

Table 1
Soil Sampling Results
COGCC Form 27 Sampling and Mapping
Red Mesa 12 Well Plugging Project
Colorado Oil and Gas Conservation Commission

Parameter	Ferguson (OWP) 2F- 12Y SS01	Ferguson (OWP) 2F- 12Y SS02	Background (Ferguson No. 2 (OWP) F-12 SS09)	COGCC Table 915-1 Standard	Units
	6/17/2021	6/17/2021	6/17/2021		
Sample Location	Wellhead	Flowline	Background	NA	NA
Latitude/Longitude	37.067393/-108.130475	37.067246/-108.130289	37.066988/-108.129035	NA	NA
Depth	2.5	2.5	0-0.67	NA	feet bgs
PID	0.4	0.3	3.8	NA	ppm
Conductivity	1.780	0.592	0.257	<4	mmhos/cm
pH	7.50	7.75	6.41	6-8.3	pH units
SAR	0.45	2.83	0.35	<6	no units
Calcium	242	35.1	34.3	NA	mg/L
Magnesium	41.0	12.4	8.66	NA	mg/L
Sodium	28.8	76.6	8.79	NA	mg/L
Arsenic	4.51	2.72	2.52	0.68	mg/kg
Barium	201	218	149	15,000	mg/kg
Cadmium	<5.00	<5.00	<5.00	71	mg/kg
Total Chromium	14.8	13.4	11.2	NA	mg/kg
Copper	164	17.0	15.7	3,100	mg/kg
Lead	954	<10.0	<10.0	400	mg/kg
Nickel	12.2	11.5	8.95	1,500	mg/kg
Selenium	<20.0	<20.0	<20.0	390	mg/kg
Silver	<1.00	<1.00	<1.00	390	mg/kg
Zinc	491	32.8	29.8	23,000	mg/kg
Boron	1.46	1.47	<1.20	2	mg/L
TPH (GRO)	<10.0	<10.0	<10.0	NA	mg/kg
TPH (DRO)	1,780	35.1	<10.0	NA	mg/kg
TPH (EXT DRO)	844	19.1	<10.0	NA	mg/kg
Total TPH	2,624	54.2	<30.0	500	mg/kg
Benzene	0.0486	<0.0250	0.0661	1.2	mg/kg
Toluene	0.304	0.0616	0.689	490	mg/kg
Ethylbenzene	0.0370	<0.0250	0.0954	5.8	mg/kg
Total Xylenes	0.0913	<0.0250	0.259	58	mg/kg
1,3,5-trimethylbenzene	<0.0250	<0.0250	<0.0250	27	mg/kg
1,2,4-trimethylbenzene	0.0339	<0.0250	0.0307	30	mg/kg
Naphthalene	0.0410	<0.0250	<0.0250	2	mg/kg
2-methylnaphthalene	1.97	<0.023	<0.023	24	mg/kg
1-methylnaphthalene	1.39	<0.016	<0.016	18	mg/kg
Acenaphthene	<0.235	<0.024	<0.024	360	mg/kg
Fluorene	0.233**	<0.014	<0.014	240	mg/kg
Anthracene	<0.172	<0.017	<0.017	1,800	mg/kg
Fluoranthene	<0.185	<0.019	<0.019	240	mg/kg
Pyrene	<0.132	<0.013	<0.013	180	mg/kg
Benzo(a)anthracene	<0.230	<0.023	<0.023	1.1	mg/kg
Chrysene	<0.172	<0.017	<0.017	110	mg/kg
Benzo(b)fluoranthene	<0.192	<0.019	<0.019	1.1	mg/kg
Benzo(k)fluoranthene	<0.157	<0.016	<0.016	11	mg/kg
Benzo(a)pyrene	<0.182*	<0.018	<0.018	0.11	mg/kg
Indeno(1,2,3-cd)pyrene	<0.168	<0.017	<0.017	1.1	mg/kg
Dibenz(a,h)anthracene	<0.186*	<0.019	<0.019	0.11	mg/kg

Notes:

PID - Photoionization Detector
SAR - Sodium Adsorption Ratio
BTEX - Benzene, Toluene, Ethylbenzene, & Total Xylenes
TPH - Total Petroleum Hydrocarbons
GRO - Gasoline Range Organics
DRO - Diesel Range Organics
EXT - Extended
NA - Not Applicable
ppm - parts per million

bgs - below ground surface
mmhos/cm - millihos per centimeter
mg/L - milligrams per liter
mg/kg - milligrams per kilogram
COGCC - Colorado Oil & Gas Conservation Commission

* - Laboratory detection limit exceeds COGCC Standard

** - Value detected below the reporting limit; result is an estimate.

Bold values exceed COGCC Standard

Values reported below the laboratory detection limit are considered zero in Total TPH calculations.