

TABLE 1
L19 DUMPLINE SPILL
SOIL ANALYTICAL RESULTS
CAERUS OIL AND GAS LLC
PICEANCE BASIN, COLORADO

PARAMETER	COGCC CONCENTRATION LEVELS	UNITS	Dumpline POR @ 6'
Sample Date			8/8/2019
Sample Matix			Spill
Arsenic	0.39	mg/kg	13
Barium	15,000	mg/kg	500
Cadmium	70	mg/kg	0.46
Chromium (III)	120,000	mg/kg	25
Chromium (VI)	23	mg/kg	<1.2
Copper	3,100	mg/kg	33
Lead	400	mg/kg	28
Mercury	23	mg/kg	0.016
Nickel	1,600	mg/kg	27
Selenium	390	mg/kg	0.91
Silver	390	mg/kg	0.085
Zinc	23,000	mg/kg	83
EC	4 or 2x background	mmhos/cm	0.4
pH	6-9	SU	7.96
SAR	12	unitless	48
TPH-DRO			820
TPH-GRO			2500
TPH	500	mg/kg	3320
Benzene	0.17	mg/kg	23
Toluene	85	mg/kg	45
Ethylbenzene	100	mg/kg	19
Total Xylenes	175	mg/kg	340
Acenaphthene	1,000	mg/kg	0.033
Anthracene	1,000	mg/kg	<0.005
Benz(a)anthracene	0.22	mg/kg	<0.005
Benzo(b)fluoranthene	0.22	mg/kg	<0.005
Benzo(k)fluoranthene	2.2	mg/kg	<0.005
Benzo(a)pyrene	0.022	mg/kg	<0.005
Chrysene	22	mg/kg	<0.005
Dibenzo(a,h)anthracene	0.022	mg/kg	<0.005
Fluoranthene	1,000	mg/kg	<0.005
Fluorene	1,000	mg/kg	0.18
Indeno(1,2,3,c,d)pyrene	0.22	mg/kg	<0.005
Naphthalene	23	mg/kg	3.9
Pyrene	1,000	mg/kg	<0.005

Notes:

< - less than the stated reporting limit

Highlight - indicates result exceeds the COGCC concentration level

COGCC - Colorado Oil and Gas Conservation Commission

EC - electrical conductivity

mg/kg - milligrams per kilogram

mmhos/cm - millimhos per centimeter

NA - not analyzed

ND - non detect

SAR - sodium adsorption ratio

SU - standard unit

TPH-GRO - total petroleum hydrocarbons-gasoline range organics

TPH-DRO - total petroleum hydrocarbons-diesel range organics

TPH - combination of TPH-GRO and TPH-DRO