

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

Parameter	Jumbo (OWP) #1A SS01	Jumbo (OWP) #1A SS02	Jumbo (OWP) #1A SS03	COGCC Table 915-1 Standard	Units
	7/23/2021	7/23/2021	7/23/2021		
Sample Location	Wellhead	AST	Flowline	NA	NA
Latitude/Longitude	37.080319/-108.138927	37.080763/-108.139025	37.080166/-108.138952	NA	NA
Depth	4.5	3	2.5	NA	feet bgs
PID	1.5	1.3	0.9	NA	ppm
Conductivity	3.030	0.550	1.790	<4	mmhos/cm
pH	8.88	7.77	7.60	6-8.3	pH units
SAR	9.36	1.18	1.00	<6	no units
Calcium	90.1	38.7	160	NA	mg/L
Magnesium	45.1	24.0	80.8	NA	mg/L
Sodium	436	38.0	62.2	NA	mg/L
Arsenic	19.7	4.36	4.68	0.68	mg/kg
Barium	317	219	311	15,000	mg/kg
Cadmium	<5.00	<5.00	<5.00	71	mg/kg
Total Chromium	10.7	13.3	9.46	NA	mg/kg
Copper	44.2	18.5	15.6	3,100	mg/kg
Lead	20.6	<10.0	<10.0	400	mg/kg
Nickel	9.03	9.86	8.17	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	211	37.2	24.0	23,000	mg/kg
Boron	<1.20	<1.20	<1.20	2	mg/L
TPH (GRO)	<10.0	<10.0	<10.0	NA	mg/kg
TPH (DRO)	18.4	<10.0	11.6	NA	mg/kg
TPH (EXT DRO)	<10.0	<10.0	<10.0	NA	mg/kg
Total TPH	18.4	<30.0	11.6	500	mg/kg
Benzene	<0.0250	<0.0250	<0.0250	1.2	mg/kg
Toluene	<0.0250	<0.0250	<0.0250	490	mg/kg
Ethylbenzene	<0.0250	<0.0250	<0.0250	5.8	mg/kg
Total Xylenes	<0.0250	<0.0250	<0.0250	58	mg/kg
1,3,5-trimethylbenzene	<0.0250	<0.0250	<0.0250	27	mg/kg
1,2,4-trimethylbenzene	<0.0250	<0.0250	<0.0250	30	mg/kg
Naphthalene	<0.0250	<0.0250	<0.0250	2	mg/kg
2-methylnaphthalene	0.024**	<0.023	<0.023	24	mg/kg
1-methylnaphthalene	0.025**	<0.016	<0.016	18	mg/kg
Acenaphthene	<0.024	<0.024	<0.024	360	mg/kg
Fluorene	<0.014	<0.014	<0.014	240	mg/kg
Anthracene	<0.017	<0.017	<0.017	1,800	mg/kg
Fluoranthene	<0.019	<0.019	<0.019	240	mg/kg
Pyrene	<0.013	<0.013	<0.013	180	mg/kg
Benzo(a)anthracene	<0.023	<0.023	<0.023	1.1	mg/kg
Chrysene	<0.017	<0.017	<0.017	110	mg/kg
Benzo(b)fluoranthene	<0.019	<0.019	<0.019	1.1	mg/kg
Benzo(k)fluoranthene	<0.016	<0.016	<0.016	11	mg/kg
Benzo(a)pyrene	<0.018	<0.018	<0.018	0.11	mg/kg
Indeno(1,2,3-cd)pyrene	0.042	<0.017	<0.017	1.1	mg/kg
Dibenz(a,h)anthracene	<0.019	<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.

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Soil Sampling Results
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Parameter	Jumbo (OWP) #1A SS04	Jumbo (OWP) #1A SS05	Background (Jumbo (OWP) #1A SS06)	COGCC Table 915-1 Standard	Units
	7/23/2021	7/23/2021	7/23/2021		
Sample Location	Flowline	Flowline	Background	NA	NA
Latitude/Longitude	37.080323/-108.138895	37.080747/-108.139038	37.081139/-108.138958	NA	NA
Depth	2.5	1	0-0.5	NA	feet bgs
PID	1.7	0.4	0.3	NA	ppm
Conductivity	1.970	4.710	0.690	<4	mmhos/cm
pH	7.90	7.62	7.33	6-8.3	pH units
SAR	5.21	4.94	0.15	<6	no units
Calcium	79.6	289	125	NA	mg/L
Magnesium	39.0	99.6	17.9	NA	mg/L
Sodium	227	382	6.96	NA	mg/L
Arsenic	10.5	7.69	4.27	0.68	mg/kg
Barium	353	268	190	15,000	mg/kg
Cadmium	<5.00	<5.00	<5.00	71	mg/kg
Total Chromium	10.3	14.3	10.0	NA	mg/kg
Copper	38.3	19.1	13.5	3,100	mg/kg
Lead	47.8	10.1	<10.0	400	mg/kg
Nickel	9.72	11.0	8.23	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	72.0	35.5	27.0	23,000	mg/kg
Boron	<1.20	1.26	1.34	2	mg/L
TPH (GRO)	<10.0	<50.0	<10.0	NA	mg/kg
TPH (DRO)	119	9,920	13.2	NA	mg/kg
TPH (EXT DRO)	97.6	3,880	16.2	NA	mg/kg
Total TPH	216.6	13,800	29.4	500	mg/kg
Benzene	<0.0250	<0.0250	<0.0250	1.2	mg/kg
Toluene	<0.0250	0.0328	0.152	490	mg/kg
Ethylbenzene	<0.0250	<0.0250	0.0439	5.8	mg/kg
Total Xylenes	<0.0250	<0.0250	0.191	58	mg/kg
1,3,5-trimethylbenzene	<0.0250	<0.0250	<0.0250	27	mg/kg
1,2,4-trimethylbenzene	<0.0250	<0.0250	<0.0250	30	mg/kg
Naphthalene	<0.0250	0.0430	<0.0250	2	mg/kg
2-methylnaphthalene	<0.023	0.326**	<0.023	24	mg/kg
1-methylnaphthalene	<0.016	0.379**	<0.016	18	mg/kg
Acenaphthene	<0.024	<0.235	<0.024	360	mg/kg
Fluorene	<0.014	<0.142	<0.014	240	mg/kg
Anthracene	<0.017	<0.172	<0.017	1,800	mg/kg
Fluoranthene	<0.019	<0.185	<0.019	240	mg/kg
Pyrene	<0.013	<0.132	<0.013	180	mg/kg
Benzo(a)anthracene	<0.023	<0.230	<0.023	1.1	mg/kg
Chrysene	<0.017	<0.172	<0.017	110	mg/kg
Benzo(b)fluoranthene	<0.019	<0.192	<0.019	1.1	mg/kg
Benzo(k)fluoranthene	<0.016	<0.157	<0.016	11	mg/kg
Benzo(a)pyrene	<0.018	<0.182*	<0.018	0.11	mg/kg
Indeno(1,2,3-cd)pyrene	<0.017	<0.168	<0.017	1.1	mg/kg
Dibenz(a,h)anthracene	<0.019	<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
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