

OBED MOUNTAIN MINE
TABLE 6 ATHABASCA RIVER AND PLANTE CREEK UPSTREAM AND AT THE CONFLUENCE (ATR USPLC and ATR-PLC)

				Location	ATR USPLC	ATR-PLC	ATR-PLC	ATR-PLC	ATR-PLC	ATR-PLC	ATR-PLC
				Date	04-Nov-13	04-Nov-13	10-Nov-13	11-Nov-13	12-Nov-13	13-Nov-13	14-Nov-13
Method Type	Chemical	Unit	MDL								
Aggregate Organics	Hydrocarbons, Recoverable (I.R.)	mg/L	1	-	-	<1	<1	<1	<1	<1	<1
	BOD	mg/L	2	<2	<2	5.5	<2	<2	<2	<2	<2
	Oil and Grease	mg/L	1	<1	<1	-	-	-	-	-	-
	Phenols (4AAP)	µg/L	1	<1	1.2	<1	1	2.2	1.5	1.5	1.5
Anions and Nutrients	Alkalinity (T) as CaCO3	mg/L	2	118	140	147	145	151	163	150	150
	Ammonia	mg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	Bicarbonate	mg/L	5	143	171	179	177	185	199	183	183
	Carbonate	mg/L	5	<5	<5	<5	<5	<5	<5	<5	<5
	Chloride	mg/L	0.5	2.83	2.43	3.35	3.77	4.11	3.6	2.64	2.64
	Electrical Conductivity (lab)	dS/m	0.0002	0.379	0.395	0.418	0.422	0.433	0.425	0.412	0.412
	Hydroxide	mg/L	5	<5	<5	<5	<5	<5	<5	<5	<5
	Ionic Balance	%		102	105	94.6	89	92.6	100	94.6	94.6
	Kjeldahl Nitrogen Total	mg/L	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
	Nitrate (as N)	mg/L	0.05	<0.05	<0.05	0.069	0.068	0.073	0.074	0.066	0.066
	Nitrate + Nitrite-N	mg/L	0.07	<0.071	<0.071	<0.071	<0.071	0.073	0.074	<0.071	<0.071
	Nitrite (as N)	mg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	pH (Lab)		0.1	8.01	8.07	8.08	8.01	8.13	8.13	8.04	8.04
	Phosphorus	mg/L	0.001	<0.02	<0.02	0.0099	0.0119	0.0131	0.0167	0.0164	0.0164
	Phosphorus (Filtered)	mg/L	0.001	-	-	0.0027	-	0.0037	0.0036	0.0033	0.0033
	Sulphate	mg/L	0.5	73.3	65.4	72.3	78	74	63.5	66.8	66.8
	Sulphide	mg/L	0.002	<0.002	0.0022	0.0026	<0.002	0.0031	0.0046	<0.002	<0.002
	Hardness as CaCO3	mg/L		184	198	191	185	191	209	189	189
	TDS	mg/L		220	233	242	243	248	251	236	236
Cyanides	Cyanide Total	mg/L	0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals	Aluminium (Filtered)	mg/L	0.001	0.015	<0.01	0.0077	0.0089	0.0097	0.0074	0.0071	0.0071
	Antimony (Filtered)	mg/L	0.0001	<0.0004	<0.0004	<0.0001	<0.0001	<0.0001	<0.0001	0.00015	0.00015
	Arsenic (Filtered)	mg/L	0.0001	<0.0004	<0.0004	0.00017	0.00016	0.00021	0.00019	0.0291	0.0291
	Barium (Filtered)	mg/L	0.00005	0.0551	0.067	0.0637	0.0578	0.0598	0.0673	0.0609	0.0609
	Beryllium (Filtered)	mg/L	0.0005	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	Bismuth (Filtered)	mg/L	0.00005	-	-	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
	Boron (hot water ext) (Filtered)	mg/L	0.01	<0.05	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	Cadmium (Filtered)	mg/L	0.00001	<0.00005	<0.00005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000013
	Calcium (Filtered)	mg/L	0.02	49.1	54.1	52.1	49.2	51.2	56.9	51.6	51.6
	Chromium (III+VI) (Filtered)	mg/L	0.0001	<0.005	<0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
	Cobalt (Filtered)	mg/L	0.0001	<0.002	<0.002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
	Copper (Filtered)	mg/L	0.0001	<0.001	<0.001	0.00013	0.00011	0.00016	0.00016	0.00015	0.00015
	Iron (Filtered)	mg/L	0.01	<0.01	<0.01	<0.01	<0.01	0.013	<0.01	<0.01	<0.01
	Lead (Filtered)	mg/L	0.00005	<0.0001	<0.0001	0.000084	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
	Lithium (Filtered)	mg/L	0.003	<0.003	0.0039	0.0033	0.0035	0.0036	0.0035	0.0037	0.0037
	Magnesium (Filtered)	mg/L	0.005	14.8	15.3	14.9	15.1	15.4	16.2	14.7	14.7
	Manganese (Filtered)	mg/L	0.00005	0.0088	0.016	0.0123	0.0116	0.0142	0.0105	0.00649	0.00649
	Molybdenum (Filtered)	mg/L	0.00005	<0.005	<0.005	0.00104	0.000913	0.000953	0.000986	0.000956	0.000956
	Nickel (Filtered)	mg/L	0.0001	<0.002	<0.002	0.0003	0.00031	0.00031	0.00033	0.00031	0.00031
	Phosphorus (Filtered)	mg/L	0.3	-	-	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
	Potassium (Filtered)	mg/L	0.05	0.66	0.72	0.741	0.701	0.796	0.72	0.701	0.701
	Selenium (Filtered)	mg/L	0.0001	<0.0004	<0.0004	0.00035	0.00029	0.0003	0.00031	0.00027	0.00027
	Silicon (Filtered)	µg/L	50	-	-	2210	2130	2260	2380	2300	2300
	Silver (Filtered)	mg/L	0.00001	<0.0001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
	Sodium (Filtered)	mg/L	0.05	8.3	10.7	10.3	9.42	11.6	11.6	9.76	9.76
	Strontium (Filtered)	mg/L	0.0001	-	-	0.575	0.507	0.511	0.495	0.501	0.501
	Thallium (Filtered)	mg/L	0.00005	<0.0001	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
	Tin (Filtered)	mg/L	0.0001	<0.05	<0.05	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001

Notes
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Method Type	Chemical	Unit	MDL								
	Titanium (Filtered)	mg/L	0.0003	<0.001	<0.001	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
	Uranium (Filtered)	µg/L	0.01	0.57	0.76	0.712	0.701	0.722	0.744	0.764	0.764
	Vanadium (Filtered)	mg/L	0.0001	<0.001	<0.001	0.00012	<0.0001	0.00014	0.00014	0.00015	0.00015
	Zinc (Filtered)	mg/L	0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Organic / Inorganic Carbon	Carbon	mg/L	1	-	-	2	2.3	2.5	3.1	2.5	2.6
	Dissolved Organic Carbon (Filtered)	mg/L	1	-	-	2.2	2.2	3	3	3	2.6
Organic Parameters	Naphthenic Acid	mg/L	1	-	-	<1	<1	<1	<1	<1	<1
Physical Tests	Dissolved Oxygen (Filtered)	mg/L	0.5	24.82	21.9	-	-	-	-	-	-
	TDS (Filtered)	mg/L	10	-	-	249	254	265	254	244	244
	Total Suspended Solids	mg/L	3	<3	25	10	<3	5	21	10	10
	Turbidity	NTU	0.1	5.4	15.5	6.57	5.51	5.7	11	11.2	11.2
Polycyclic Aromatic Hydrocarbons	Benzo[b+]fluoranthene	mg/L	0.00001	-	-	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
	C4 Benzantracenes/Chrysenes	ug/L	0.04	-	-	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
	C4 Dibenzothiophenes	ug/L	0.04	-	-	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
	C4 Fluoranthenes/Pyrenes	ug/L	0.04	-	-	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
	C4 Naphthalenes	ug/L	0.04	-	-	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
	C4 Phenanthrenes/Anthracenes	ug/L	0.04	-	-	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
	1,1-Biphenyl	µg/L	0.01	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	1-Methylnaphthalene	µg/L	0.01	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	2-methylnaphthalene	µg/L	0.01	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	Acenaphthene	µg/L	0.01	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	Acenaphthylene	µg/L	0.01	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	Anthracene	µg/L	0.01	-	-	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
	Benz(a)anthracene	µg/L	0.01	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	Benzo(a) pyrene	µg/L	0.01	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	Acridine	mg/L	0.00001	-	-	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
	Benzo(e)pyrene	µg/L	0.01	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	Benzo(g,h,i)perylene	µg/L	0.01	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	Benzo(k)fluoranthene	µg/L	0.01	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	C1 Acenaphthenes	ug/L	0.04	-	-	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
	C1 Benz(a)Anthracenes/Chrysenes	ug/L	0.04	-	-	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
	C1 Benzofluoranthenes/Benzopyrenes	ug/L	0.04	-	-	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
	Chrysene	µg/L	0.01	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	C1 Biphenyls	ug/L	0.04	-	-	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
	C1 Dibenzothiophenes	ug/L	0.04	-	-	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
	C1 Fluorenes	ug/L	0.04	-	-	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
	Dibenz(a,h)anthracene	µg/L	0.01	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	Dibenzothiophene	ug/L	0.01	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	Fluoranthene	µg/L	0.01	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	Fluorene	µg/L	0.01	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	Indeno(1,2,3-c,d)pyrene	µg/L	0.01	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	Naphthalene	µg/L	0.05	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	Perylene	µg/L	0.01	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	Phenanthrene	µg/L	0.01	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	Pyrene	µg/L	0.01	-	-	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
	Quinoline	µg/L	0.01	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	Retene	ug/L	0.01	-	-	0.013	<0.01	0.021	0.036	0.019	0.019
	C2 Benz(a)Anthracenes/Chrysenes	ug/L	0.04	-	-	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
	C2 Benzofluoranthenes/Benzopyrenes	ug/L	0.04	-	-	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
	C2 Biphenyls	ug/L	0.04	-	-	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
	C2 Dibenzothiophenes	ug/L	0.04	-	-	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04

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		Date	04-Nov-13	04-Nov-13	10-Nov-13	11-Nov-13	12-Nov-13	13-Nov-13	14-Nov-13	14-Nov-13
Method Type	Chemical	Unit	MDL							
	C2 Fluoranthenes/Pyrenes	ug/L	0.04	-	-	<0.04	<0.04	<0.04	<0.04	<0.04
	C2 Naphthalenes	ug/L	0.04	-	-	<0.04	<0.04	<0.04	<0.04	<0.04
	C2 Phenanthrenes/Anthracenes	ug/L	0.04	-	-	<0.04	<0.04	<0.04	<0.04	<0.04
	C2 Fluorenes	ug/L	0.04	-	-	<0.04	<0.04	<0.04	<0.04	<0.04
	C3 Benzantracenes/Chrysenes	ug/L	0.04	-	-	<0.04	<0.04	<0.04	<0.04	<0.04
	C3 Dibenzothiophenes	ug/L	0.04	-	-	<0.04	<0.04	<0.04	<0.04	<0.04
	C3 Fluoranthenes/Pyrenes	ug/L	0.04	-	-	<0.04	<0.04	<0.04	<0.04	<0.04
	C3 Fluorenes	ug/L	0.04	-	-	<0.04	<0.04	<0.04	<0.04	<0.04
	C3 Naphthalenes	ug/L	0.04	-	-	<0.04	<0.04	<0.04	<0.04	<0.04
	C3 Phenanthrenes/Anthracenes	ug/L	0.04	-	-	<0.04	<0.04	<0.04	<0.04	<0.04
Total Metals	Aluminium	mg/L	0.003	0.112	1.52	0.213	0.188	0.191	0.238	0.212
	Antimony	mg/L	0.0001	<0.0004	<0.0004	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
	Arsenic	mg/L	0.0001	<0.0004	0.00099	0.00023	0.00024	0.00024	0.00073	0.0003
	Barium	mg/L	0.00005	0.0546	0.183	0.0676	0.0644	0.0644	0.076	0.0747
	Beryllium	mg/L	0.0005	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	Bismuth	mg/L	0.00005	-	-	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
	Boron (hot water ext)	mg/L	0.01	<0.05	<0.05	<0.01	0.012	<0.01	<0.01	<0.01
	Cadmium	mg/L	0.00001	<0.00005	<0.00005	<0.00001	<0.00001	<0.00001	0.000012	0.000011
	Calcium	mg/L	0.02	49.1	51.6	52	52	55.7	53.4	53.4
	Chromium (III+VI)	mg/L	0.0001	<0.005	<0.005	0.00025	0.00022	0.00025	0.00042	0.00026
	Cobalt	mg/L	0.0001	<0.002	<0.002	0.0001	0.00012	0.0001	0.00017	0.00017
	Copper	mg/L	0.0001	<0.001	0.0021	0.0003	0.0003	0.00041	0.00094	0.00047
	Iron	mg/L	0.01	0.119	1.41	0.178	0.177	0.17	0.34	0.337
	Lead	mg/L	0.0005	<0.0001	0.00203	0.000665	0.000149	0.000163	0.000399	0.000305
	Lithium	mg/L	0.005	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005
	Magnesium	mg/L	0.005	14.3	14.8	14.7	15.9	15.3	14.7	14.7
	Manganese	mg/L	0.00005	0.0119	0.0164	0.0154	0.0155	0.0166	0.0179	0.018
	Mercury	ug/L	0.0005	<0.1*	<0.1*	0.0007	0.00068	0.00073	0.00089	0.00101
	Molybdenum	mg/L	0.00005	<0.005	<0.005	0.00105	0.00109	0.00109	0.000912	0.000983
	Nickel	mg/L	0.0001	<0.002	<0.002	0.00041	0.00039	0.00043	0.00083	0.0006
	Phosphorus	mg/L	0.3	-	-	<0.3	<0.3	<0.3	<0.3	<0.3
	Potassium	mg/L	0.05	0.69	0.97	0.776	0.778	0.769	0.764	0.725
	Selenium	mg/L	0.0001	<0.0004	<0.0004	0.00031	0.00029	0.00029	0.00026	0.00027
	Silicon	ug/L	50	-	-	2550	2190	2390	2510	2320
	Silver	mg/L	0.00001	<0.0001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
	Sodium	mg/L	0.05	8.3	10.4	10	10.7	11.6	12	10
	Strontium	mg/L	0.0001	-	-	0.563	0.574	0.562	0.468	0.532
	Thallium	mg/L	0.00005	<0.0001	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
	Tin	mg/L	0.0001	<0.05	<0.05	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
	Titanium	mg/L	0.0003	0.0022	0.0401	0.00439	0.00373	0.00288	0.00507	0.00471
	Uranium	ug/L	0.01	0.6	1.06	0.779	0.689	0.749	0.783	0.695
	Vanadium	mg/L	0.0001	<0.001	0.0024	0.00047	0.00047	0.00053	0.00058	0.00057
Zinc	mg/L	0.003	<0.004	0.0113	<0.003	<0.003	<0.003	0.0051	0.0036	
Volatile Organic Compounds	1,1,1-trichloroethane	ug/L	1	-	-	<1	<1	<1	<1	<1
	1,1,2,2-tetrachloroethane	ug/L	20	-	-	<20	<20	<20	<20	<20
	1,1,2-trichloroethane	ug/L	2	-	-	<2	<2	<2	<2	<2
	1,1-dichloroethane	ug/L	1	-	-	<1	<1	<1	<1	<1
	1,1-dichloroethene	ug/L	1	-	-	<1	<1	<1	<1	<1
	1,2,3-trichloropropane	ug/L	5	-	-	<5	<5	<5	<5	<5
	1,2-dibromoethane	ug/L	1	-	-	<1	<1	<1	<1	<1
	1,2-dichlorobenzene	ug/L	1	-	-	<1	<1	<1	<1	<1
	1,2-dichloroethane	ug/L	2	-	-	<2	<2	<2	<2	<2

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* EPA 245.7/245.1

OBED MOUNTAIN MINE
TABLE 6 ATHABASCA RIVER AND PLANTE CREEK UPSTREAM AND AT THE CONFLUENCE (ATR USPLC and ATR-PLC)

		Location	ATR USPLC	ATR-PLC	ATR-PLC	ATR-PLC	ATR-PLC	ATR-PLC	ATR-PLC	ATR-PLC
		Date	04-Nov-13	04-Nov-13	10-Nov-13	11-Nov-13	12-Nov-13	13-Nov-13	14-Nov-13	14-Nov-13
Method Type	Chemical	Unit	MDL							
	1,2-dichloropropane	µg/L	2	-	-	<2	<2	<2	<2	<2
	1,3-dichlorobenzene	µg/L	1	-	-	<1	<1	<1	<1	<1
	1,4-dichlorobenzene	µg/L	1	-	-	<1	<1	<1	<1	<1
	Methyl Ethyl Ketone	µg/L	100	-	-	<100	<100	<100	<100	<100
	2-hexanone (MBK)	µg/L	10	-	-	<10	<10	<10	<10	<10
	4-Methyl-2-pentanone	µg/L	10	-	-	<10	<10	<10	<10	<10
	Acetone	mg/L	0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1
	Acrolein	µg/L	100	-	-	<100	<100	<100	<100	<100
	Acrylonitrile	µg/L	100	-	-	<100	<100	<100	<100	<100
	Benzene	mg/L	0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001
	Toluene	mg/L	0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001
	Bromodichloromethane	µg/L	1	-	-	<1	<1	<1	<1	<1
	Bromoform	µg/L	3	-	-	<3	<3	<3	<3	<3
	Bromomethane	µg/L	10	-	-	<10	<10	<10	<10	<10
	Carbon disulfide	µg/L	1	-	-	<1	<1	<1	<1	<1
	Carbon tetrachloride	µg/L	1	-	-	<1	<1	<1	<1	<1
	Chlorobenzene	µg/L	1	-	-	<1	<1	<1	<1	<1
	Chlorodibromomethane	µg/L	3	-	-	<3	<3	<3	<3	<3
	Chloroethane	µg/L	10	-	-	<10	<10	<10	<10	<10
	Chloroform	µg/L	1	-	-	<1	<1	<1	<1	<1
	Chloromethane	µg/L	10	-	-	<10	<10	<10	<10	<10
	cis-1,2-dichloroethene	µg/L	1	-	-	<1	<1	<1	<1	<1
	cis-1,3-dichloropropene	µg/L	1	-	-	<1	<1	<1	<1	<1
	cis-1,4-Dichloro-2-butene	µg/L	10	-	-	<10	<10	<10	<10	<10
	Dibromomethane	µg/L	3	-	-	<3	<3	<3	<3	<3
	Dichlorodifluoromethane	µg/L	3	-	-	<3	<3	<3	<3	<3
	Dichloromethane	µg/L	1	-	-	<1	<1	<1	<1	<1
	Ethanol	µg/L	300	-	-	<300	<300	<300	<300	<300
	Ethyl methacrylate	µg/L	10	-	-	<10	<10	<10	<10	<10
	Ethylbenzene	mg/L	0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001
	Xylene (m & p)	mg/L	0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001
	Xylene (o)	mg/L	0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001
	Xylenes Total	µg/L	0.71	<0.71	<0.71	-	-	-	-	-
	Iodomethane	µg/L	1	-	-	<1	<1	<1	<1	<1
	Styrene	µg/L	1	-	-	<1	<1	<1	<1	<1
	Trichloroethene	µg/L	1	-	-	<1	<1	<1	<1	<1
	Tetrachloroethene	µg/L	1	-	-	<1	<1	<1	<1	<1
	trans-1,2-dichloroethene	µg/L	1	-	-	<1	<1	<1	<1	<1
	trans-1,3-dichloropropene	µg/L	1	-	-	<1	<1	<1	<1	<1
	trans-1,4-Dichloro-2-butene	µg/L	10	-	-	<10	<10	<10	<10	<10
	Trichlorofluoromethane	µg/L	1	-	-	<1	<1	<1	<1	<1
	Vinyl acetate	µg/L	100	-	-	<100	<100	<100	<100	<100
	Vinyl chloride	µg/L	2	-	-	<2	<2	<2	<2	<2

Notes
MDL - Method Detection Limit
- "Sample not analyzed for this parameter"
< - "result is less than the MDL. No detectable concentration was measured"
* EPA 245.7/245.1

OBED MOUNTAIN MINE
TABLE 6 ATHABASCA RIVER AND PLANTE CREEK UPSTREAM AND AT THE CONFLUENCE (ATR USPLC and ATR-PLC)

		Location	ATR-PLC	ATR-PLC	ATR-PLC	ATR-PLC	ATR-PLC	ATR-PLC	ATR-PLC	ATR-PLC
		Date	15-Nov-13	16-Nov-13	17-Nov-13	18-Nov-13	21-Nov-13	22-Nov-13	24-Nov-13	24-Nov-13
Method Type	Chemical	Unit	MDL							
Aggregate Organics	Hydrocarbons, Recoverable (I.R.)	mg/L	1	<1	<1	<1	<1	<1	<1	<1
	BOD	mg/L	2	<2	1	<2	<2	<2	<2	<2
	Oil and Grease	mg/L	1	-	-	-	-	-	-	-
	Phenols (4AAP)	µg/L	1	<1	1.7	<1	1	2.2	<1 - 2.6	<1
Anions and Nutrients	Alkalinity (T) as CaCO3	mg/L	2	145	154	208	188	188	179 - 180	159 - 165
	Ammonia	mg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.066 - 0.069	<0.05
	Bicarbonate	mg/L	5	177	188	253	229	229	219 - 220	194 - 201
	Carbonate	mg/L	5	<5	<5	<5	<5	<5	<5	<5
	Chloride	mg/L	0.5	2.61	2.4	1.26	2.86	3.34	3.85 - 3.99	3.35
	Electrical Conductivity (lab)	dS/m	0.0002	0.411	0.412	0.453	0.464	0.481	0.492 - 0.493	0.463 - 0.464
	Hydroxide	mg/L	5	<5	<5	<5	<5	<5	<5	<5
	Ionic Balance	%		97.8	96.7	92.8	97.2	96.1	95.4 - 95.8	96.2 - 96.9
	Kjeldahl Nitrogen Total	mg/L	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2 - 0.23
	Nitrate (as N)	mg/L	0.05	0.061	0.056	0.089	0.061	0.083	0.066 - 0.068	0.079 - 0.083
	Nitrate + Nitrite-N	mg/L	0.07	<0.071	<0.071	0.089	<0.071	0.083	<0.071	0.079 - 0.083
	Nitrite (as N)	mg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	pH (Lab)		0.1	8.01	8.01	8.09	8.04	8.07		8.08 - 8.09
	Phosphorus	mg/L	0.001	0.0218	0.0181	0.0169	0.0188	0.0185	0.0201 - 0.0213	0.0166 - 0.0184
	Phosphorus (Filtered)	mg/L	0.001	0.0024	0.0024	0.0027	0.0034	0.0018	0.0016 - 0.0027	<0.001 - 0.0018
	Sulphate	mg/L	0.5	65.4	59.8	36.4	53.5	66.3	78.5 - 81	80.8 - 82.5
	Sulphide	mg/L	0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002 - 0.0075	<0.002
Hardness as CaCO3	mg/L		190	188	201	218	222 - 223	214 - 216		
TDS	mg/L		233	233	246	258	275	285 - 287	270 - 272	
Cyanides	Cyanide Total	mg/L	0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals	Aluminium (Filtered)	mg/L	0.001	0.0073	<0.0062	0.0065	0.0068	0.0068	0.0088 - 0.0092	0.0076 - 0.0087
	Antimony (Filtered)	mg/L	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
	Arsenic (Filtered)	mg/L	0.0001	0.00016	<0.00019	0.00021	0.00205	0.0002	0.00018	0.00017
	Barium (Filtered)	mg/L	0.00005	0.0611	0.0634	0.0684	0.0744	0.0724	0.072 - 0.073	0.0667 - 0.0684
	Beryllium (Filtered)	mg/L	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	Bismuth (Filtered)	mg/L	0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
	Boron (hot water ext) (Filtered)	mg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01 - 0.01
	Cadmium (Filtered)	mg/L	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
	Calcium (Filtered)	mg/L	0.02	53	52.7	54.2	56.7	59.6	61	57.6 - 58
	Chromium (III+VI) (Filtered)	mg/L	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
	Cobalt (Filtered)	mg/L	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
	Copper (Filtered)	mg/L	0.0001	0.00023	<0.00015	0.00016	<0.0001	0.00023	0.00016 - 0.00018	0.00018 - 0.00024
	Iron (Filtered)	mg/L	0.01	<0.01	0.011	<0.01	0.018	0.011	0.012 - 0.013	<0.01
	Lead (Filtered)	mg/L	0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
	Lithium (Filtered)	mg/L	0.003	0.0041	0.0038	0.0043	0.0039	0.0048	0.0047 - 0.0049	0.0041 - 0.0042
	Magnesium (Filtered)	mg/L	0.005	14	13.8	16	15.6	16.7	16.9 - 17.1	17.1 - 17.3
	Manganese (Filtered)	mg/L	0.00005	0.00549	0.00859	0.00873	0.0104	0.00887	0.00898 - 0.00961	0.00869 - 0.00872
	Molybdenum (Filtered)	mg/L	0.00005	0.000937	0.000873	0.000923	0.000942	0.00108	0.00113 - 0.00116	0.00112 - 0.00114
	Nickel (Filtered)	mg/L	0.0001	0.00028	0.0003	0.00032	0.00035	0.00036	0.00033 - 0.00034	0.00031 - 0.00032
	Phosphorus (Filtered)	mg/L	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
	Potassium (Filtered)	mg/L	0.05	0.7	0.76	0.839	0.913	0.947	0.98 - 1	0.86 - 0.9
	Selenium (Filtered)	mg/L	0.0001	0.00025	<0.00024	0.00023	0.00022	0.00031	0.00035 - 0.00038	0.00036 - 0.00039
	Silicon (Filtered)	µg/L	50	2310	2650	2910	3510	2750	2600 - 2650	2390 - 2550
	Silver (Filtered)	mg/L	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
	Sodium (Filtered)	mg/L	0.05	9.9	10.8	12.6	15.6	15.1	15.3	12.4 - 12.5
	Strontium (Filtered)	mg/L	0.0001	0.539	0.488	0.457	0.435	0.536	0.572 - 0.576	0.592 - 0.61
	Thallium (Filtered)	mg/L	0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
	Tin (Filtered)	mg/L	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001

Notes
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TABLE 6 ATHABASCA RIVER AND PLANTE CREEK UPSTREAM AND AT THE CONFLUENCE (ATR USPLC and ATR-PLC)

				Location	ATR-PLC	ATR-PLC	ATR-PLC	ATR-PLC	ATR-PLC	ATR-PLC	ATR-PLC
				Date	15-Nov-13	16-Nov-13	17-Nov-13	18-Nov-13	21-Nov-13	22-Nov-13	24-Nov-13
Method Type	Chemical	Unit	MDL								
	Titanium (Filtered)	mg/L	0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
	Uranium (Filtered)	µg/L	0.01	0.765	0.784	0.904	1.05	0.928	0.892 - 0.899	0.751 - 0.771	
	Vanadium (Filtered)	mg/L	0.0001	0.00014	0.00012	0.00014	0.00018	0.00019	0.00017	0.00016	
	Zinc (Filtered)	mg/L	0.001	0.0032	<0.001	<0.001	<0.001	0.0011	<0.001 - 0.0013	<0.001 - 0.0015	
Organic / Inorganic Carbon	Carbon	mg/L	1	3.2	3.8	3.7	4	3.7	3.8	2.4 - 3.8	
	Dissolved Organic Carbon (Filtered)	mg/L	1	2.7	2.7	3.4	4.3	3.4	3.6	2 - 2.1	
Organic Parameters	Naphthenic Acid	mg/L	1	<1	<1	<1	<1	<1	<1	<1	
Physical Tests	Dissolved Oxygen (Filtered)	mg/L	0.5	-	-	-	-	-	-	-	
	TDS (Filtered)	mg/L	10	265	256	270	278	291	296 - 306	267 - 274	
	Total Suspended Solids	mg/L	3	27	11	21	14	9	12 - 13	5 - 9	
	Turbidity	NTU	0.1	15.7	12.9	11	8.26	6.82	7.02 - 7.22	4.5 - 5.06	
Polycyclic Aromatic Hydrocarbons	Benzo[b+j]fluoranthene	µg/L	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	
	C4 Benzanthracenes/Chrysenes	µg/L	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	
	C4 Dibenzothiophenes	µg/L	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	
	C4 Fluoranthenes/Pyrenes	µg/L	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	
	C4 Naphthalenes	µg/L	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	
	C4 Phenanthrenes/Anthracenes	µg/L	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	
	1,1-Biphenyl	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
	1-Methylnaphthalene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
	2-methylnaphthalene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
	Acenaphthene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
	Acenaphthylene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
	Anthracene	µg/L	0.01	<0.04	<0.026	<0.015	<0.04	<0.04	<0.04	<0.04	
	Benz(a)anthracene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
	Benzo(a) pyrene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
	Acridine	mg/L	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	
	Benzo(e)pyrene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
	Benzo(g,h,i)perylene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
	Benzo(k)fluoranthene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
	C1 Acenaphthenes	µg/L	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	
	C1 Benz(a)Anthracenes/Chrysenes	µg/L	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	
	C1 Benzofluoranthenes/Benzopyrenes	µg/L	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	
	Chrysene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
	C1 Biphenyls	µg/L	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	
	C1 Dibenzothiophenes	µg/L	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	
	C1 Fluorenes	µg/L	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	
	Dibenz(a,h)anthracene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
	Dibenzothiophene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
	Fluoranthene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
	Fluorene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
	Indeno(1,2,3-c,d)pyrene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
	Naphthalene	µg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
	Perylene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
	Phenanthrene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
	Pyrene	µg/L	0.01	<0.04	<0.01	<0.01	<0.04	<0.04	<0.01	<0.04	
	Quinoline	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
	Retene	µg/L	0.01	0.028	0.028	0.023	0.037	0.035	0.029 - 0.037	0.019 - 0.025	
	C2 Benz(a)Anthracenes/Chrysenes	µg/L	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	
	C2 Benzofluoranthenes/Benzopyrenes	µg/L	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	
	C2 Biphenyls	µg/L	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	
	C2 Dibenzothiophenes	µg/L	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	

Notes
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- "Sample not analyzed for this parameter"
< - "result is less than the MDL. No detectable concentration was measured"
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OBED MOUNTAIN MINE
TABLE 6 ATHABASCA RIVER AND PLANTE CREEK UPSTREAM AND AT THE CONFLUENCE (ATR USPLC and ATR-PLC)

		Location	ATR-PLC	ATR-PLC	ATR-PLC	ATR-PLC	ATR-PLC	ATR-PLC	ATR-PLC	ATR-PLC
		Date	15-Nov-13	16-Nov-13	17-Nov-13	18-Nov-13	21-Nov-13	22-Nov-13	24-Nov-13	24-Nov-13
Method Type	Chemical	Unit	MDL							
	C2 Fluoranthenes/Pyrenes	ug/L	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
	C2 Naphthalenes	ug/L	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
	C2 Phenanthrenes/Anthracenes	ug/L	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
	C2 Fluorenes	ug/L	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
	C3 Benzantracenes/Chrysenes	ug/L	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
	C3 Dibenzothiophenes	ug/L	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
	C3 Fluoranthenes/Pyrenes	ug/L	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
	C3 Fluorenes	ug/L	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
	C3 Naphthalenes	ug/L	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
	C3 Phenanthrenes/Anthracenes	ug/L	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Total Metals	Aluminium	mg/L	0.003	0.309	0.186	0.247	0.229	0.219	0.18 - 0.204	0.146 - 0.149
	Antimony	mg/L	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
	Arsenic	mg/L	0.0001	0.00039	0.0003	0.00045	0.00044	0.00033	0.00027 - 0.00031	0.00022 - 0.00027
	Barium	mg/L	0.00005	0.0804	0.072	0.084	0.0816	0.0816	0.0812 - 0.0903	0.0756 - 0.0757
	Beryllium	mg/L	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	Bismuth	mg/L	0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
	Boron (hot water ext)	mg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01 - 0.011	<0.01
	Cadmium	mg/L	0.00001	0.000014	0.000014	0.000014	0.00001	0.000011	0.00001 - 0.000011	<0.00001
	Calcium	mg/L	0.02	55.1	49.1	54	54	61	64 - 65.5	60 - 61.3
	Chromium (III+VI)	mg/L	0.0001	0.00039	0.00041	0.00038	0.00033	0.00026	0.00022 - 0.00032	0.00029 - 0.00031
	Cobalt	mg/L	0.0001	0.00021	0.00016	0.00016	0.00015	0.00014	0.00012 - 0.00015	0.00011 - 0.00013
	Copper	mg/L	0.0001	0.00071	0.00163	0.00093	0.00089	0.00044	0.00039 - 0.00056	0.00049 - 0.00054
	Iron	mg/L	0.01	0.478	0.319	0.361	0.325	0.271	0.208 - 0.284	0.195 - 0.206
	Lead	mg/L	0.00005	0.000495	0.000409	0.000415	0.000367	0.000323	0.000276 - 0.0004	0.000239 - 0.000314
	Lithium	mg/L	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.005 - 0.0052	<0.005
	Magnesium	mg/L	0.005	14.4	14.9	16.4	16.6	17.6	16.4 - 17.1	16.7 - 17
	Manganese	mg/L	0.00005	0.02	0.0164	0.0166	0.0175	0.0172	0.016 - 0.0162	0.0144 - 0.0146
	Mercury	ug/L	0.0005	0.002	0.0016	0.0021	0.00184	0.0019	0.00121 - 0.00143	0.00071 - 0.00091
	Molybdenum	mg/L	0.00005	0.00104	0.000881	0.000937	0.00095	0.00114	0.00122 - 0.0013	0.00123
	Nickel	mg/L	0.0001	0.00077	0.00086	0.00074	0.00069	0.0006	0.00048 - 0.00063	0.00054 - 0.00056
	Phosphorus	mg/L	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
	Potassium	mg/L	0.05	0.786	0.801	0.879	0.971	1.02	1.01 - 1.04	0.877 - 0.887
	Selenium	mg/L	0.0001	0.00028	0.00026	0.00023	0.00023	0.00034	0.00034	0.00037 - 0.00038
	Silicon	ug/L	50	2790	2960	3610	3520	3230	2860 - 2870	2590 - 2650
	Silver	mg/L	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
	Sodium	mg/L	0.05	9.93	11.4	13.2	16.1	16.6	15.4 - 15.7	11.5 - 11.8
	Strontium	mg/L	0.0001	0.54	0.461	0.436	0.419	0.538	0.595 - 0.639	0.643 - 0.651
	Thallium	mg/L	0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
	Tin	mg/L	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
	Titanium	mg/L	0.0003	0.00663	0.00341	0.00579	0.00653	0.00509	0.00437 - 0.00611	0.00375 - 0.00463
	Uranium	ug/L	0.01	0.832	0.812	0.986	1.07	0.925	0.913 - 0.965	0.78 - 0.822
	Vanadium	mg/L	0.0001	0.00075	0.00056	0.00063	0.00062	0.00055	0.00051 - 0.00057	0.00045 - 0.00048
	Zinc	mg/L	0.003	<0.003	0.0086	0.0127	0.114	<0.003	<0.003 - 0.004	0.0031 - 0.0032
Volatile Organic Compounds	1,1,1-trichloroethane	ug/L	1	<1	<1	<1	<1	<1	<1	<1
	1,1,2,2-tetrachloroethane	ug/L	20	<20	<20	<20	<20	<20	<20	<20
	1,1,2-trichloroethane	ug/L	2	<2	<2	<2	<2	<2	<2	<2
	1,1-dichloroethane	ug/L	1	<1	<1	<1	<1	<1	<1	<1
	1,1-dichloroethene	ug/L	1	<1	<1	<1	<1	<1	<1	<1
	1,2,3-trichloropropane	ug/L	5	<5	<5	<5	<5	<5	<5	<5
	1,2-dibromoethane	ug/L	1	<1	<1	<1	<1	<1	<1	<1
	1,2-dichlorobenzene	ug/L	1	<1	<1	<1	<1	<1	<1	<1
	1,2-dichloroethane	ug/L	2	<2	<2	<2	<2	<2	<2	<2

Notes
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* EPA 245.7/245.1

OBED MOUNTAIN MINE
TABLE 6 ATHABASCA RIVER AND PLANTE CREEK UPSTREAM AND AT THE CONFLUENCE (ATR USPLC and ATR-PLC)

		Location	ATR-PLC	ATR-PLC	ATR-PLC	ATR-PLC	ATR-PLC	ATR-PLC	ATR-PLC
		Date	15-Nov-13	16-Nov-13	17-Nov-13	18-Nov-13	21-Nov-13	22-Nov-13	24-Nov-13
Method Type	Chemical	Unit	MDL						
	1,2-dichloropropane	µg/L	2	<2	<2	<2	<2	<2	<2
	1,3-dichlorobenzene	µg/L	1	<1	<1	<1	<1	<1	<1
	1,4-dichlorobenzene	µg/L	1	<1	<1	<1	<1	<1	<1
	Methyl Ethyl Ketone	µg/L	100	<100	<100	<100	<100	<100	<100
	2-hexanone (MBK)	µg/L	10	<10	<10	<10	<10	<10	<10
	4-Methyl-2-pentanone	µg/L	10	<10	<10	<10	<10	<10	<10
	Acetone	mg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	Acrolein	µg/L	100	<100	<100	<100	<100	<100	<100
	Acrylonitrile	µg/L	100	<100	<100	<100	<100	<100	<100
	Benzene	mg/L	0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	Toluene	mg/L	0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	Bromodichloromethane	µg/L	1	<1	<1	<1	<1	<1	<1
	Bromoform	µg/L	3	<3	<3	<3	<3	<3	<3
	Bromomethane	µg/L	10	<10	<10	<10	<10	<10	<10
	Carbon disulfide	µg/L	1	<1	<1	<1	<1	<1	<1
	Carbon tetrachloride	µg/L	1	<1	<1	<1	<1	<1	<1
	Chlorobenzene	µg/L	1	<1	<1	<1	<1	<1	<1
	Chlorodibromomethane	µg/L	3	<3	<3	<3	<3	<3	<3
	Chloroethane	µg/L	10	<10	<10	<10	<10	<10	<10
	Chloroform	µg/L	1	<1	<1	<1	<1	<1	<1
	Chloromethane	µg/L	10	<10	<10	<10	<10	<10	<10
	cis-1,2-dichloroethene	µg/L	1	<1	<1	<1	<1	<1	<1
	cis-1,3-dichloropropene	µg/L	1	<1	<1	<1	<1	<1	<1
	cis-1,4-Dichloro-2-butene	µg/L	10	<10	<10	<10	<10	<10	<10
	Dibromomethane	µg/L	3	<3	<3	<3	<3	<3	<3
	Dichlorodifluoromethane	µg/L	3	<3	<3	<3	<3	<3	<3
	Dichloromethane	µg/L	1	<1	<1	<1	<1	<1	<1
	Ethanol	µg/L	300	<300	<300	<300	<300	<300	<300
	Ethyl methacrylate	µg/L	10	<10	<10	<10	<10	<10	<10
	Ethylbenzene	mg/L	0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	Xylene (m & p)	mg/L	0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	Xylene (o)	mg/L	0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	Xylenes Total	µg/L	0.71	-	-	-	-	-	-
	Iodomethane	µg/L	1	<1	<1	<1	<1	<1	<1
	Styrene	µg/L	1	<1	<1	<1	<1	<1	<1
	Trichloroethene	µg/L	1	<1	<1	<1	<1	<1	<1
	Tetrachloroethene	µg/L	1	<1	<1	<1	<1	<1	<1
	trans-1,2-dichloroethene	µg/L	1	<1	<1	<1	<1	<1	<1
	trans-1,3-dichloropropene	µg/L	1	<1	<1	<1	<1	<1	<1
	trans-1,4-Dichloro-2-butene	µg/L	10	<10	<10	<10	<10	<10	<10
	Trichlorofluoromethane	µg/L	1	<1	<1	<1	<1	<1	<1
	Vinyl acetate	µg/L	100	<100	<100	<100	<100	<100	<100
	Vinyl chloride	µg/L	2	<2	<2	<2	<2	<2	<2

Notes
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OBED MOUNTAIN MINE
TABLE 6 ATHABASCA RIVER AND PLANTE CREEK UPSTREAM AND AT THE CONFLUENCE (ATR USPLC and ATR-PLC)

		Location	ATR-PLC	ATR-PLC
		Date	25-Nov-13	26-Nov-13
Method Type	Chemical	Unit	MDL	
Aggregate Organics	Hydrocarbons, Recoverable (I.R.)	mg/L	1	<1
	BOD	mg/L	2	<2
	Oil and Grease	mg/L	1	-
	Phenols (4AAP)	µg/L	1	<1
Anions and Nutrients				1.3 - 2.3
	Alkalinity (T) as CaCO ₃	mg/L	2	156 - 157
	Ammonia	mg/L	0.05	<0.05
	Bicarbonate	mg/L	5	190 - 192
	Carbonate	mg/L	5	<5
	Chloride	mg/L	0.5	2.83 - 3.01
	Electrical Conductivity (lab)	dS/m	0.0002	0.447 - 0.449
	Hydroxide	mg/L	5	<5
	Ionic Balance	%		97.4 - 97.7
	Kjeldahl Nitrogen Total	mg/L	0.2	<0.2
	Nitrate (as N)	mg/L	0.05	0.061 - 0.065
	Nitrate + Nitrite-N	mg/L	0.07	<0.071
	Nitrite (as N)	mg/L	0.05	<0.05
	pH (Lab)	pH	0.1	8.05 - 8.06
	Phosphorus	mg/L	0.001	0.0162 - 0.0176
	Phosphorus (Filtered)	mg/L	0.001	0.0013 - 0.0017
	Sulphate	mg/L	0.5	74.1 - 78.6
	Sulphide	mg/L	0.002	<0.002
	Hardness as CaCO ₃	mg/L		209 - 211
	TDS	mg/L		256 - 261
Cyanides	Cyanide Total	mg/L	0.002	<0.005
Dissolved Metals	Aluminium (Filtered)	mg/L	0.001	0.0084 - 0.0085
	Antimony (Filtered)	mg/L	0.0001	<0.0001
	Arsenic (Filtered)	mg/L	0.0001	0.00016 - 0.00017
	Barium (Filtered)	mg/L	0.00005	0.0652 - 0.0662
	Beryllium (Filtered)	mg/L	0.0005	<0.0005
	Bismuth (Filtered)	mg/L	0.00005	<0.00005
	Boron (hot water ext) (Filtered)	mg/L	0.01	<0.01
	Cadmium (Filtered)	mg/L	0.00001	<0.00001
	Calcium (Filtered)	mg/L	0.02	57.6 - 58.3
	Chromium (III+VI) (Filtered)	mg/L	0.0001	<0.0001
	Cobalt (Filtered)	mg/L	0.0001	<0.0001
	Copper (Filtered)	mg/L	0.0001	0.00018 - 0.00019
	Iron (Filtered)	mg/L	0.01	<0.01
	Lead (Filtered)	mg/L	0.00005	<0.00005
	Lithium (Filtered)	mg/L	0.003	0.0047 - 0.0048
	Magnesium (Filtered)	mg/L	0.005	15.9 - 16
	Manganese (Filtered)	mg/L	0.00005	0.00913 - 0.0095
	Molybdenum (Filtered)	mg/L	0.00005	0.00113 - 0.00117
	Nickel (Filtered)	mg/L	0.0001	0.0003 - 0.00031
	Phosphorus (Filtered)	mg/L	0.3	<0.3
	Potassium (Filtered)	mg/L	0.05	0.79 - 0.8
	Selenium (Filtered)	mg/L	0.0001	0.00032
	Silicon (Filtered)	µg/L	50	2430 - 2440
	Silver (Filtered)	mg/L	0.00001	<0.00001
	Sodium (Filtered)	mg/L	0.05	10.6 - 10.8
	Strontium (Filtered)	mg/L	0.0001	0.601 - 0.621
	Thallium (Filtered)	mg/L	0.00005	<0.00005
	Tin (Filtered)	mg/L	0.0001	<0.0001

Notes
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OBED MOUNTAIN MINE
TABLE 6 ATHABASCA RIVER AND PLANTE CREEK UPSTREAM AND AT THE CONFLUENCE (ATR USPLC and ATR-PLC)

				Location	ATR-PLC	ATR-PLC
				Date	25-Nov-13	26-Nov-13
Method Type	Chemical	Unit	MDL			
	Titanium (Filtered)	mg/L	0.0003	<0.0003	<0.0003	
	Uranium (Filtered)	µg/L	0.01	0.739 - 0.758	0.78 - 0.784	
	Vanadium (Filtered)	mg/L	0.0001	0.00012	0.0001	
	Zinc (Filtered)	mg/L	0.001	0.0015 - 0.0028	<0.001	
Organic / Inorganic Carbon	Carbon	mg/L	1	2.6 - 2.9	2.6	
	Dissolved Organic Carbon (Filtered)	mg/L	1	2.1 - 2.2	2.6 - 2.7	
Organic Parameters	Naphthenic Acid	mg/L	1	<1	<1	
Physical Tests	Dissolved Oxygen (Filtered)	mg/L	0.5	-	-	
	TDS (Filtered)	mg/L	10	267 - 272	256 - 262	
	Total Suspended Solids	mg/L	3	14 - 15	11 - 21	
	Turbidity	NTU	0.1	6.65 - 6.82	6.4 - 6.49	
Polycyclic Aromatic Hydrocarbons	Benzo[b]fluoranthene	mg/L	0.00001	<0.00001	<0.00001	
	C4 Benzantracenes/Chrysenes	ug/L	0.04	<0.04	<0.04	
	C4 Dibenzothiophenes	ug/L	0.04	<0.04	<0.04	
	C4 Fluoranthenes/Pyrenes	ug/L	0.04	<0.04	<0.04	
	C4 Naphthalenes	ug/L	0.04	<0.04	<0.04	
	C4 Phenanthrenes/Anthracenes	ug/L	0.04	<0.04	0.058 - 0.066	
	1,1-Biphenyl	µg/L	0.01	<0.01	<0.01	
	1-Methylnaphthalene	µg/L	0.01	<0.01	<0.01	
	2-methylnaphthalene	µg/L	0.01	<0.01	<0.01	
	Acenaphthene	µg/L	0.01	<0.01	<0.01	
	Acenaphthylene	µg/L	0.01	<0.01	<0.01	
	Anthracene	µg/L	0.01	<0.04	<0.04	
	Benz(a)anthracene	µg/L	0.01	<0.01	<0.01	
	Benzo(a) pyrene	µg/L	0.01	<0.01	<0.01	
	Acridine	mg/L	0.00001	<0.00001	<0.00001	
	Benzo(e)pyrene	µg/L	0.01	<0.01	<0.01	
	Benzo(g,h,i)perylene	µg/L	0.01	<0.01	<0.01	
	Benzo(k)fluoranthene	µg/L	0.01	<0.01	<0.01	
	C1 Acenaphthenes	ug/L	0.04	<0.04	<0.04	
	C1 Benz(a)Anthracenes/Chrysenes	ug/L	0.04	<0.04	<0.04	
	C1 Benzofluoranthenes/Benzopyrenes	ug/L	0.04	<0.04	<0.04	
	Chrysene	µg/L	0.01	<0.01	<0.01	
	C1 Biphenyls	ug/L	0.04	<0.04	<0.04	
	C1 Dibenzothiophenes	ug/L	0.04	<0.04	<0.04	
	C1 Fluorenes	ug/L	0.04	<0.04	<0.04	
	Dibenz(a,h)anthracene	µg/L	0.01	<0.01	<0.01	
	Dibenzothiophene	ug/L	0.01	<0.01	<0.01 - 0.062	
	Fluoranthene	µg/L	0.01	<0.01	<0.01	
	Fluorene	µg/L	0.01	<0.01	<0.01	
	Indeno(1,2,3-c,d)pyrene	µg/L	0.01	<0.01	<0.01	
	Naphthalene	µg/L	0.05	<0.05	<0.05	
	Perylene	µg/L	0.01	<0.01	<0.01	
	Phenanthrene	µg/L	0.01	<0.01	<0.01	
	Pyrene	µg/L	0.01	<0.04	<0.04	
	Quinoline	µg/L	0.01	<0.01	<0.01	
	Retene	ug/L	0.01	0.025 - 0.028	0.058 - 0.066	
	C2 Benz(a)Anthracenes/Chrysenes	ug/L	0.04	<0.04	<0.04	
	C2 Benzofluoranthenes/Benzopyrenes	ug/L	0.04	<0.04	<0.04	
	C2 Biphenyls	ug/L	0.04	<0.04	<0.04	
	C2 Dibenzothiophenes	ug/L	0.04	<0.04	<0.04	

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OBED MOUNTAIN MINE
TABLE 6 ATHABASCA RIVER AND PLANTE CREEK UPSTREAM AND AT THE CONFLUENCE (ATR USPLC and ATR-PLC)

				Location	ATR-PLC	ATR-PLC
				Date	25-Nov-13	26-Nov-13
Method Type	Chemical	Unit	MDL			
	C2 Fluoranthenes/Pyrenes	ug/L	0.04	<0.04	<0.04	<0.04
	C2 Naphthalenes	ug/L	0.04	<0.04	<0.04	<0.04
	C2 Phenanthrenes/Anthracenes	ug/L	0.04	<0.04	<0.04	<0.04
	C2 Fluorenes	ug/L	0.04	<0.04	<0.04	<0.04
	C3 Benzantracenes/Chrysenes	ug/L	0.04	<0.04	<0.04	<0.04
	C3 Dibenzothiophenes	ug/L	0.04	<0.04	<0.04	<0.04
	C3 Fluoranthenes/Pyrenes	ug/L	0.04	<0.04	<0.04	<0.04
	C3 Fluorenes	ug/L	0.04	<0.04	<0.04	<0.04
	C3 Naphthalenes	ug/L	0.04	<0.04	<0.04	<0.04
	C3 Phenanthrenes/Anthracenes	ug/L	0.04	<0.04	<0.04	<0.04
Total Metals	Aluminium	mg/L	0.003	0.177 - 0.19	0.167 - 0.198	
	Antimony	mg/L	0.0001	0.00011	<0.0001 - 0.0001	
	Arsenic	mg/L	0.0001	0.00027 - 0.0003	0.00024 - 0.00029	
	Barium	mg/L	0.00005	0.074 - 0.0763	0.07 - 0.0729	
	Beryllium	mg/L	0.0005	<0.0005	<0.0005	
	Bismuth	mg/L	0.00005	<0.00005	<0.00005	
	Boron (hot water ext)	mg/L	0.01	<0.01	<0.01	
	Cadmium	mg/L	0.00001	<0.00001	<0.00001 - 0.00001	
	Calcium	mg/L	0.02	56.6 - 61.4	51.2 - 54	
	Chromium (III+VI)	mg/L	0.0001	0.00029	0.00033 - 0.00035	
	Cobalt	mg/L	0.0001	0.00014	0.00012 - 0.00015	
	Copper	mg/L	0.0001	0.0008 - 0.00141	0.00069 - 0.00072	
	Iron	mg/L	0.01	0.248 - 0.265	0.233 - 0.276	
	Lead	mg/L	0.00005	0.000276 - 0.000342	0.000315 - 0.000433	
	Lithium	mg/L	0.005	<0.005	<0.005	
	Magnesium	mg/L	0.005	16.6 - 17	14.7 - 15	
	Manganese	mg/L	0.00005	0.0148 - 0.0162	0.0132 - 0.0165	
	Mercury	ug/L	0.0005	0.00159 - 0.00208	0.00118 - 0.00165	
	Molybdenum	mg/L	0.00005	0.00111 - 0.00116	0.000968 - 0.00101	
	Nickel	mg/L	0.0001	0.00057 - 0.00058	0.00069 - 0.00072	
	Phosphorus	mg/L	0.3	<0.3	<0.3	
	Potassium	mg/L	0.05	0.785 - 0.835	0.82 - 0.863	
	Selenium	mg/L	0.0001	0.00034 - 0.00037	0.00029 - 0.00032	
	Silicon	ug/L	50	2660 - 2840	2500 - 2620	
	Silver	mg/L	0.00001	<0.00001	<0.00001	
	Sodium	mg/L	0.05	10.7 - 11.7	10.4 - 10.8	
	Strontium	mg/L	0.0001	0.561 - 0.569	0.523 - 0.547	
	Thallium	mg/L	0.00005	<0.00005	<0.00005	
	Tin	mg/L	0.0001	<0.0001	<0.0001	
	Titanium	mg/L	0.0003	0.00512 - 0.00523	0.00685 - 0.00745	
	Uranium	ug/L	0.01	0.831 - 0.845	0.816 - 0.901	
	Vanadium	mg/L	0.0001	0.00064 - 0.00069	0.00056 - 0.00065	
	Zinc	mg/L	0.003	0.0063 - 0.0072	0.0057 - 0.007	
Volatile Organic Compounds	1,1,1-trichloroethane	ug/L	1	<1	<1	
	1,1,2,2-tetrachloroethane	ug/L	20	<20	<20	
	1,1,2-trichloroethane	ug/L	2	<2	<2	
	1,1-dichloroethane	ug/L	1	<1	<1	
	1,1-dichloroethene	ug/L	1	<1	<1	
	1,2,3-trichloropropane	ug/L	5	<5	<5	
	1,2-dibromoethane	ug/L	1	<1	<1	
	1,2-dichlorobenzene	ug/L	1	<1	<1	
	1,2-dichloroethane	ug/L	2	<2	<2	

Notes
MDL - Method Detection Limit
- "Sample not analyzed for this parameter"
< - "result is less than the MDL. No detectable concentration was measured"
* EPA 245.7/245.1

OBED MOUNTAIN MINE
TABLE 6 ATHABASCA RIVER AND PLANTE CREEK UPSTREAM AND AT THE CONFLUENCE (ATR USPLC and ATR-PLC)

				Location	ATR-PLC	ATR-PLC
				Date	25-Nov-13	26-Nov-13
Method Type	Chemical	Unit	MDL			
	1,2-dichloropropane	µg/L	2	<2	<2	<2
	1,3-dichlorobenzene	µg/L	1	<1	<1	<1
	1,4-dichlorobenzene	µg/L	1	<1	<1	<1
	Methyl Ethyl Ketone	µg/L	100	<100	<100	<100
	2-hexanone (MBK)	µg/L	10	<10	<10	<10
	4-Methyl-2-pentanone	µg/L	10	<10	<10	<10
	Acetone	mg/L	0.1	<0.1	<0.1	<0.1
	Acrolein	µg/L	100	<100	<100	<100
	Acrylonitrile	µg/L	100	<100	<100	<100
	Benzene	mg/L	0.0005	<0.001	<0.001	<0.001
	Toluene	mg/L	0.0005	<0.001	<0.001	<0.001
	Bromodichloromethane	µg/L	1	<1	<1	<1
	Bromoform	µg/L	3	<3	<3	<3
	Bromomethane	µg/L	10	<10	<10	<10
	Carbon disulfide	µg/L	1	<1	<1	<1
	Carbon tetrachloride	µg/L	1	<1	<1	<1
	Chlorobenzene	µg/L	1	<1	<1	<1
	Chlorodibromomethane	µg/L	3	<3	<3	<3
	Chloroethane	µg/L	10	<10	<10	<10
	Chloroform	µg/L	1	<1	<1	<1
	Chloromethane	µg/L	10	<10	<10	<10
	cis-1,2-dichloroethene	µg/L	1	<1	<1	<1
	cis-1,3-dichloropropene	µg/L	1	<1	<1	<1
	cis-1,4-Dichloro-2-butene	µg/L	10	<10	<10	<10
	Dibromomethane	µg/L	3	<3	<3	<3
	Dichlorodifluoromethane	µg/L	3	<3	<3	<3
	Dichloromethane	µg/L	1	<1	<1	<1
	Ethanol	µg/L	300	<300	<300	<300
	Ethyl methacrylate	µg/L	10	<10	<10	<10
	Ethylbenzene	mg/L	0.0005	<0.001	<0.001	<0.001
	Xylene (m & p)	mg/L	0.0005	<0.001	<0.001	<0.001
	Xylene (o)	mg/L	0.0005	<0.001	<0.001	<0.001
	Xylenes Total	µg/L	0.71	-	-	-
	Iodomethane	µg/L	1	<1	<1	<1
	Styrene	µg/L	1	<1	<1	<1
	Trichloroethene	µg/L	1	<1	<1	<1
	Tetrachloroethene	µg/L	1	<1	<1	<1
	trans-1,2-dichloroethene	µg/L	1	<1	<1	<1
	trans-1,3-dichloropropene	µg/L	1	<1	<1	<1
	trans-1,4-Dichloro-2-butene	µg/L	10	<10	<10	<10
	Trichlorofluoromethane	µg/L	1	<1	<1	<1
	Vinyl acetate	µg/L	100	<100	<100	<100
	Vinyl chloride	µg/L	2	<2	<2	<2

Notes

MDL - Method Detection Limit

- "Sample not analyzed for this parameter"

< - "result is less than the MDL. No detectable concentration was measured"

* EPA 245.7/245.1