

Table 1

**Soil Analytical Results - Excavation Samples**  
**Hiawatha Deep 4-36**  
**Moffat County, Colorado**

Analyte	COGCC Table 915-1 RSSL Concentrations	Sample ID	Hiawatha Deep 4-36	SS01	SS03	SS04	SS06	SS09	SS10	SS11
		Date Sampled	9/2/2021	9/2/2021	10/21/2021	10/21/2021	10/21/2021	10/21/2021	10/21/2021	10/21/2021
		Depth (feet)	3	0-0.5	4	4	6	5	10	8
Volatile Organic Compounds (VOCs)		Units								
Field Screen PID	NPS	ppm	112.00	0.21	1.7	0.0	0.0	0.2	5.9	7.8
Benzene	1.2	mg/kg	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Toluene	490	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Ethylbenzene	5.8	mg/kg	0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Xylenes (total)	58	mg/kg	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
1,2,4-trimethylbenzene	30	mg/kg	1	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
1,3,5-trimethylbenzene	27	mg/kg	0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Naphthalene	2	mg/kg	0.1	<0.0038	<0.0038	<0.0038	<0.0038	<0.0038	<0.0038	<0.0038
Gasoline Range Organics (GRO)	NPS	mg/kg	12	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Extractable Petroleum Hydrocarbons (DRO)	NPS	mg/kg	3,500	<50	63	<50	<50	<50	<50	<50
Extractable Petroleum Hydrocarbons (ORO)	NPS	mg/kg	230	<50	<50	<50	<50	<50	<50	<50
Total Petroleum Hydrocarbons (TPH)	500	mg/kg	3,742	<100.50	63	<100.50	<100.50	<100.50	<100.50	<100.50
Polycyclic Aromatic Hydrocarbons										
Acenaphthene	360	mg/kg	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
Anthracene	1800	mg/kg	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
Benz(a)anthracene	1.1	mg/kg	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
Benzo(a)pyrene	0.11	mg/kg	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
Benzo(b)fluoranthene	1.1	mg/kg	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
Benzo(k)fluoranthene	11	mg/kg	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
Chrysene	110	mg/kg	0.0115	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
Dibenzo(a,h)anthracene	0.11	mg/kg	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
Fluoranthene	240	mg/kg	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
Fluorene	240	mg/kg	0.229	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
Indeno(1,2,3-cd)pyrene	1.1	mg/kg	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
Pyrene	180	mg/kg	0.0282	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
1-Methylnaphthalene	18	mg/kg	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
2-Methylnaphthalene	24	mg/kg	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
Total Metals										
Arsenic	0.68	mg/kg	--	--	37.5	49.0	52.6	60.1	63.7	45.6
Barium	15,000	mg/kg	--	--	75.9	59.4	72.5	66.3	59.2	95.1
Cadmium	71	mg/kg	--	--	0.669	0.721	0.812	0.787	0.884	0.822
Copper	3,100	mg/kg	--	--	26.7	30.0	36.4	32.5	25.0	28.8
Lead	400	mg/kg	--	--	16.0	16.2	19.6	14.6	17.9	18.8
Nickel	1,500	mg/kg	--	--	26.0	26.0	28.3	27.2	28.4	26.2
Selenium	390	mg/kg	--	--	2.04	2.18	2.65	3.27	1.87	2.49
Silver	390	mg/kg	--	--	0.103	0.101	0.136	0.151	0.123	0.132
Zinc	23,000	mg/kg	--	--	119	141	152	135	112	152
Chromium, Hexavalent	0.3	mg/kg	--	--	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Reclamation Suitability Parameters										
Sodium Absorption Ratio	6	--	0.217	0.324	11.0	10.3	8.63	12.4	11.6	10.5
Boron	2	mg/L	0.207	0.713	0.454	0.554	0.475	0.692	0.279	0.291
pH	6-8.3	--	7.46	7.94	7.98	7.96	7.87	8.00	8.02	7.96
Specific Conductance (EC)	4	mmhos/cm	4.93	3.17	8.04	8.12	7.07	9.76	9.10	8.47

**Notes**

COGCC - Colorado Oil and Gas Conservation Commission

RSSL - Residential Soil Screening Level

NPS - no published standard

mg/kg - milligrams per kilogram

mg/L - milligrams per liter

mmhos/cm - millimhos per centimeter

-- - not applicable

PID - Photo Ionization Detector

ppm- parts per million

&lt; = less than the indicated laboratory reporting limit

**Bold** - Indicates result exceeds the applicable regulatory standard