

**TABLE 1
BERRY FARMS 30 31 32-8HZ O SA
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)
Produced Water Vault Soil Samples							
PW-B01 @ 4'	11/02/22	4	0.5	N/S	N/O	40.2454520593623, -104.910174469507	Y
PW-N01 @ 2'	11/02/22	2	0.6	N/S	N/O	40.2454887431016, -104.910172856569	Y
PW-S01 @ 2'	11/02/22	2	0.4	N/S	N/O	40.2454192337317, -104.910170357687	N
PW-E01 @ 2'	11/02/22	2	0.4	N/S	N/O	40.2454570110672, -104.910146011103	N
PW-E02 @ 2'	11/02/22	2	0.4	N/S	N/O	40.2454352066924, -104.910133648611	N
PW-W01 @ 2'	11/02/22	2	0.5	N/S	N/O	40.2454528090856, -104.910188232513	N
PW-W02 @ 2'	11/02/22	2	0.6	N/S	N/O	40.2454300792143, -104.91019435791	N
PW-B02 @ 5'	11/16/22	5	0.3	N/S	N/O	40.245454200968, -104.910171251925	Y
Tank Battery Soil Samples							
SEP-B01 @ 3"	10/31/22	0.25	0.6	N/S	N/O	40.2452041971324, -104.909876746077	Y
SEP-B02 @ 3"	10/31/22	0.25	10.0	N/S	N/O	40.2452676960812, -104.909855720268	Y
SEP-B03 @ 3"	10/31/22	0.25	1.1	N/S	N/O	40.245197392461, -104.909809624327	Y
SEP-B04 @ 3"	10/31/22	0.25	0.8	N/S	N/O	40.2452577135185, -104.909780557064	Y
SEP-B05 @ 3"	10/31/22	0.25	0.7	N/S	N/O	40.2452703096469, -104.909606788906	Y
SEP-B06 @ 3"	10/31/22	0.25	0.6	N/S	N/O	40.2452868306719, -104.909687855968	Y
SEP-B07 @ 3"	10/31/22	0.25	0.6	N/S	N/O	40.2453277993141, -104.909605870239	Y
SEP-B08 @ 3"	10/31/22	0.25	0.7	N/S	N/O	40.245347566567, -104.909679948411	Y
SEP-B09 @ 3"	10/31/22	0.25	0.5	N/S	N/O	40.2453813648888, -104.909596269221	Y
SEP-B10 @ 3"	10/31/22	0.25	20.6	N/S	N/O	40.2453869136769, -104.909690072098	Y
SEP-B11 @ 3"	10/31/22	0.25	1.1	N/S	N/O	40.2451914217772, -104.910151214684	Y
SEP-B12 @ 3"	10/31/22	0.25	0.8	N/S	N/O	40.2452348368843, -104.910153282739	Y
SEP-B13 @ 3"	10/31/22	0.25	2.1	N/S	N/O	40.2451924164398, -104.910222219314	Y
SEP-B14 @ 3"	10/31/22	0.25	0.7	N/S	N/O	40.2452312956696, -104.910199724355	Y
SEP-B15 @ 3"	10/31/22	0.25	0.3	N/S	N/O	40.2454766419044, -104.909839385095	Y
SEP-B16 @ 3"	10/31/22	0.25	0.3	N/S	N/O	40.2454660940653, -104.90985382666	Y
MH-B01 @ 3"	10/31/22	0.25	0.2	N/S	N/O	40.2454674045385, -104.909884905515	N
ECD-B01 @ 3"	10/31/22	0.25	0.3	N/S	N/O	40.2453514145656, -104.909841942942	N
AST-B01 @ 3"	10/31/22	0.25	0.9	N/S	N/O	40.2454262870801, -104.910305120257	Y
AST-B02 @ 3"	10/31/22	0.25	0.3	N/S	N/O	40.2454463172671, -104.910304985782	N
SEP-B05 @ 1.5'	11/07/22	1.5	0.1	N/S	N/O	40.2452793232865, -104.909619714824	Y
SEP-B17 @ 1'	11/16/22	1	1.5	N/S	N/O	40.2454768797804, -104.909841425966	Y
SEP-B18 @ 1'	11/16/22	1	1.7	N/S	N/O	40.2452583089132, -104.909784024317	Y
AST-B03 @ 1.25'	11/16/22	1.25	0.0	N/S	N/O	40.2454266930805, -104.91030311363	Y
AST-B04 @ 1.25'	11/16/22	1.25	0.1	N/S	N/O	40.2454460492052, -104.910303834323	N
Wellhead/Flowline Background Soil Samples (Berry 1)							
WH-BG01 @ 3'	10/17/22	3	1.4	N/S	N/O	40.2435130579936, -104.908561851118	Y
WH-BG01 @ 6'	10/17/22	6	1.1	N/S	N/O	40.2435130579936, -104.908561851118	Y
WH-BG02 @ 3'	10/17/22	3	7.5	N/S	N/O	40.243613392022, -104.908690772061	Y
WH-BG02 @ 6'	10/17/22	6	6.1	N/S	N/O	40.243613392022, -104.908690772061	Y
WH-BG03 @ 3'	10/17/22	3	5.2	N/S	N/O	40.2436643807108, -104.908523649339	Y
WH-BG03 @ 6'	10/17/22	6	4.5	N/S	N/O	40.2436643807108, -104.908523649339	Y
FL-BG01 @ 4'	01/19/24	4	0.2	N/S	N/O	40.2418344, -104.9086354	Y
FL-BG02 @ 4'	01/19/24	4	0.1	N/S	N/O	40.24191769, -104.9085175	Y
FL-BG03 @ 4'	01/19/24	4	0.2	N/S	N/O	40.24223743, -104.9090546	Y
FL-BG04 @ 4'	01/19/24	4	0.4	N/S	N/O	40.24229618, -104.9090681	Y
FL-BG05 @ 4'	01/19/24	4	0.3	N/S	N/O	40.24270267, -104.9091937	Y

bgs = below ground surface

N/S = No Staining

PID = photoionization detector

N/O = No Odor

ppm-v = parts per million by volume

GRAY = sample has been excavated



TABLE 2
BERRY FARMS 30 31 32-8HZ O SA
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
Tank Battery Soil Samples											
SEP-B01 @ 3"	10/31/22	<0.00200	<0.00200	<0.00200	<0.00200	<0.200	<25.0	<100	<0.00380	<0.00200	<0.00200
SEP-B02 @ 3"	10/31/22	<0.00200	<0.00200	<0.00200	<0.00200	<0.200	<25.0	<100	<0.00380	0.00332	<0.00200
SEP-B03 @ 3"	10/31/22	<0.00200	<0.00200	<0.00200	<0.00200	<0.200	<25.0	<100	<0.00380	<0.00200	<0.00200
SEP-B04 @ 3"	10/31/22	<0.00200	<0.00200	<0.00200	<0.00200	<0.200	<25.0	<100	<0.00380	<0.00200	<0.00200
SEP-B05 @ 3"	10/31/22	<0.00200	<0.00200	<0.00200	<0.00200	<0.200	<25.0	<100	0.00870	<0.00200	<0.00200
SEP-B06 @ 3"	10/31/22	<0.00200	<0.00200	<0.00200	<0.00200	<0.200	<25.0	<100	<0.00380	<0.00200	<0.00200
SEP-B07 @ 3"	10/31/22	<0.00200	<0.00200	<0.00200	<0.00200	<0.200	<25.0	<100	<0.00380	<0.00200	<0.00200
SEP-B08 @ 3"	10/31/22	<0.00200	<0.00200	<0.00200	<0.00200	<0.200	<25.0	<100	<0.00380	<0.00200	<0.00200
SEP-B09 @ 3"	10/31/22	<0.00200	<0.00200	<0.00200	<0.00200	<0.200	<25.0	<100	<0.00380	<0.00200	<0.00200
SEP-B10 @ 3"	10/31/22	<0.00200	<0.00200	<0.00200	<0.00200	<0.200	<25.0	<100	<0.00380	<0.00200	<0.00200
SEP-B11 @ 3"	10/31/22	<0.00200	<0.00200	<0.00200	<0.00200	<0.200	<25.0	<100	<0.00380	<0.00200	<0.00200
SEP-B12 @ 3"	10/31/22	<0.00200	<0.00200	<0.00200	<0.00200	<0.200	<25.0	<100	<0.00380	<0.00200	<0.00200
SEP-B13 @ 3"	10/31/22	<0.00200	<0.00200	<0.00200	<0.00200	<0.200	<25.0	<100	<0.00380	<0.00200	<0.00200
SEP-B14 @ 3"	10/31/22	<0.00200	<0.00200	<0.00200	<0.00200	<0.200	<25.0	<100	<0.00380	<0.00200	<0.00200
SEP-B15 @ 3"	10/31/22	<0.00200	<0.00200	<0.00200	<0.00200	<0.200	<25.0	<100	<0.00380	<0.00200	<0.00200
SEP-B16 @ 3"	10/31/22	<0.00200	<0.00200	<0.00200	<0.00200	<0.200	<25.0	<100	<0.00380	<0.00200	<0.00200
AST-B01 @ 3"	10/31/22	<0.00200	<0.00200	<0.00200	<0.00200	<0.200	<25.0	<100	<0.00380	<0.00200	<0.00200
SEP-B05 @ 1.5'	11/07/22	NA	NA	NA	NA	NA	NA	NA	<0.00380	NA	NA
AST-B03 @ 1.25'	11/16/22	<0.00200	<0.00200	<0.00200	<0.00200	<0.200	<25.0	<100	<0.00380	<0.00200	<0.00200
Produced Water Vault Soil Samples											
PW-B01 @ 4'	11/02/22	<0.00200	<0.00200	<0.00200	<0.00200	<0.200	<25.0	<100	<0.00380	<0.00200	<0.00200
PW-N01 @ 2'	11/02/22	<0.00200	<0.00200	<0.00200	<0.00200	<0.200	<25.0	<100	<0.00380	<0.00200	<0.00200
PW-B02 @ 5'	11/16/22	<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

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

NA = Not Analyzed

GRAY = sample has been excavated

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
BERRY FARMS 30 31 32-8HZ O SA
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>Background Limit</i>			8.59	3.10	5.65	0.773
<i>Produced Water Vault Soil Samples</i>						
PW-B01 @ 4'	11/02/22	4	8.12	0.419	0.107	<0.100
PW-N01 @ 2'	11/02/22	2	8.19	1.00	0.622	1.14
PW-B02 @ 5'	11/16/22	5	8.40*	0.660	0.367	<0.0983
<i>Tank Battery Soil Samples</i>						
AST-B01 @ 3"	10/31/22	0.25	9.88	29.0	0.882	0.159
AST-B03 @ 1.25'	11/16/22	1.25	8.24	0.622	0.556	<0.0990
SEP-B01 @ 3"	10/31/22	0.25	8.21	0.117	0.0927	<0.0994
SEP-B02 @ 3"	10/31/22	0.25	8.35*	0.807	0.226	0.244
SEP-B03 @ 3"	10/31/22	0.25	8.42*	0.400	0.147	0.121
SEP-B04 @ 3"	10/31/22	0.25	8.69	52.8	3.75	0.164
SEP-B05 @ 3"	10/31/22	0.25	8.14	0.331	0.379	<0.101
SEP-B06 @ 3"	10/31/22	0.25	8.23	0.561	0.215	0.194
SEP-B07 @ 3"	10/31/22	0.25	8.11	0.284	0.374	0.146
SEP-B08 @ 3"	10/31/22	0.25	8.22	0.338	0.257	0.195
SEP-B09 @ 3"	10/31/22	0.25	8.14	0.106	0.220	0.109
SEP-B10 @ 3"	10/31/22	0.25	8.21	0.336	0.329	0.178
SEP-B11 @ 3"	10/31/22	0.25	8.19	0.262	0.247	0.149
SEP-B12 @ 3"	10/31/22	0.25	8.00	3.02	2.28	0.716
SEP-B13 @ 3"	10/31/22	0.25	8.17	0.236	0.248	<0.100
SEP-B14 @ 3"	10/31/22	0.25	8.08	0.253	0.319	0.136
SEP-B15 @ 3"	10/31/22	0.25	8.57*	2.05	0.345	2.35
SEP-B16 @ 3"	10/31/22	0.25	8.10	0.384	0.472	0.358
SEP-B17 @ 1'	11/16/22	1	8.02	NA	NA	0.755
SEP-B18 @ 1'	11/16/22	1	8.24	1.99	NA	NA
<i>Wellhead/Flowline Background Soil Samples (Berry 1)</i>						
WH-BG01 @ 3'	10/17/22	3	8.11	2.65	4.14	0.675
WH-BG01 @ 6'	10/17/22	6	8.16	1.47	3.45	0.710
WH-BG02 @ 3'	10/17/22	3	7.98	0.219	2.30	<0.0999
WH-BG02 @ 6'	10/17/22	6	8.19	3.10	3.73	0.773
WH-BG03 @ 3'	10/17/22	3	8.02	0.0755	2.51	0.163
WH-BG03 @ 6'	10/17/22	6	8.37	0.156	0.502	<0.0997
FL-BG01 @ 4'	01/19/24	4	8.46	NA	2.22	NA
FL-BG02 @ 4'	01/19/24	4	8.59	NA	2.23	NA
FL-BG03 @ 4'	01/19/24	4	8.37	NA	5.65	NA

TABLE 3
BERRY FARMS 30 31 32-8HZ O SA
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 Limit			8.59	3.10	5.65	0.773
FL-BG04 @ 4'	01/19/24	4	8.43	NA	2.21	NA
FL-BG05 @ 4'	01/19/24	4	8.58	NA	2.45	NA

Notes:

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

ECMC = Energy and 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

NA = Not Analyzed

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

GRAY = sample has been excavated

**TABLE 4
BERRY FARMS 30 31 32-8HZ O SA
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
Tank Battery Soil Samples															
SEP-B04 @ 3"	10/31/22	<0.00201	<0.00201	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067	0.000505	<0.00067	<0.00067	<0.00067
SEP-B05 @ 3"	10/31/22	0.00282	0.00575	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067
SEP-B15 @ 3"	10/31/22	<0.0101	<0.0101	<0.00335	<0.00335	<0.00335	<0.00335	<0.00335	<0.00335	<0.00335	<0.00335	<0.00335	<0.00335	<0.00335	<0.00335
AST-B01 @ 3"	10/31/22	<0.00201	<0.00201	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067

Notes:

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

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

ECMC = Energy and Carbon Management Commission

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

mg/kg = milligrams per kilogram

PAH = Polycyclic Aromatic Hydrocarbons

GRAY = sample has been excavated

TABLE 5
BERRY FARMS 30 31 32-8HZ O SA
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>Background Limits (1.25x Buffer Applied)</i>		9.32	192	0.157	NA	12.4	26.6	16.8	0.396	NA	NA
Tank Battery Soil Samples											
SEP-B04 @ 3"	10/31/22	6.71*	59.5	0.355	*<0.5	129	11.0	12.8	0.473	<0.0955	99.8
SEP-B05 @ 3"	10/31/22	1.90*	55.0	<0.0959	*<0.5	<9.59	<9.59	<9.59	0.190	<0.0959	<95.9
SEP-B15 @ 3"	10/31/22	6.25*	49.9	0.362	*<0.5	11.9	<9.91	11.6	<0.0991	<0.0991	<99.1
AST-B01 @ 3"	10/31/22	2.09*	56.6	<0.0937	*<0.5	<9.37	<9.37	<9.37	0.105	<0.0937	<93.7
SEP-B05 @ 1.5'	11/07/22	3.98*	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEP-B17 @ 1'	11/16/22	6.07*	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEP-B18 @ 1'	11/16/22	3.80*	NA	NA	NA	10.7	NA	NA	0.148	NA	NA
AST-B03 @ 1.25'	11/16/22	2.42*	NA	NA	NA	NA	NA	NA	NA	NA	NA
Wellhead/Flowline Background Soil Samples (Berry 1)											
WH-BG01 @ 3'	10/17/22	6.82	57.6	<0.0983	<0.5	<9.83	21.3	12.6	0.291	<0.0983	<98.3
WH-BG01 @ 6'	10/17/22	7.46	98.8	0.126	<0.51	9.98	14.0	13.5	0.317	<0.0958	<95.8
WH-BG02 @ 3'	10/17/22	4.50	28.7	<0.0972	<0.5	<9.72	<9.72	<9.72	0.118	<0.0972	<97.2
WH-BG02 @ 6'	10/17/22	5.61	154	0.102	<0.5	<9.52	<9.52	10.6	0.232	<0.0952	<95.2
WH-BG03 @ 3'	10/17/22	6.27	57.5	<0.0960	<0.5	<9.60	11.0	11.9	0.182	<0.0960	<96.0
WH-BG03 @ 6'	10/17/22	5.21	621	<0.0964	<0.512	<9.64	<9.64	<9.64	0.108	<0.0964	<96.4

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 and 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.

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

NA = Not Analyzed

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

GRAY = sample has been excavated

