Cottonwood CONSULTING

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 No. 1 (OWP) F35-1 SS01	Ferguson No. 1 (OWP) F35-1 SS02	Ferguson No. 1 (OWP) F35-1 SS03	Ferguson No. 1 (OWP) F35-1 SS04	Background (Ferguson No. 2 (OWP) F-12 SS09)	COGCC Table 915-1 Standard	Units
	6/24/2021	6/24/2022	6/24/2023	6/24/2024	6/17/2021		
Sample Location	Wellhead	Flowline	Flowline	AST	Background	NA	NA
Latitude/Longitude	37.063212/-108.12596	37.063246/-108.125959	37.063243/-108.125841	37.063288/-108.125558	37.066988/-108.129035	NA	NA
Depth	6	3	3	0-1	0-0.67	NA	feet bgs
PID	1,158	2,726	3,706	512.5	3.8	NA	ppm
Conductivity	0.915	0.553	0.544	2.260	0.257	<4	mmhos/cm
pH	7.66	7.60	7.79	6.00	6.41	6-8.3	pH units
SAR	5.80	2.58	3.28	**15.8**	0.35	<6	no units
Calcium	38.7	36.9	25.3	24.9	34.3	NA	mg/L
Magnesium	8.94	11.1	9.34	4.45	8.66	NA	mg/L
Sodium	154	69.5	75.9	325	8.79	NA	mg/L
Arsenic	**3.08**	**3.86**	**3.14**	**2.62**	**2.52**	0.68	mg/kg
Barium	201	180	185	148	149	15,000	mg/kg
Cadmium	<5.00	<5.00	<5.00	<5.00	<5.00	71	mg/kg
Total Chromium	11.9	13.9	11.3	12.6	11.2	NA	mg/kg
Copper	15.4	21.5	15.2	18.6	15.7	3,100	mg/kg
Lead	<10.0	**5,150**	<10.0	13.9	<10.0	400	mg/kg
Nickel	11.3	11.3	10.5	13.4	8.95	1,500	mg/kg
Selenium	<20.0	<20.0	<20.0	<20.0	<20.0	390	mg/kg
Silver	<1.00	<1.00	<1.00	<1.00	<1.00	390	mg/kg
Zinc	31.1	32.9	29.4	45.7	29.8	23,000	mg/kg
Boron	1.29	<1.20	<1.20	<1.20	<1.20	2	mg/L
TPH (GRO)	333	864	6,380	543	<10.0	NA	mg/kg
TPH (DRO)	3,280	<10.0	29,400	3,710	<10.0	NA	mg/kg
TPH (EXT DRO)	876	<10.0	6,360	847	<10.0	NA	mg/kg
Total TPH	**4,489**	**864**	**42,140**	**5,100**	<30.0	500	mg/kg
Benzene	<0.100	0.300	**3.44**	<0.0250	0.0661	1.2	mg/kg
Toluene	<0.100	27.2	57.0	0.0435	0.689	490	mg/kg
Ethylbenzene	3.00	<0.0250	**29.2**	0.714	0.0954	5.8	mg/kg
Total Xylenes	0.180	<0.0250	**273**	10.9	0.259	58	mg/kg
1,3,5-trimethylbenzene	<0.100	<0.0250	**41.6**	4.18	<0.0250	27	mg/kg
1,2,4-trimethylbenzene	<0.100	<0.0250	**138**	9.94	0.0307	30	mg/kg
Naphthalene	**4.83**	<0.0250	**26.0**	**2.14**	<0.0250	2	mg/kg
2-methylnaphthalene	10.1	<0.023	**55.1**	6.83	<0.023	24	mg/kg
1-methylnaphthalene	6.95	<0.016	**32.9**	4.27	<0.016	18	mg/kg
Acenaphthene	<0.235	<0.024	0.603	<0.235	<0.024	360	mg/kg
Fluorene	1.46	<0.014	6.60	0.952	<0.014	240	mg/kg
Anthracene	<0.172	<0.017	3.13	<0.172	<0.017	1,800	mg/kg
Fluoranthene	<0.185	<0.019	0.426	<0.185	<0.019	240	mg/kg
Pyrene	<0.132	<0.013	0.989	<0.132	<0.013	180	mg/kg
Benzo(a)anthracene	<0.230	<0.023	<0.230	<0.230	<0.023	1.1	mg/kg
Chrysene	0.447	<0.017	1.56	<0.172	<0.017	110	mg/kg
Benzo(b)fluoranthene	<0.192	<0.019	0.200**	<0.192	<0.019	1.1	mg/kg
Benzo(k)fluoranthene	<0.157	<0.016	<0.157	<0.157	<0.016	11	mg/kg
Benzo(a)pyrene	<0.182*	<0.018	<0.182*	<0.182	<0.018	0.11	mg/kg
Indeno(1,2,3-cd)pyrene	<0.168	<0.017	<0.168	<0.168	<0.017	1.1	mg/kg
Dibenz(a,h)anthracene	<0.186*	<0.019	<0.186*	<0.186	<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.