

TABLE 1
SOIL SAMPLE FIELD DATA SUMMARY TABLE
RADEMACHER 32-30 WELLHEAD
WELD COUNTY, COLORADO
KERR-MCGEE OIL AND GAS ONSHORE, LP

Soil Sample Location	Date	Depth (ft. bgs)	PID Reading (ppm)	Visual Observation	Olfactory Observation	Latitude	Longitude	Submitted for Lab Analysis? (Y/N)
WELLHEAD EXCAVATION SAMPLES								
N Wall	12/28/2023	3	0.1	NS	NO	40.19554186	-104.9389248	N
E Wall	12/28/2023	3	0.1	NS	NO	40.19553228	-104.9389123	N
S Wall	12/28/2023	3	0.0	NS	NO	40.19552763	-104.9389238	N
W Wall	12/28/2023	3	0.3	NS	NO	40.19553694	-104.9389388	N
WH01-RISER @3'	12/28/2023	3	0.3	NS	NO	40.19553195	-104.938939	Y
B01 @6'	12/28/2023	6	1.5	NS	NO	40.19554178	-104.9389263	Y
	1/11/2024		3.8	NS	NO	40.19554178	-104.9389263	Y
FS01	12/28/2023	0.5	0.0	NS	NO	40.1955792	-104.9389192	N
FS02	12/28/2023	0.5	0.0	NS	NO	40.19554117	-104.9388656	N
FS03	12/28/2023	0.5	0.0	NS	NO	40.19548413	-104.938933	N
FS04	12/28/2023	0.5	0.0	NS	NO	40.1955359	-104.9389873	N
FLOWLINE POTHOLE SAMPLES								
FL01 @4'	1/2/2024	4	42.3	NS	Odor	40.19215247	-104.9385974	Y
SEPARATOR RISER SAMPLES								
SEP01-RISER @4'	1/2/2024	4	0.1	NS	NO	40.19208709	-104.9385846	Y
BACKGROUND SOIL SAMPLES								
NATIVE-BG01 @3'	12/28/2023	3	0.0	NS	NO	40.19560148	-104.9388661	Y
NATIVE-BG01 @6'	12/28/2023	6	0.0	NS	NO	40.19560148	-104.9388661	Y
NATIVE-BG02 @3'	12/28/2023	3	0.0	NS	NO	40.19552673	-104.9387789	Y
NATIVE-BG02 @6'	12/28/2023	6	0.0	NS	NO	40.19552673	-104.9387789	Y
NATIVE-BG03 @3'	12/28/2023	3	0.0	NS	NO	40.1954532	-104.9389667	Y
NATIVE-BG03 @6'	12/28/2023	6	0.0	NS	NO	40.1954532	-104.9389667	Y
NATIVE-BG04 @3'	12/28/2023	3	0.4	NS	NO	40.1955599	-104.9390163	Y
NATIVE-BG04 @6'	12/28/2023	6	0.7	NS	NO	40.1955599	-104.9390163	Y

Notes:

ft. - feet

bgs - below ground surface

PID - Photoionization detector

ppm - parts per million

NS - No Staining

NO - No Odor

NA - Not Analyzed/Not Applicable

TABLE 2-1
SOIL SAMPLE ANALYTICAL RESULTS
VOLATILE ORGANIC COMPOUNDS AND TOTAL PETROLEUM HYDROCARBONS
RADEMACHER 32-30 WELLHEAD
WELD COUNTY, COLORADO
KERR-MCGEE OIL AND GAS ONSHORE, LP

Soil Sample ID	Date	Depth (ft. bgs)	TPH-GRO+ (mg/kg)	TPH-DRO+ (mg/kg)	TPH-RRO+ (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	1,2,4- Trimethyl benzene (mg/kg)	1,3,5- Trimethyl benzene (mg/kg)	Naphthalene (mg/kg)
ECMC Table 915-1 Cleanup Concentrations (PGSSLs)			500			0.0026	0.69	0.78	9.9	0.0081	0.0087	0.0038
WELLHEAD EXCAVATION SAMPLES												
WH01-RISER @3'	12/28/2023	3	<0.200	<25.0	<100	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.002
B01 @6'	12/28/2023	6	<0.200	<25.0	<100	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.002
	1/11/2024		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FLOWLINE POTHOLE SAMPLES												
FL01 @4'	1/2/2024	4	<0.200	<25.0	<100	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.002
SEPARATOR RISER SAMPLES												
SEP01-RISER @4'	1/2/2024	4	<0.200	<25.0	<100	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.002

Notes:

ECMC - Energy and Carbon Management Commission
PGSSLs - Protection of Groundwater Soil Screening Level Concentrations
TPH - total petroleum hydrocarbons
GRO - gasoline range organics
DRO - diesel range organics
RRO - residual range organics
*Allowable level for TPH is 500 mg/kg for combined GRO, DRO, ORO

ft - feet
bgs - below ground surface
mg/kg - milligrams per kilogram
< - less than laboratory reporting limit
NA - Not Analyzed/Not Applicable
Bold - exceeds ECMC Table 915-1 allowable level and background

TABLE 2-2
SOIL SAMPLE ANALYTICAL RESULTS
POLYCYCLIC AROMATIC HYDROCARBONS
RADEMACHER 32-30 WELLHEAD
WELD COUNTY, COLORADO
KERR-MCGEE OIL AND GAS ONSHORE, LP

Soil Sample ID	Date	Depth (ft. bgs)	Acenaphthene (mg/kg)	Anthracene (mg/kg)	Benzo (a) anthracene (mg/kg)	Benzo (b) fluoranthene (mg/kg)	Benzo (k) fluoranthene (mg/kg)	Benzo (a) pyrene (mg/kg)	Chrysene (mg/kg)	Dibenz (a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	1-Methyl naphthalene (mg/kg)	2-Methyl naphthalene (mg/kg)	Pyrene (mg/kg)
ECMC Table 915-1 Cleanup Concentrations (PGSSLs)			0.55	5.8	0.011	0.3	2.9	0.24	9	0.096	8.9	0.54	0.98	0.006	0.019	1.3
WELLHEAD EXCAVATION SAMPLES																
WH01-RISER @3'	12/28/2023	3	<0.020	<0.020	<0.005	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.002	<0.002	<0.020
B01 @6'	12/28/2023	6	<0.020	<0.020	<0.005	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.002	<0.002	<0.020
	1/11/2024		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FLOWLINE POTHOLE SAMPLES																
FL01 @4'	1/2/2024	4	<0.020	<0.020	<0.005	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.002	<0.002	<0.020
SEPARATOR RISER SAMPLES																
SEP01-RISER @4'	1/2/2024	4	<0.020	<0.020	<0.005	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.002	<0.002	<0.020

Notes:
ECMC - Energy and Carbon Management Commission
PGSSLs - Protection of Groundwater Soil Screening Level Concentrations
ft - feet
bgs - below ground surface
mg/kg - milligrams per kilogram
< - less than laboratory reporting limit
NA - Not Analyzed/Not Applicable
Bold - exceeds ECMC Table 915-1 allowable level and background

TABLE 2-3
SOIL SAMPLE ANALYTICAL RESULTS
SOIL SUITABILITY FOR RECLAMATION
RADEMACHER 32-30 WELLHEAD
WELD COUNTY, COLORADO
KERR-MCGEE OIL AND GAS ONSHORE, LP

Soil Sample ID	Date	Depth (ft. bgs)	EC (mmhos/cm)	SAR	pH	Boron (mg/L)
ECMC Table 915-1 Cleanup Concentrations			4	6	6-8.3	2
Site-Specific Background Limits (3'-6')			2.45	3.55	8.38	0.534
WELLHEAD EXCAVATION SAMPLES						
WH01-RISER @3'	12/28/2023	3	0.667	0.181	8.19	0.351
B01 @6'	12/28/2023	6	6.86	0.898	11.0	0.587
	1/11/2024		0.732	NA	8.37*	NA
FLOWLINE POTHOLE SAMPLES						
FL01 @4'	1/2/2024	4	1.770	1.85	8.17	0.438
SEPARATOR RISER SAMPLES						
SEP01-RISER @4'	1/2/2024	4	0.358	0.564	8.38*	0.385
BACKGROUND SAMPLES						
NATIVE-BG01 @3'	12/28/2023	3	0.567	1.89	8.33	0.510
NATIVE-BG01 @6'	12/28/2023	6	0.799	2.29	8.38	0.290
NATIVE-BG02 @3'	12/28/2023	3	0.419	0.511	8.29	0.283
NATIVE-BG02 @6'	12/28/2023	6	0.462	1.28	8.29	0.293
NATIVE-BG03 @3'	12/28/2023	3	2.45	3.55	8.02	0.534
NATIVE-BG03 @6'	12/28/2023	6	1.14	0.985	8.28	0.221
NATIVE-BG04 @3'	12/28/2023	3	0.770	1.51	8.28	0.380
NATIVE-BG04 @6'	12/28/2023	6	1.12	1.71	8.29	0.329

Notes:

ECMC - Energy and Carbon Management Commission

EC - electrical conductivity

SAR - sodium adsorption ratio

< - less than laboratory reporting limit

NA - Not Analyzed/Not Applicable

Bold - exceeds ECMC Table 915-1 allowable level and background

*Exceeds Table 915-1 allowable level but within analytical variability of background

^ - site-specific background is shown as 1.08x maximum background to account for analytical variability

If site-specific backgrounds are less than cleanup concentrations, then cleanup concentration values will be applied.

ft - feet

bgs - below ground surface

mmhos/cm - millimhos per centimeter

mg/L - milligrams per liter

TABLE 2-4
SOIL SAMPLE ANALYTICAL RESULTS
METALS
RADEMACHER 32-30 WELLHEAD
WELD COUNTY, COLORADO
KERR-MCGEE OIL AND GAS ONSHORE, LP

Soil Sample ID	Date	Depth (ft. bgs)	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)
ECMC Table 915-1 Cleanup Concentrations (PGSSLs)			0.29	82	0.38	0.00067	46	14	26	0.26	0.8	370
Site-Specific Background Limits^ (3'-6')			8.85	270	0.251	NA	12.5	12.0	14.5	0.286	NA	54.8
WELLHEAD EXCAVATION SAMPLES												
WH01-RISER @3'	12/28/2023	3	5.96*	245*	0.200	<0.5	14.0	9.93	11.8	0.222	<0.0937	45.7
B01 @6'	12/28/2023	6	5.59*	1660	0.198	<0.5	17.7	9.33	15.8	0.152	<0.0930	41.5
	1/11/2024		NA	59.1	NA	NA	NA	NA	NA	NA	NA	NA
FLOWLINE POTHOLE SAMPLES												
FL01 @4'	1/2/2024	4	4.88*	45.5	<0.0866	<0.5	<8.66	5.02	4.66	<0.0866	<0.0866	23.5
SEPARATOR RISER SAMPLES												
SEP01-RISER @4'	1/2/2024	4	5.77*	100*	<0.0905	<0.5	<9.05	7.36	7.36	<0.0905	<0.0905	33.0
BACKGROUND SAMPLES												
NATIVE-BG01 @3'	12/28/2023	3	7.08	141	0.137	<0.5	<9.70	8.34	9.32	0.210	<0.0970	33.7
NATIVE-BG01 @6'	12/28/2023	6	3.79	106	0.0965	<0.5	<8.95	5.41	6.39	<0.0894	<0.0894	23.5
NATIVE-BG02 @3'	12/28/2023	3	6.09	190	0.201	<0.5	10.0	9.57	11.6	0.229	<0.0952	43.8
NATIVE-BG02 @6'	12/28/2023	6	3.88	156	0.0973	<0.5	<9.10	5.08	5.60	<0.0910	<0.0910	21.8
NATIVE-BG03 @3'	12/28/2023	3	3.75	216	<0.0925	<0.5	<9.25	6.19	7.71	<0.0925	<0.0925	26.1
NATIVE-BG03 @6'	12/28/2023	6	2.59	183	<0.0928	<0.5	<9.28	6.39	5.96	<0.0928	<0.0928	28.2
NATIVE-BG04 @3'	12/28/2023	3	3.88	139	<0.0946	<0.5	<9.46	4.74	5.89	0.164	<0.0946	19.6
NATIVE-BG04 @6'	12/28/2023	6	4.78	186	0.116	<0.5	<9.42	6.85	8.03	0.186	<0.0942	28.1

Notes:

ECMC - Energy and Carbon Management Commission

PGSSLs - Protection of Groundwater Soil Screening Level Concentrations

ft - feet

bgs - below ground surface

mg/kg - milligrams per kilogram

< - less than laboratory reporting limit

NA - Not Analyzed/Not Applicable

Bold - exceeds ECMC Table 915-1 allowable level and background

*Exceeds Table 915-1 allowable level but within analytical variability of background

^ - site-specific background is shown as 1.25x maximum background to account for analytical variability

If site-specific backgrounds are less than cleanup concentrations, then cleanup concentration values will be applied.