

TABLE 1
FREAUFF 33-4A
SOIL SAMPLE FIELD DATA SUMMARY TABLE
KERR-McGEE OIL AND GAS ONSHORE LP

Sample Location	Date	Approximate Depth (feet bgs)	PID (ppm-v)	Visual Observation	Olfactory Observation	Latitude, Longitude	Submitted for Lab Analysis (Y/N)
Flowline Soil Samples							
FL-B01 @ 4'	10/25/23	4	0.6	N/S	N/O	40.24994941, -104.8895228	Y
FL-B02 @ 4'	10/25/23	4	0.3	N/S	N/O	40.24997874, -104.8896716	N
FL-B03 @ 4'	10/25/23	4	0.2	N/S	N/O	40.25010312, -104.8900879	Y
FL-B04 @ 4'	10/25/23	4	0.5	N/S	N/O	40.25020032, -104.8901785	N
FL-B05 @ 4'	10/25/23	4	0.3	N/S	N/O	40.25026318, -104.8902273	N
FL-B06 @ 4'	10/25/23	4	0.6	N/S	N/O	40.25033339, -104.890287	N
FL-B07 @ 4'	10/25/23	4	0.2	N/S	N/O	40.2504672, -104.890401	N
FL-B08 @ 4'	10/25/23	4	0.2	N/S	N/O	40.25063254, -104.8905405	N
FL-B09 @ 4'	10/25/23	4	0.3	N/S	N/O	40.25082781, -104.8907065	N
FL-B10 @ 4'	10/25/23	4	0.4	N/S	N/O	40.25102775, -104.8908677	N
FL-B11 @ 4'	10/26/23	4	0.2	N/S	N/O	40.25121176, -104.8910069	N
FL-B12 @ 4'	10/26/23	4	0.1	N/S	N/O	40.25140696, -104.891151	N
FL-B13 @ 4'	10/26/23	4	0.8	N/S	N/O	40.25149792, -104.8912199	N
FL-B14 @ 4'	12/15/23	4	0.8	N/S	N/O	40.25171998, -104.8915349	N
FL-B15 @ 4'	12/15/23	4	0.6	N/S	N/O	40.25192828, -104.8917033	N
FL-B16 @ 4'	12/15/23	4	1.0	N/S	N/O	40.25219477, -104.8919753	N
FL-B17 @ 4'	12/15/23	4	0.9	N/S	N/O	40.25241853, -104.8921877	N
FL-B18 @ 4'	12/15/23	4	0.8	N/S	N/O	40.25269965, -104.8924317	N
FL-B19 @ 4'	12/15/23	4	1.0	N/S	N/O	40.25291828, -104.8925994	Y
Background Soil Samples (Freaff 34-4)							
WH-BG01 @ 3'	05/24/23	3	0.0	N/S	N/O	40.2492808413144, -104.894639611259	Y
WH-BG01 @ 6'	05/24/23	6	0.3	N/S	N/O	40.2492808413144, -104.894639611259	Y
WH-BG02 @ 3'	05/24/23	3	0.2	N/S	N/O	40.2491907607019, -104.894609162427	Y
WH-BG02 @ 6'	05/24/23	6	0.1	N/S	N/O	40.2491907607019, -104.894609162427	Y
WH-BG03 @ 3'	05/24/23	3	0.1	N/S	N/O	40.2491110291298, -104.894431589834	Y
WH-BG03 @ 6'	05/24/23	6	0.1	N/S	N/O	40.2491110291298, -104.894431589834	Y
WH-BG04 @ 3'	05/24/23	3	0.0	N/S	N/O	40.2492150758022, -104.894315435252	Y
WH-BG04 @ 6'	05/24/23	6	0.1	N/S	N/O	40.2492150758022, -104.894315435252	Y
Background Soil Samples (PSC 16-4/Freaff 33 O SA)							
PW-BG01 @ 3"	9/14/23	0.25	0.3	N/S	N/O	40.2500846255226, -104.889402782302	Y
PW-BG02 @ 3'	9/14/23	3	1.4	N/S	N/O	40.2497628904437, -104.889393171325	Y
PW-BG02 @ 6'	9/14/23	6	0.8	N/S	N/O	40.2497628904437, -104.889393171325	Y
PW-BG03 @ 3'	9/14/23	3	0.7	N/S	N/O	40.2499002362479, -104.88898335574	Y
PW-BG03 @ 6'	9/14/23	6	0.4	N/S	N/O	40.2499002362479, -104.88898335574	Y
PW-BG04 @ 3"	9/14/23	0.25	0.4	N/S	N/O	40.2500054935433, -104.890025865376	Y

Notes:

bgs = below ground surface
 PID = photoionization detector
 ppm-v = parts per million by volume
BOLD = exceeds ECMC Table 915-1

N/S = No Staining
 N/O = No Odor

TABLE 2
FREAUFF 33-4A
SOIL SAMPLE RESULTS SUMMARY TABLE - VOCs
KERR-McGEE OIL AND GAS ONSHORE LP

Sample Location	Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)	TPH-ORO (mg/kg)	Naphthalene (mg/kg)	1,2,4-TMB (mg/kg)	1,3,5-TMB (mg/kg)
<i>ECMC standards for soil (mg/kg)</i> ⁽¹⁾		0.0026	0.69	0.78	9.9	500			0.0038	0.0081	0.0087
<i>ECMC standards for soil (mg/kg)</i> ⁽²⁾		1.2	490	5.8	58	500			2	30	27
<i>Flowline Soil Samples</i>											
FL-B01 @ 4'	10/25/23	<0.00200	<0.00200	<0.00200	<0.00200	<0.200	<25.0	<100	<0.00380	<0.00200	<0.00200
FL-B03 @ 4'	10/25/23	<0.00200	<0.00200	<0.00200	<0.00200	<0.200	<25.0	<100	<0.00380	<0.00200	<0.00200
FL-B19 @ 4'	12/15/23	<0.00200	<0.00200	<0.00200	<0.00200	<0.200	<25.0	<100	<0.00380	<0.00200	<0.00200

Notes:

⁽¹⁾ ECMC Table 915-1: Protection of Groundwater Soil Screening Level Concentrations, effective January 15, 2021

⁽²⁾ ECMC Table 915-1: Residential Soil Screening Level Concentrations, effective January 15, 2021

ECMC = Energy and Carbon Management Commission

< = Analytical result is less than the laboratory reporting limit

mg/kg = milligrams per kilogram

TPH-GRO = Total petroleum hydrocarbons - gasoline range organics

TPH-DRO = Total petroleum hydrocarbons - diesel range organics

TPH-ORO = Total petroleum hydrocarbons - oil range organics

TMB = Trimethylbenzene

TABLE 3
FREAUFF 33-4A
SOIL SAMPLE RESULTS SUMMARY TABLE - SOIL SUITABILITY FOR RECLAMATION
KERR-McGEE OIL AND GAS ONSHORE LP

Sample Location	Date	Depth (ft. bgs)	pH	SAR	EC (mmhos/cm)	Boron (mg/L)
ECMC standards for soil (mg/kg) ⁽¹⁾			6 - 8.3	<6	<4	2
Background Limits			8.37	9.65	10.6	2.71
Flowline Soil Samples						
FL-B01 @ 4'	10/25/2023	4	8.34*	0.581	0.362	0.157
FL-B03 @ 4'	10/25/2023	4	8.31*	2.61	2.02	0.495
FL-B19 @ 4'	12/15/2023	4	8.32*	12.4	5.86*	2.27*
Background Samples (Freaff 34-4)						
WH-BG01 @ 3'	5/24/2023	3	7.94	7.74	7.89	0.787
WH-BG01 @ 6'	5/24/2023	6	7.96	5.74	6.11	0.659
WH-BG02 @ 3'	5/24/2023	3	7.88	2.09	4.39	0.960
WH-BG02 @ 6'	5/24/2023	6	8.00	9.65	10.6	2.71
WH-BG03 @ 3'	5/24/2023	3	7.83	8.07	9.63	1.30
WH-BG03 @ 6'	5/24/2023	6	7.89	5.28	7.60	1.17
WH-BG04 @ 3'	5/24/2023	3	7.87	2.96	6.92	0.686
WH-BG04 @ 6'	5/24/2023	6	7.63	0.882	3.03	0.422
Background Samples (PSC 16-4/Freaff 33 O SA)						
PW-BG01 @ 3"	9/14/23	0.25	8.22	0.201	0.424	0.421
PW-BG02 @ 3'	9/14/23	3	7.99	0.469	0.359	0.894
PW-BG02 @ 6'	9/14/23	6	8.10	0.430	2.92	0.767
PW-BG03 @ 3'	9/14/23	3	8.37	2.35	0.670	0.340
PW-BG03 @ 6'	9/14/23	6	8.32	1.54	0.611	0.360
PW-BG04 @ 3"	9/14/23	0.25	8.12	0.298	0.973	0.695

Notes:

⁽¹⁾ Standards for soil are taken from ECMC Table 915-1, effective January 15, 2021

ECMC = Energy & Carbon Management Commission

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

ft. bgs = Feet below ground surface

mmhos/cm = Millimhos per centimeter

mg/L = Milligrams per liter

SAR = Sodium Absorption Ratio

EC = Electrical Conductivity

Values presented in **BOLD*** contained concentrations exceeding ECMC Table 915-1 Cleanup Concentrations but are within background limits

Values presented in **BOLD** contained concentrations exceeding ECMC Table 915-1 Cleanup Concentrations