

TABLE 1
CANEPA 6-21
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)
Wellhead Soil Samples							
WH-B01 @ 6'	01/25/24	6	0.9	N/S	N/O	40.26091418, -104.9346701	Y
WH-N01 @ 5'	01/25/24	5	1.1	N/S	N/O	40.26092634, -104.9346715	N
WH-S01 @ 5'	01/25/24	5	1.3	N/S	N/O	40.26089926, -104.9346712	N
WH-E01 @ 5'	01/25/24	5	1.0	N/S	N/O	40.26091406, -104.9346564	N
WH-W01 @ 5'	01/25/24	5	0.9	N/S	N/O	40.2609129, -104.9346862	N
WHS-N01 @ 3"	01/25/24	0.25	0.8	N/S	N/O	40.26095916, -104.9346757	N
WHS-S01 @ 3"	01/25/24	0.25	0.9	N/S	N/O	40.26087306, -104.9346708	N
WHS-E01 @ 3"	01/25/24	0.25	1.2	N/S	N/O	40.26091661, -104.9346209	N
WHS-W01 @ 3"	01/25/24	0.25	0.7	N/S	N/O	40.26091713, -104.9347154	N
Flowline Soil Samples							
FL-B01 @ 4'	01/24/24	4	0.7	N/S	N/O	40.26252543, -104.9355817	Y
FL-B02 @ 4'	01/24/24	4	0.8	N/S	N/O	40.26253218, -104.9353481	N
FL-B03 @ 4'	01/24/24	4	0.4	N/S	N/O	40.2625499, -104.9350239	N
FL-B04 @ 4'	01/24/24	4	0.7	N/S	N/O	40.26254349, -104.93463	Y
FL-B05 @ 4'	01/25/24	4	0.8	N/S	N/O	40.26091976, -104.9346485	Y
FL-B06 @ 4'	01/29/24	4	0.8	N/S	N/O	40.2623370714322, -104.934631050081	N
FL-B07 @ 4'	01/29/24	4	0.3	N/S	N/O	40.2620599214674, -104.934639266815	N
FL-B08 @ 4'	01/29/24	4	1.4	N/S	N/O	40.2618137048352, -104.934648216878	N
FL-B09 @ 4'	01/29/24	4	0.6	N/S	N/O	40.2615532048679, -104.93465293361	N
FL-B10 @ 4'	01/29/24	4	0.1	N/S	N/O	40.261324955754, -104.934648661144	N
FL-B11 @ 4'	01/29/24	4	1.1	N/S	N/O	40.2611637666143, -104.934636273897	N
Wellhead Background Soil Samples							
WH-BG01 @ 3'	01/25/24	3	0.6	N/S	N/O	40.26103215, -104.9346813	Y
WH-BG01 @ 6'	01/25/24	6	0.6	N/S	N/O	40.26103215, -104.9346813	Y
WH-BG02 @ 3'	01/25/24	3	0.4	N/S	N/O	40.26089305, -104.93449	Y
WH-BG02 @ 6'	01/25/24	6	0.5	N/S	N/O	40.26089305, -104.93449	Y
WH-BG03 @ 3'	01/25/24	3	0.6	N/S	N/O	40.26087023, -104.9348128	Y
WH-BG03 @ 6'	01/25/24	6	0.5	N/S	N/O	40.26087023, -104.9348128	Y

Notes:

bgs = below ground surface
 PID = photoionization detector
 ppm-v = parts per million by volume

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

TABLE 2
CANEPA 6-21
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)⁽¹⁾</i>		0.0026	0.69	0.78	9.9	500			0.0038	0.0081	0.0087
<i>ECMC standards for soil (mg/kg)⁽²⁾</i>		1.2	490	5.8	58	500			2	30	27
Wellhead Soil Samples											
WH-B01 @ 6'	01/25/24	<0.00200	<0.00200	<0.00200	<0.00200	<0.200	<25.0	<100	<0.002	<0.00200	<0.00200
Flowline Soil Samples											
FL-B01 @ 4'	01/24/24	<0.00200	<0.00200	<0.00200	<0.00200	<0.200	<25.0	<100	<0.002	<0.00200	<0.00200
FL-B04 @ 4'	01/24/24	<0.00200	<0.00200	<0.00200	<0.00200	<0.200	<25.0	<100	<0.002	<0.00200	<0.00200
FL-B05 @ 4'	01/25/24	<0.00200	<0.00200	<0.00200	<0.00200	<0.200	<25.0	<100	<0.002	<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 & 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
CANEPA 6-21
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)
<i>ECMC standards for soil (mg/kg) ⁽¹⁾</i>			6 - 8.3	<6	<4	2
<i>Site Specific Background Limits</i>			8.44			
Wellhead Soil Samples						
WH-B01 @ 6'	1/25/2024	6	8.02	1.92	3.02	1.31
Flowline Soil Samples						
FL-B01 @ 4'	1/24/2024	4	8.38*	1.54	1.43	1.04
FL-B04 @ 4'	1/24/2024	4	8.37*	2.46	2.07	1.15
FL-B05 @ 4'	1/25/2024	4	8.38*	0.614	0.598	0.586
Wellhead Background Soil Samples						
WH-BG01 @ 3'	1/25/2024	3	8.19	2.74	3.32	1.22
WH-BG01 @ 6'	1/25/2024	6	8.21	2.82	2.97	1.70
WH-BG02 @ 3'	1/25/2024	3	8.44	2.77	1.28	0.892
WH-BG02 @ 6'	1/25/2024	6	8.21	2.90	2.60	1.80
WH-BG03 @ 3'	1/25/2024	3	8.33	2.85	3.13	1.30
WH-BG03 @ 6'	1/25/2024	6	8.26	2.36	2.43	1.49

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 were within site-specific background limits.

TABLE 4
CANEPA 6-21
SOIL SAMPLE RESULTS SUMMARY TABLE - PAHs
KERR-McGEE OIL AND GAS ONSHORE LP

Sample Location	Date	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Anthracene (mg/kg)	Benzo(a)-anthracene (mg/kg)	Benzo(a)-pyrene (mg/kg)	Benzo(b)-fluoranthene (mg/kg)	Benzo(k)-fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h)-anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Ideno(1,2,3-cd)-pyrene (mg/kg)	Pyrene (mg/kg)
<i>ECMC standards for soil (mg/kg)⁽¹⁾</i>		0.006	0.019	0.55	5.8	0.011	0.24	0.3	2.9	9	0.096	8.9	0.54	0.98	1.3
<i>ECMC standards for soil (mg/kg)⁽²⁾</i>		18	24	360	1,800	1.1	0.11	1.1	11	110	0.11	240	240	1.1	180
Wellhead Soil Samples															
WH-B01 @ 6'	1/25/2024	<0.002	<0.002	<0.020	<0.020	<0.005	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Flowline Soil Samples															
FL-B01 @ 4'	1/24/2024	<0.002	<0.002	<0.020	<0.020	<0.005	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
FL-B04 @ 4'	1/24/2024	<0.002	<0.002	<0.020	<0.020	<0.005	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
FL-B05 @ 4'	1/25/2024	<0.002	<0.002	<0.020	<0.020	<0.005	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020

Notes:

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

⁽²⁾ Standards for soil are taken from ECMC Table 915-1: Residential Soil Screening Level Concentrations, effective January 15, 2021

ECMC = Energy & Carbon Management Commission

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

mg/kg = milligrams per kilogram

PAH = Polycyclic Aromatic Hydrocarbons

TABLE 5
CANEPA 6-21
SOIL SAMPLE RESULTS SUMMARY TABLE - METALS
KERR-McGEE OIL AND GAS ONSHORE LP

Sample Location	Date	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)
<i>ECMC standards for soil (mg/kg) ⁽¹⁾</i>		0.29	82	0.38	0.00067	46	14	26	0.26	0.8	370
<i>ECMC standards for soil (mg/kg) ⁽²⁾</i>		0.68	15,000	71	0.3	3,100	400	1,500	390	390	23,000
<i>Site Specific Background Limits</i>		8.575	252.5								
Wellhead Soil Samples											
WH-B01 @ 6'	1/25/2024	6.29*	116*	0.128	<0.244	11.3	8.99	13.6	0.198	<0.0848	46.4
Flowline Soil Samples											
FL-B01 @ 4'	1/24/2024	4.84*	169*	0.191	<0.244	10.3	9.89	12.2	0.168	<0.0900	39.7
FL-B04 @ 4'	1/24/2024	4.73*	240*	0.128	<0.244	<9.97	5.54	6.97	0.154	<0.0997	20.0
FL-B05 @ 4'	1/25/2024	6.18*	172*	0.246	<0.244	14.7	11.6	16.8	0.230	<0.0903	59.8
Wellhead Background Soil Samples											
WH-BG01 @ 3'	1/25/2024	6.20	158	0.210	<0.244	12.5	10.1	15.9	0.244	<0.0923	54.3
WH-BG01 @ 6'	1/25/2024	5.83	132	0.183	<0.244	11.9	9.43	14.6	0.221	<0.0965	49.1
WH-BG02 @ 3'	1/25/2024	6.57	148	0.222	<0.244	14.8	11.4	18.1	0.207	<0.0976	59.3
WH-BG02 @ 6'	1/25/2024	6.86	158	0.190	<0.244	13.5	11.0	16.4	0.189	<0.0946	57.5
WH-BG03 @ 3'	1/25/2024	6.24	202	0.227	<0.244	13.9	10.9	17.0	0.244	<0.0979	56.6
WH-BG03 @ 6'	1/25/2024	6.36	144	0.201	<0.244	12.4	9.71	15.1	0.197	<0.0881	50.1

Notes:

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

(2) Standards for soil are taken from ECMC Table 915-1: Residential Soil Screening Level Concentrations, effective January 15, 2021

ECMC = Energy & Carbon Management Commission

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

Values presented in **BOLD*** contained concentrations exceeding ECMC Table 915-1 Cleanup Concentrations, but were within site-specific background limits.

* = compound is in accordance with the ECMC Table 915-1 Footnote 9.



TABLE 6
CANEPA 6-21
SOIL VAPOR DATA SUMMARY TABLE
KERR-McGEE OIL AND GAS ONSHORE LP

Soil Vapor Point ID	Date	Time	Methane (%)	Carbon Dioxide (%)	Carbon Monoxide (PPM)	Oxygen (%)	Hydrogen Sulfide (PPM)	Sample Collected (Y or N)
SVP-01 @ 8'	1/30/2024	1240	0	0.5	0	20.1	1	N
SVP-02 @ 8'	1/30/2024	1242	0	0.7	0	20.1	1	N
SVP-03 @ 5'	1/30/2024	1245	0	1.8	0	19.6	2	N
SVP-04 @ 5'	1/30/2024	1247	0	2.1	0	19.5	1	N
SVP-05 @ 5'	1/30/2024	1250	0	2.2	0	19.4	2	N

% = percentage

ppm = parts per million

