
Naphthalene	0.0740	0.0038	"	0.100		74.0	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0417		"	0.0400		104	50-150			
Surrogate: Toluene-d8	0.0420		"	0.0400		105	50-150			
Surrogate: 4-Bromofluorobenzene	0.0383		"	0.0400		95.8	50-150			

Matrix Spike (BHG0518-MS1)

Source: 2407229-01

Prepared: 07/18/24 Analyzed: 07/19/24

Benzene	0.0628	0.0020	mg/kg	0.100	ND	62.8	70-130			QM-05
Toluene	0.0742	0.0050	"	0.100	ND	74.2	70-130			
Ethylbenzene	0.0635	0.0050	"	0.100	ND	63.5	70-130			QM-05
m,p-Xylene	0.140	0.010	"	0.200	ND	70.0	70-130			
o-Xylene	0.0716	0.0050	"	0.100	ND	71.6	70-130			
1,2,4-Trimethylbenzene	0.0492	0.0050	"	0.100	ND	49.2	70-130			QM-05
1,3,5-Trimethylbenzene	0.0570	0.0050	"	0.100	ND	57.0	70-130			QM-05
Naphthalene	0.0475	0.0038	"	0.100	ND	47.5	70-130			QM-05
Surrogate: 1,2-Dichloroethane-d4	0.0375		"	0.0400		93.7	50-150			
Surrogate: Toluene-d8	0.0407		"	0.0400		102	50-150			
Surrogate: 4-Bromofluorobenzene	0.0369		"	0.0400		92.3	50-150			

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Sec 9 Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/23/24 10:56

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0518 - EPA 5030 Soil MS

Matrix Spike Dup (BHG0518-MSD1)		Source: 2407229-01			Prepared: 07/18/24 Analyzed: 07/19/24					
Benzene	0.0642	0.0020	mg/kg	0.100	ND	64.2	70-130	2.17	30	QM-05
Toluene	0.0751	0.0050	"	0.100	ND	75.1	70-130	1.21	30	
Ethylbenzene	0.0636	0.0050	"	0.100	ND	63.6	70-130	0.142	30	QM-05
m,p-Xylene	0.138	0.010	"	0.200	ND	68.9	70-130	1.55	30	QM-05
o-Xylene	0.0703	0.0050	"	0.100	ND	70.3	70-130	1.86	30	
1,2,4-Trimethylbenzene	0.0514	0.0050	"	0.100	ND	51.4	70-130	4.24	30	QM-05
1,3,5-Trimethylbenzene	0.0578	0.0050	"	0.100	ND	57.8	70-130	1.25	30	QM-05
Naphthalene	0.0472	0.0038	"	0.100	ND	47.2	70-130	0.570	30	QM-05
Surrogate: 1,2-Dichloroethane-d4		0.0382	"	0.0400		95.4	50-150			
Surrogate: Toluene-d8		0.0416	"	0.0400		104	50-150			
Surrogate: 4-Bromofluorobenzene		0.0369	"	0.0400		92.2	50-150			

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Project: PDC - Merritt Sec 9 Wellhead Pad
Project Number: [none]
Project Manager: Karen Olson

Reported:
07/23/24 10:56

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0515 - EPA 3550A

Blank (BHG0515-BLK1)

Prepared: 07/18/24 Analyzed: 07/19/24

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: o-Terphenyl	11.9		"	12.5		95.5	30-150			

LCS (BHG0515-BS1)

Prepared: 07/18/24 Analyzed: 07/19/24

C10-C28 (DRO)	519	50	mg/kg	500		104	70-130			
Surrogate: o-Terphenyl	10.6		"	12.5		84.8	30-150			

Matrix Spike (BHG0515-MS1)

Source: 2407229-01

Prepared: 07/18/24 Analyzed: 07/19/24

C10-C28 (DRO)	481	50	mg/kg	500	9.38	94.3	70-130			
Surrogate: o-Terphenyl	9.21		"	12.5		73.7	30-150			

Matrix Spike Dup (BHG0515-MSD1)

Source: 2407229-01

Prepared: 07/18/24 Analyzed: 07/19/24

C10-C28 (DRO)	535	50	mg/kg	500	9.38	105	70-130	10.7	20	
Surrogate: o-Terphenyl	11.2		"	12.5		89.5	30-150			

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Project: PDC - Merritt Sec 9 Wellhead Pad
Project Number: [none]
Project Manager: Karen Olson

Reported:
07/23/24 10:56

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0520 - EPA 5030 Soil MS

Blank (BHG0520-BLK1)

Prepared & Analyzed: 07/19/24

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
Surrogate: 2-Methylnaphthalene-d10	0.0177		"	0.0333		53.2	40-150			
Surrogate: Fluoranthene-d10	0.0193		"	0.0333		57.8	40-150			

LCS (BHG0520-BS1)

Prepared & Analyzed: 07/19/24

Acenaphthene	0.0205	0.00500	mg/kg	0.0333		61.5	31-137			
Anthracene	0.0216	0.00500	"	0.0333		64.8	30-120			
Benzo (a) anthracene	0.0215	0.00500	"	0.0333		64.5	30-120			
Benzo (a) pyrene	0.0198	0.00500	"	0.0333		59.5	30-120			
Benzo (b) fluoranthene	0.0195	0.00500	"	0.0333		58.6	30-120			
Benzo (k) fluoranthene	0.0198	0.00500	"	0.0333		59.5	30-120			
Chrysene	0.0211	0.00500	"	0.0333		63.3	30-120			
Dibenz (a,h) anthracene	0.0193	0.00500	"	0.0333		58.0	30-120			
Fluoranthene	0.0208	0.00500	"	0.0333		62.5	30-120			
Fluorene	0.0215	0.00500	"	0.0333		64.4	30-120			
Indeno (1,2,3-cd) pyrene	0.0144	0.00500	"	0.0333		43.3	30-120			
Pyrene	0.0220	0.00500	"	0.0333		66.0	35-142			
1-Methylnaphthalene	0.0192	0.00500	"	0.0333		57.6	35-142			
2-Methylnaphthalene	0.0196	0.00500	"	0.0333		58.7	35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0194		"	0.0333		58.2	40-150			
Surrogate: Fluoranthene-d10	0.0213		"	0.0333		64.0	40-150			

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Project: PDC - Merritt Sec 9 Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/23/24 10:56

PAH by EPA Method 8270D SIM - Quality Control

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Analyte	Reporting			Spike Level	Source		%REC		RPD	
	Result	Limit	Units		Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0520 - EPA 5030 Soil MS

Matrix Spike (BHG0520-MS1)

Source: 2407229-01

Prepared & Analyzed: 07/19/24

Acenaphthene	0.0161	0.00500	mg/kg	0.0333	ND	48.4	31-137		
Anthracene	0.0160	0.00500	"	0.0333	ND	48.1	30-120		
Benzo (a) anthracene	0.0162	0.00500	"	0.0333	ND	48.5	30-120		
Benzo (a) pyrene	0.0144	0.00500	"	0.0333	ND	43.1	30-120		
Benzo (b) fluoranthene	0.0140	0.00500	"	0.0333	ND	41.9	30-120		
Benzo (k) fluoranthene	0.0142	0.00500	"	0.0333	ND	42.7	30-120		
Chrysene	0.0158	0.00500	"	0.0333	ND	47.5	30-120		
Dibenz (a,h) anthracene	0.0160	0.00500	"	0.0333	ND	47.9	30-120		
Fluoranthene	0.0153	0.00500	"	0.0333	ND	45.9	30-120		
Fluorene	0.0164	0.00500	"	0.0333	ND	49.1	30-120		
Indeno (1,2,3-cd) pyrene	0.0151	0.00500	"	0.0333	ND	45.3	30-120		
Pyrene	0.0170	0.00500	"	0.0333	ND	50.9	35-142		
1-Methylnaphthalene	0.0153	0.00500	"	0.0333	ND	45.8	15-130		
2-Methylnaphthalene	0.0157	0.00500	"	0.0333	ND	47.2	15-130		
Surrogate: 2-Methylnaphthalene-d10	0.0142		"	0.0333		42.6	40-150		
Surrogate: Fluoranthene-d10	0.0159		"	0.0333		47.8	40-150		

Matrix Spike Dup (BHG0520-MSD1)

Source: 2407229-01

Prepared & Analyzed: 07/19/24

Acenaphthene	0.0173	0.00500	mg/kg	0.0333	ND	52.0	31-137	7.27	30
Anthracene	0.0172	0.00500	"	0.0333	ND	51.6	30-120	7.03	30
Benzo (a) anthracene	0.0169	0.00500	"	0.0333	ND	50.7	30-120	4.52	30
Benzo (a) pyrene	0.0150	0.00500	"	0.0333	ND	45.1	30-120	4.50	30
Benzo (b) fluoranthene	0.0146	0.00500	"	0.0333	ND	43.7	30-120	4.27	30
Benzo (k) fluoranthene	0.0145	0.00500	"	0.0333	ND	43.5	30-120	1.93	30
Chrysene	0.0165	0.00500	"	0.0333	ND	49.6	30-120	4.35	30
Dibenz (a,h) anthracene	0.0137	0.00500	"	0.0333	ND	41.1	30-120	15.2	30
Fluoranthene	0.0163	0.00500	"	0.0333	ND	48.8	30-120	6.00	30
Fluorene	0.0175	0.00500	"	0.0333	ND	52.5	30-120	6.77	30
Indeno (1,2,3-cd) pyrene	0.0140	0.00500	"	0.0333	ND	42.0	30-120	7.41	30
Pyrene	0.0175	0.00500	"	0.0333	ND	52.5	35-142	3.15	30
1-Methylnaphthalene	0.0157	0.00500	"	0.0333	ND	47.2	15-130	3.15	50
2-Methylnaphthalene	0.0162	0.00500	"	0.0333	ND	48.6	15-130	2.87	50
Surrogate: 2-Methylnaphthalene-d10	0.0154		"	0.0333		46.1	40-150		
Surrogate: Fluoranthene-d10	0.0170		"	0.0333		50.9	40-150		

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt Sec 9 Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/23/24 10:56

Total Metals by EPA 6020B Hot Water Soluble Extraction - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0526 - EPA 3050B

Blank (BHG0526-BLK1)

Prepared: 07/19/24 Analyzed: 07/20/24

Boron ND 2.00 mg/L

LCS (BHG0526-BS1)

Prepared: 07/19/24 Analyzed: 07/20/24

Boron 4.84 2.00 mg/L 5.00 96.8 80-120

Duplicate (BHG0526-DUP1)

Source: 2407229-01

Prepared: 07/19/24 Analyzed: 07/20/24

Boron 0.122 2.00 mg/L 0.179 38.4 20 QR-01

Matrix Spike (BHG0526-MS1)

Source: 2407229-01

Prepared: 07/19/24 Analyzed: 07/20/24

Boron 5.58 2.00 mg/L 5.05 0.179 107 75-125

Matrix Spike Dup (BHG0526-MSD1)

Source: 2407229-01

Prepared: 07/19/24 Analyzed: 07/20/24

Boron 5.92 2.00 mg/L 5.05 0.179 114 75-125 5.93 25

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Project: PDC - Merritt Sec 9 Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/23/24 10:56

Total Metals by EPA 6020B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0533 - EPA 3050B

Blank (BHG0533-BLK1)

Prepared: 07/19/24 Analyzed: 07/20/24

Arsenic	ND	0.200	mg/kg wet
Barium	ND	0.400	"
Cadmium	ND	0.200	"
Copper	ND	0.400	"
Lead	ND	0.200	"
Nickel	ND	0.400	"
Silver	ND	0.0200	"
Zinc	ND	0.400	"
Selenium	ND	0.260	"

LCS (BHG0533-BS1)

Prepared: 07/19/24 Analyzed: 07/20/24

Arsenic	39.7	0.200	mg/kg wet	39.1	102	80-120	QM-07
Barium	47.3	0.400	"	39.1	121	80-120	
Cadmium	1.90	0.200	"	1.95	97.3	80-120	
Copper	37.6	0.400	"	39.1	96.2	80-120	
Lead	19.2	0.200	"	19.5	98.5	80-120	
Nickel	37.7	0.400	"	39.1	96.6	80-120	
Silver	1.91	0.0200	"	1.95	97.6	80-120	
Zinc	37.4	0.400	"	39.1	95.9	80-120	
Selenium	3.82	0.260	"	3.91	97.8	80-120	

Duplicate (BHG0533-DUP1)

Source: 2407206-01

Prepared: 07/19/24 Analyzed: 07/20/24

Arsenic	4.51	0.200	mg/kg dry	4.03	11.4	20
Barium	133	0.400	"	124	7.17	20
Cadmium	0.363	0.200	"	0.304	17.6	20
Copper	5.55	0.400	"	5.04	9.62	20
Lead	13.5	0.200	"	12.1	10.7	20
Nickel	5.64	0.400	"	5.07	10.6	20
Silver	0.0465	0.0200	"	0.0439	5.66	20
Zinc	23.5	0.400	"	21.2	10.1	20
Selenium	0.197	0.260	"	0.218	10.1	20

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Project: PDC - Merritt Sec 9 Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/23/24 10:56

Total Metals by EPA 6020B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0533 - EPA 3050B

Matrix Spike (BHG0533-MS1)		Source: 2407206-01			Prepared: 07/19/24 Analyzed: 07/20/24					
Arsenic	39.4	0.179	mg/kg dry	37.7	4.03	93.8	75-125			
Barium	163	0.357	"	37.7	124	102	75-125			
Cadmium	2.12	0.179	"	1.88	0.304	96.6	75-125			
Copper	22.7	0.357	"	37.7	5.04	47.0	75-125			QM-05
Lead	30.0	0.179	"	18.8	12.1	95.1	75-125			
Nickel	23.0	0.357	"	37.7	5.07	47.7	75-125			QM-05
Silver	1.77	0.0179	"	1.88	0.0439	91.4	75-125			
Zinc	42.4	0.357	"	37.7	21.2	56.2	75-125			QM-05
Selenium	2.78	0.232	"	3.77	0.218	68.0	75-125			QM-07

Matrix Spike Dup (BHG0533-MSD1)		Source: 2407206-01			Prepared: 07/19/24 Analyzed: 07/20/24					
Arsenic	40.9	0.200	mg/kg dry	39.6	4.03	93.1	75-125	3.95	25	
Barium	160	0.400	"	39.6	124	90.8	75-125	1.57	25	
Cadmium	2.16	0.200	"	1.98	0.304	93.6	75-125	1.68	25	
Copper	24.3	0.400	"	39.6	5.04	48.6	75-125	6.65	25	QM-05
Lead	30.8	0.200	"	19.8	12.1	94.3	75-125	2.60	25	
Nickel	24.8	0.400	"	39.6	5.07	49.7	75-125	7.21	25	QM-05
Silver	1.82	0.0200	"	1.98	0.0439	89.4	75-125	2.84	25	
Zinc	41.7	0.400	"	39.6	21.2	51.6	75-125	1.70	25	QM-05
Selenium	3.03	0.260	"	3.96	0.218	70.9	75-125	8.61	25	QM-07

Post Spike (BHG0533-PS1)		Source: 2407206-01			Prepared: 07/19/24 Analyzed: 07/20/24					
Arsenic	115		ug/l	100	9.55	105	75-125			
Barium	414		"	100	295	119	75-125			
Cadmium	5.78		"	5.00	0.722	101	75-125			
Copper	68.4		"	100	12.0	56.5	75-125			QM-01
Lead	80.0		"	50.0	28.8	102	75-125			
Nickel	68.3		"	100	12.0	56.3	75-125			QM-01
Silver	5.07		"	5.00	0.104	99.3	75-125			
Zinc	112		"	100	50.3	61.7	75-125			QM-01
Selenium	8.78		"	10.0	0.516	82.6	75-125			

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Project: PDC - Merritt Sec 9 Wellhead Pad
Project Number: [none]
Project Manager: Karen Olson

Reported:
07/23/24 10:56

Hexavalent Chromium by EPA Method 7196 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0522 - 3060A Mod

Blank (BHG0522-BLK1)

Prepared & Analyzed: 07/19/24

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BHG0522-BS1)

Prepared & Analyzed: 07/19/24

Chromium, Hexavalent 26.2 0.30 mg/kg wet 25.0 105 80-120

Duplicate (BHG0522-DUP1)

Source: 2407195-21

Prepared & Analyzed: 07/19/24

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BHG0522-MS1)

Source: 2407195-21

Prepared & Analyzed: 07/19/24

Chromium, Hexavalent 27.4 0.30 mg/kg dry 25.7 ND 107 75-125

Matrix Spike Dup (BHG0522-MSD1)

Source: 2407195-21

Prepared & Analyzed: 07/19/24

Chromium, Hexavalent 27.0 0.30 mg/kg dry 25.7 ND 105 75-125 1.32 20

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Project: PDC - Merritt Sec 9 Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/23/24 10:56

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD	
		Limit	Units		Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0506 - General Preparation

Blank (BHG0506-BLK1)

Prepared: 07/18/24 Analyzed: 07/19/24

Calcium	ND	0.0500	mg/L wet
Magnesium	ND	0.0500	"
Sodium	ND	0.0500	"

LCS (BHG0506-BS1)

Prepared: 07/18/24 Analyzed: 07/19/24

Calcium	5.22	0.0500	mg/L wet	5.00	104	70-130
Magnesium	4.87	0.0500	"	5.00	97.4	70-130
Sodium	6.52	0.0500	"	5.00	130	70-130

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Project: PDC - Merritt Sec 9 Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/23/24 10:56

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control

Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD	
		Limit	Units		Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0530 - General Preparation

Duplicate (BHG0530-DUP1)

Source: 2407229-01

Prepared: 07/19/24 Analyzed: 07/22/24

% Solids	90.2	%	90.7	0.501	20

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Project: PDC - Merritt Sec 9 Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/23/24 10:56

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD	
		Limit	Units		Result	%REC	Limits	RPD	Limit	Notes

Batch BHG0509 - General Preparation

Blank (BHG0509-BLK1)

Prepared: 07/18/24 Analyzed: 07/19/24

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BHG0509-BS1)

Prepared: 07/18/24 Analyzed: 07/19/24

Specific Conductance (EC) 0.155 0.0100 mmhos/cm 0.150 103 95-105

Duplicate (BHG0509-DUP1)

Source: 2407220-01

Prepared: 07/18/24 Analyzed: 07/19/24

Specific Conductance (EC) 0.146 0.0100 mmhos/cm 0.147 0.545 20

Summit Scientific

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Tasman Geosciences
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Broomfield CO, 80020

Project: PDC - Merritt Sec 9 Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/23/24 10:56

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source Result	%REC		RPD		Notes
		Limit	Units			%REC	Limits	RPD	Limit	

Batch BHG0508 - General Preparation

LCS (BHG0508-BS1)

Prepared: 07/18/24 Analyzed: 07/19/24

pH	9.13	pH Units	9.18	99.5	95-105

Duplicate (BHG0508-DUP1)

Source: 2407220-01

Prepared: 07/18/24 Analyzed: 07/19/24

pH	8.29	pH Units	8.35	0.721	20

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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Project: PDC - Merritt Sec 9 Wellhead Pad

Project Number: [none]
Project Manager: Karen Olson

Reported:
07/23/24 10:56

Notes and Definitions

QR-01	Analyses are not controlled on RPD values from sample concentrations less than 10 times the reporting limit. QC batch accepted based on LCS and/or LCSD QC results.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
QM-05	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The associated LCS and/or LCSD were within acceptance limits, therefore the data are considered valid.
QM-01	The spike recovery for this QC sample is outside of established control limits due to sample matrix interference.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference