Table 1
UP 22-32 (MWP Inlet Header) Spill
Soil Data Summary

SAMPLE SUMMARY	
Location Description	UP 22-32/MWP Inlet Header Spill
Sample Type	Soil

LABORATORY DATA SUMMARY

Sample ID	UP 22-32 ORIGIN	UP 22-32 SS1	UP 22-32 SS2	UP 22-32 SS3	UP 22-32 SS3	UP 22-32 SS4	UP 22-32 SS5	UP 22-32 SS5
Sample Depth	0-6"	0-6"	0-6"	0-6"	0-6"	0-6"	0-6"	0-6"
Collection Date	11/8/2024	11/8/2024	11/8/2024	11/8/2024	9/29/2025	11/8/2024	11/8/2024	9/29/2025
Analytical Parameters								
TPH								
TPH Gasoline Range Organics	0.0937 BJ	0.103	0.107	0.0901 J	<3.02	0.0721 J	0.0697 J	<2.78
TPH Diesel Range Organics	64.3	15.2	8.92	11.2	10.5	14.6	5.42 J	<169
TPH Oil Range Organics	272	85.1	37.1	40.9	37.5	45.7	17.4	429
BTEX								
Benzene	<0.00100	<0.00100	<0.00100	<0.00100	<0.00121	<0.00100	<0.00100	<0.00111
Toluene	0.00159 J	0.00147 J	0.00143 J	0.00163 J	<0.0121	0.00134 J	0.00141 J	<0.0111
Ethylbenzene	<0.00250	<0.00250	<0.00250	<0.00250	<0.0121	<0.00250	<0.00250	<0.0111
Total Xylene	<0.00650	<0.00650	<0.00650	<0.00650	<0.121	<0.00650	<0.00650	<0.111
1,2,4-trimethlybenzene	<0.00500	<0.00500	<0.00500	<0.00500	<0.00605	<0.00500	<0.00500	<0.00557
1,3,5-trimethylbenzen	<0.00500	<0.00500	<0.00500	<0.00500	<0.00605	<0.00500	<0.00500	<0.00557
Metals								
Arsenic	6.89	6.79	7.78	6.23	6.5	4.58	6.74	7.84
Barium	261	387	321	204	249	171	519	333
Cadmium	0.288 J	0.300 J	0.348 J	0.197 J	0.314	0.225 J	0.273 J	0.318
Chromium, Hexavalent	<1.00	<1.00	<1.00	<1.00	<0.221	<1.00	<1.00	0.26
Copper	18.3	17.4	19	16.3	15.4	9.88	18.5	19.7
Lead	20	18.9	20	16.1	14.8	9.6	24	26
Nickel	22.8	22.5	22.9	23	19	11.8	15.7	21.8
Selenium	1.7 J	1.33 J	1.52 J	1.24 J	1.22	0.863 J	1.06 J	0.744
Silver	<0.500	0.0979 J	0.0917 J	0.0886 J	<0.552	<0.500	<0.500	<0.528
Zinc	101	97.1	105	91.7	76.3	68.9	98.2	98.2
Soil Suitability for Reclamation								
Sodium Adsorption Ratio	0.403	1.34	0.673	21.5	0.335	12.2	11.2	5.58
Hot Water Soluble Boron	0.926	0.948	0.493	0.939	<0.100	1.74	2.1	0.124
Specific Conductivity	0.918	2.85	0.487	10.8	2.04	8.9	10.1	1.89
pH	7.69	7.78	7.92	7.98	7.92	7.98	8.13	8.37
Polynuclear Aromatic Hydrocarbons								
Acenaphthene	<0.00600	<0.00600	<0.00600	<0.00600	<0.0364	<0.00600	<0.00600	<0.0349
Anthracene	<0.00600	<0.00600	<0.00600	<0.00600	<0.0364	<0.00600	<0.00600	<0.0349
Benzo(a)anthracene	<0.00600	<0.00600	<0.00600	<0.00600	0.018	0.00202 J	0.00921	0.015
Benzo(b)fluoranthene	0.00209 J	<0.00600	<0.00600	<0.00600	<0.0364	0.00282 J	0.0101	<0.0349
Benzo(k)fluoranthene	<0.00600	<0.00600	<0.00600	<0.00600	<0.0364	<0.00600	0.00348 J	<0.0349
Benzo(a)pyrene	<0.00600	<0.00600	<0.00600	<0.00600	<0.0364	0.00315 J	0.00715	<0.0349
Chrysene	<0.00600	<0.00600	<0.00600	<0.00600	<0.0364	<0.00600	0.00775	<0.0349
Dibenzo(a,h)anthracene	<0.00600	<0.00600	<0.00600	<0.00600	<0.0364	<0.00600	<0.00600	<0.0349
Fluoranthene	0.00329 J	<0.00355 J	<0.00600	<0.00600	0.0532	0.00403 J	0.0247	0.043
Fluorene	<0.00600	<0.00600	<0.00600	<0.00600	<0.0364	<0.00600	<0.00600	<0.0349
Indeno(1,2,3-cd)pyrene	<0.00600	<0.00600	<0.00600	<0.00600	<0.0364	<0.00600	0.00572 J	<0.0349
1-methylnaphthalene	<0.0200	<0.0200	<0.0200	<0.0200	<0.00331	<0.0200	<0.0200	<0.00317
2-methylnaphthalene	<0.0200	<0.0200	<0.0200	<0.0200	<0.0133	<0.0200	<0.0200	<0.0127
Napthalene	<0.0200	<0.0200	<0.0200	<0.0200	<0.00331	<0.0200	<0.0200	<0.00317
Pyrene	0.0217	0.00300 J	<0.00600	<0.00600	0.0415	0.0042	0.0181	0.0351

Sample ID	UP 22-32 SS6	UP 22-32 SS6	UP 22-32 SS7	UP 22-32 SS7	UP 22-32 SS8	UP 22-32 SS9	UP 22-32 SS10	UP 22-32 SS11	UP 22-32 SS12
Sample Depth	0-6"	0-6"	0-6"	0-6"	0-6"	0-6"	0-6"	0-6"	0-6"
Collection Date	11/8/2024	9/29/2025	11/8/2024	9/29/2025	11/8/2024	11/8/2024	11/8/2024	11/8/2024	11/8/2024
Analytical Parameters									
TPH									
TPH Gasoline Range Organics	0.0714 BJ	<2.87	0.0830 J	<2.85	0.0866 J	0.0844 J	0.0889 J	0.0933 J	0.114
TPH Diesel Range Organics	13	39.9	11	16.5	24.8	21.3	289	40.9	2.61 J
TPH Oil Range Organics	40.1	152	16.7	69.5	64.8	74.6	475	126	12.8
BTEX									
Benzene	<0.00100	<0.00115	<0.00100	<0.00114	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
Toluene	0.00138 J	<0.0115	0.00143 J	<0.0114	0.00147 J	0.00135 J	0.00139 J	0.00169 J	0.00135 J
Ethylbenzene	<0.00250	<0.0115	<0.00250	<0.0114	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250
Total Xylene	<0.00650	<0.115	<0.00650	<0.114	<0.00650	<0.00650	<0.00650	<0.00650	<0.00650
1,2,4-trimethlybenzene	<0.00500	<0.00573	<0.00500	<0.00569	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
1,3,5-trimethylbenzen	<0.00500	<0.00573	<0.00500	<0.00569	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
Metals									
Arsenic	6	7.75	5.36	7.98	8.97	6.75	8.77	8.57	6.64
Barium	308	288	265	232	413	398	256	322	176
Cadmium	0.321 J	0.272	0.211 J	0.348	0.247 J	0.234 J	0.290 J	0.307 J	0.329 J
Chromium, Hexavalent	<1.00	<0.215	<1.00	<0.214	<1.00	<1.00	<1.00	<1.00	<1.00
Copper	13.6	17.9	13	20.6	16.9	18.2	18.4	16.2	16.9
Lead	15	20.2	14.9	21.2	15	14.9	18.1	17	18.2
Nickel	16.6	22.4	17.1	26.1	18.2	17.2	19.8	18.5	19.4
Selenium	1.45 J	1.52	1.26 J	2.12	1.02 J	0.957 J	1.62 J	1.43 J	1.21 J
Silver	<0.500	<0.537	<0.500	<0.535	<0.500	<0.500	<0.500	<0.500	<0.500
Zinc	82.5	105	82.6	115	109	128	117	111	88
Soil Suitability for Reclamation									
Sodium Adsorption Ratio	26.7	9.35	19.4	3.4	6.07	6.51	9.75	6.47	1.87
Hot Water Soluble Boron	2.51	0.16	2.33	0.122	0.886	1	1.66	0.896	0.589
Specific Conductivity	20.2	6.22	12.4	4.37	4.71	1.88	6.48	1.35	0.455
pH	8.11	8.10	8.29	7.98	7.92	8.12	7.82	8.20	8.00
Polynuclear Aromatic Hydrocarbons									
Acenaphthene	0.00212 J	<0.0354	<0.0600	<0.0353	0.0736	<0.00600	<0.00600	<0.00600	<0.00600
Anthracene	0.00599 J	<0.0354	<0.00600	<0.0353	0.122	<0.00600	<0.00600	0.00243 J	<0.00600
Benzo(a)anthracene	0.0387	0.0386	<0.00600	<0.00642	0.219	0.00303 J	0.0166	0.00693	<0.00600
Benzo(b)fluoranthene	0.0384	0.0358	<0.00600	<0.0353	0.242	0.00402 J	0.0144	0.00772 J	<0.00600
Benzo(k)fluoranthene	0.0143	<0.0354	<0.00600	<0.0353	0.0936	<0.00600	0.00551 J	0.00268 J	<0.00600
Benzo(a)pyrene	0.0263	<0.0354	<0.00600	<0.0353	0.173	0.00233 J	0.0124	0.00538 J	<0.00600
Chrysene	0.0348	<0.0354	<0.00600	<0.0353	0.162	0.00288 J	0.00914	0.00587 J	<0.00600
Dibenzo(a,h)anthracene	0.00420 J	<0.0354	<0.00600	<0.0353	0.0204	<0.00600	0.00262 J	<0.00600	<0.00600
Fluoranthene	0.0793	0.0748	<0.00600	<0.0353	0.78	0.00838	0.0316	0.0239	<0.00600
Fluorene	<0.00600	<0.0354	<0.00600	<0.0353	0.0538	<0.00600	<0.00600	<0.00600	<0.00600
Indeno(1,2,3-cd)pyrene	0.0202	<0.0354	<0.00600	<0.0353	0.147	0.00241 J	0.00821	0.00532 J	<0.00600
1-methylnaphthalene	<0.0200	<0.00322	<0.0200	<0.00321	0.00744 J	<0.0200	<0.0200	<0.0200	<0.0200
2-methylnaphthalene	<0.0200	<0.0129	<0.0200	<0.0128	0.00912 J	<0.0200	<0.0200	<0.0200	<0.0200
Napthalene	<0.0200	<0.00322	<0.0200	0.00554	0.0509	<0.0200	<0.0200	<0.0200	<0.0200
Pyrene	0.0658	0.0567	<0.00600	<0.0353	0.417	0.00571 J	0.0249	0.0134	<0.00600

Sample ID	MWP-CP-BG1	UP 34-31-BG1	DRAS-BG1	MWP-LSG-BG1	MWP-LSG-BG2	MWP-BG5	COGCC TABLE 910-1 CONCENTRATION LEVELS	ECMC TABLE 915-1 CONCENTRATION LEVELS		UNITS
Sample Depth	0-6"	0-6"	0-6"	0-8"	0-6"	0-6"		Residential Soil Levels	Protection of Groundwater	
Collection Date	6/16/2021	6/7/2016	6/21/2018	6/16/2021	1/23/2026	11/20/2024				
Analytical Parameters										
TPH										
TPH Gasoline Range Organics	NT	NT	NT	NT	NT	NT	500	500	500	mg/kg
TPH Diesel Range Organics	NT	NT	NT	NT	NT	NT				
TPH Oil Range Organics	NT	NT	NT	NT	NT	NT				
BTEX										
Benzene	NT	NT	NT	NT	NT	NT	0.17	1.2	0.0026	mg/kg
Toluene	NT	NT	NT	NT	NT	NT	85	490	0.69	mg/kg
Ethylbenzene	NT	NT	NT	NT	NT	NT	100	5.8	0.78	mg/kg
Total Xylene	NT	NT	NT	NT	NT	NT	175	58	9.9	mg/kg
1,2,4-trimethlybenzene	NT	NT	NT	NT	NT	NT	NA	30	0.0081	mg/kg
1,3,5-trimethylbenzen	NT	NT	NT	NT	NT	NT	NA	27	0.0087	mg/kg
Metals										
Arsenic	4.6	9.2	6.2	6.3	NT	NT	0.39	0.68	0.29	mg/kg
Barium	120	210	180	160	NT	NT	15,000	15,000	82	mg/kg
Cadmium	0.089 J	<0.37	0.27 J	0.20 J	NT	NT	70	71	0.38	mg/kg
Chromium, Hexavalent	0.93 J	<1.1	<0.41	<1.3	NT	NT	23	0.3	0.00067	mg/kg
Copper	12	21	19	17	NT	NT	3,100	3,100	46	mg/kg
Lead	16	20	16	27	NT	NT	400	400	14	mg/kg
Nickel	15	26	17	21	NT	NT	1,600	1,500	26	mg/kg
Selenium	0.82	1.4	1.1	1.2	NT	NT	390	390	0.26	mg/kg
Silver	0.076 J	<0.37	<0.057	0.11 J	NT	NT	390	390	0.8	mg/kg
Zinc	67	120	81	100	NT	NT	23,000	23,000	370	mg/kg
Soil Suitability for Reclamation										
Sodium Adsorption Ratio	14	0.72	2.2	2.1	17.6	8.99	<12	<6	<6	ratio
Hot Water Soluble Boron	NT	NT	NT	NT	NT	NT	NA	2	2	mg/L
Specific Conductivity	8.40	4.1	4.7	12	NT	6.12	<4 or 2 x the background	<4	<4	mmhos/cm
pH	8.30	8.0	8.41	8.10	NT	7.88	6-9	6-8.3	6-8.3	su
Polynuclear Aromatic Hydrocarbons										
Acenaphthene	NT	NT	NT	NT	NT	NT	1,000	360	0.55	mg/kg
Anthracene	NT	NT	NT	NT	NT	NT	1,000	1,800	5.8	mg/kg
Benzo(a)anthracene	NT	NT	NT	NT	NT	NT	0.22	1.1	0.011	mg/kg
Benzo(b)fluoranthene	NT	NT	NT	NT	NT	NT	0.22	1.1	0.3	mg/kg
Benzo(k)fluoranthene	NT	NT	NT	NT	NT	NT	2.2	11.0	2.9	mg/kg
Benzo(a)pyrene	NT	NT	NT	NT	NT	NT	0.022	0.11	0.24	mg/kg
Chrysene	NT	NT	NT	NT	NT	NT	22	110	9	mg/kg
Dibenzo(a,h)anthracene	NT	NT	NT	NT	NT	NT	0.022	0.11	0.096	mg/kg
Fluoranthene	NT	NT	NT	NT	NT	NT	1,000	240	8.9	mg/kg
Fluorene	NT	NT	NT	NT	NT	NT	1,000	240	0.54	mg/kg
Indeno(1,2,3-cd)pyrene	NT	NT	NT	NT	NT	NT	0.22	1.1	0.98	mg/kg
1-methylnaphthalene	NT	NT	NT	NT	NT	NT	NA	18.00	0.006	mg/kg
2-methylnaphthalene	NT	NT	NT	NT	NT	NT	NA	24.00	0.019	mg/kg
Napthalene	NT	NT	NT	NT	NT	NT	23	2	0.0038	mg/kg
Pyrene	NT	NT	NT	NT	NT	NT	1,000	180	1.3	mg/kg

mg/kg - milligrams per kilogra
mg/L - milligrams per lite
J - indicates an estimated value
mmhos/cm - millimhos per centimete
mv - millivolts
su - standard units
NA - not applicable
NT - parameter was not tested
ND - not detected above method detection lim

Over ECMC Table 915-1 concentration levels but under BACKGROUND level.

Over ECMC Table 915-1 concentration levels and not within BACKGROUND level.

Over ECMC Table 915-1 concentration levels

Background Sample