

**Table 1**  
**Soil Sampling Results**  
**Margaret Spaulding (OWP) #12-A**  
**Lone Pine Well Plugging Project**  
**Colorado Oil & Gas Conservation Commission**

Parameter	SS01	SS02	SS03	SS04	SS01	COGCC Table 915-1 Standard	Units
	09/01/2021	09/01/2021	09/01/2021	09/01/2021	Background 07/28/2021		
Sample Location	Wellhead	Triplex Pump	Pumping Unit	Flowline	Background	NA	NA
Latitude/Longitude	40.7123, -106.4982	40.7124, -106.498	40.71225, -106.4982	40.71237, -106.498	40.71514, -106.4963	NA	NA
Laboratory ID	2109058-01	2109058-02	2109058-03	2109058-04	2107315-01	NA	NA
Depth	0-0.25	0-0.16	0-0.33	3	0-0.66	NA	feet bgs
PID	28.6	311.8	0.0	49.1	0.0	NA	ppm
Conductivity	0.632	0.963	0.486	0.771	0.286	<4	mmhos/cm
pH	7.06	6.56	7.33	7.17	<b>5.60</b>	6-8.3	pH units
SAR	0.37	2.70	0.65	4.54	0.16	<6	no units
Calcium	104	48.9	65.9	41.2	36.4	NA	mg/L
Magnesium	12.2	10.4	13.0	11.0	10.3	NA	mg/L
Sodium	14.8	79.6	22.0	127	4.22	NA	mg/L
Arsenic	<b>4.12</b>	<b>1.79</b>	<b>2.57</b>	<b>4.05</b>	<b>2.04</b>	0.68	mg/kg
Barium	866	96.9	238	234	146	15000	mg/kg
Cadmium	<5.00	<5.00	<5.00	<5.00	<5.00	71	mg/kg
Chromium (VI)***	<0.250	<0.250	<0.250	<0.250	Not Analyzed	0.3	mg/kg
Total Chromium	85.7	6.92	24.6	25.5	25.0	NA	mg/kg
Copper	46.4	13.0	21.8	23.0	27.5	3100	mg/kg
Lead	1020	<10.0	25.6	13.5	<10.0	400	mg/kg
Nickel	35.1	6.41	12.7	14.8	13.0	1500	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	128	33.7	66.6	54.6	64.8	23000	mg/kg
Boron	<1.20	<1.20	<1.20	<1.20	<1.20	2	mg/L
TPH (GRO)	107	1450	<10.0	88.3	<10.0	NA	mg/kg
TPH (DRO)	30500	43200	1330	1540	<10.0	NA	mg/kg
TPH (EXT DRO)	12800	16000	744	558	<10.0	NA	mg/kg
Total TPH	<b>43407</b>	<b>60650</b>	<b>2074</b>	<b>2186.3</b>	<30.0	500	mg/kg
Benzene	0.0279	<0.250	<0.0250	<0.500	<0.0250	1.2	mg/kg
Toluene	0.0607	0.776	<0.0250	<0.500	<0.0250	490	mg/kg
Ethylbenzene	<0.0250	0.631	<0.0250	<0.500	<0.0250	5.8	mg/kg
Total Xylenes	<0.0750	11.3	<0.0750	<1.50	<0.0250	58	mg/kg
1,3,5-trimethylbenzene	0.0326	15.7	<0.0250	<b>41.2</b>	<0.0250	27	mg/kg
1,2,4-trimethylbenzene	<0.0250	10.9	<0.0250	<0.500	<0.0250	30	mg/kg
Naphthalene	0.0292	1.76	0.0422	<0.500	<0.0250	2	mg/kg
2-methylnaphthalene	<0.226	16.2	<0.023	<0.023	<0.023	24	mg/kg
1-methylnaphthalene	<0.161	<b>28.9</b>	0.041	0.069	<0.016	18	mg/kg
Acenaphthene	<0.235	<0.235	<0.024	<0.024	<0.024	360	mg/kg
Fluorene	<0.142	8.22	<0.014	<0.014	<0.014	240	mg/kg
Anthracene	<0.172	<0.172	<0.017	<0.017	<0.017	1800	mg/kg
Fluoranthene	<0.185	1.90	<0.019	<0.019	<0.019	240	mg/kg
Pyrene	2.67	5.13	0.138	0.234	<0.013	180	mg/kg
Benzo(a)anthracene	<0.230	<0.230	<0.023	<0.023	<0.023	1.1	mg/kg
Chrysene	2.98	7.15	0.193	0.577	<0.017	110	mg/kg
Benzo(b)fluoranthene	1.06	<b>1.84</b>	0.058	<0.019	<0.019	1.1	mg/kg
Benzo(k)fluoranthene	<0.157	<0.157	<0.016	<0.016	<0.016	11	mg/kg
Benzo(a)pyrene	<0.182*	<b>4.20</b>	<b>0.219</b>	<b>0.497</b>	<0.018	0.11	mg/kg
Indeno(1,2,3-cd)pyrene	<0.168	0.283	<0.017	<0.017	<0.017	1.1	mg/kg
Dibenz(a,h)anthracene	<0.186*	<0.186*	<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 - millihhos 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.  
\*\*\*Laboratory could only analyze for Total Chromium (not Chromium (IV)) prior to September 2021.