

Table B1: Analytical Results for Nutrients in Surface Water		Upstream Background		CONTACT WATER		E292170 WTS			E292898 ANCILLARY DISCHARGE										E305365 SW-1										Field Blank			
Sample ID	BCAWWQD ⁽¹⁾	6101529-01	6101596-01	6100550-01	6101012-01	6101420-01	6101420-02	RPD	6100550-02	6100918-01	6101911-01	6101054-01	6101423-01	6101528-01	6101990-01	6102322-01	6102929-01	6108006-01	6100550-03	6100550-04	6100550-06	6100918-02	6101011-02	6101054-02	6101423-02	6101528-02	6101990-02	6102322-02	6102929-02	6108006-02	6100550-05	
Date Sampled/Time		21-Oct-16	26-Oct-16	08-Oct-16/10:00	14-Oct-16	20-Oct-16	20-Oct-16		Weir	1	1	WEIR	Weir (1)	Weir	Weir	1	Weir	Weir	SW1	SW1	SW1	2	2	SW-1	SW-1 (2)	SW-1	SW-1	2	SW-1	SW-1	FB	
		08-Oct-16/11:00	08-Oct-16/11:00	08-Oct-16/11:00	08-Oct-16/11:00	08-Oct-16/11:00	08-Oct-16/11:00		08-Oct-16/11:15	14-Oct-16	15-Oct-16	16-Oct-16	20-Oct-16	21-Oct-16	26-Oct-16	02-Nov-16	05-Nov-16	09-Nov-16	08-Oct-16/11:00	08-Oct-16/18:00	09-Oct-16/9:00	14-Oct-16	15-Oct-16	16-Oct-16	20-Oct-16	21-Oct-16	26-Oct-16	02-Nov-16	05-Nov-16	09-Nov-16	08-Oct-16/17:45	
Physical Tests																																
Colour, True (Colour Units)	15 ⁽¹⁾ units absolute, or 5 units above background (30-day average)	34	33	8	6	<5	<5	-	14	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Conductivity, µmhos/cm	-	-	-	180	83	441	442	0%	176	128	129	605	447	514	1120	518	389	424	1260	601	1060	691	443	611	619	662	628	591	518	480	581	3
Dissolved Inorganic Carbon (DIC) (mg/L)	-	-	-	61	14.3	124	138	3%	66.6	187	226	239	103	100	356	169	126	136	479	345	313	221	199	243	281	256	322	212	186	201	6.59	
Total Suspended Solids (mg/L)	25 mg/L above background (24-hr during clear flow)	25	34	2000	175	<2	<2	-	96	13	3	7	43	<6	27	21	63	21	28	3	-2	6	-2	11	21	<2	6	20	2	2	<2	
Total Dissolved Solids (mg/L)	-	-	-	1050	79	254	243	4%	159	304	334	383	409	330	721	323	223	260	633	634	663	346	269	378	540	410	596	385	321	368	<10	
Turbidity (NTU)	8 NTU above background (24-hr during clear flow)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Change from background of 5 NTU at any time when background is 8 - 50 NTU during high flows or in turbid waters	17.8	50	-	156	0.1	0.11	-	-	21.1	20.6	15.4	82.7	194	46.4	37.1	82.4	45.8	-	-	-	9.55	6.16	3.39	11.9	21.7	1.44	12.8	19.6	4.39	-	
	Change from background of 10% when background is > 50 NTU at any time during high flows or in turbid waters	-	-	8960	-	-	-	-	416	-	-	-	-	-	-	-	-	-	45.8	6.41	1.79	-	-	-	-	-	-	-	-	-	0.35	
Anions and Nutrients mg/L																																
Alkalinity Total (as CaCO ₃)	<10 high sensitivity to acid inputs moderate sensitivity to acid inputs >20 low sensitivity to acid inputs	10-30	-	-	25	3	10	13	26%	25	25	28	33	39	43	56	51	40	52	118	86	77	44	28	43	63	59	83	68	59	79	<1
Acid Sensitivity	-	-	-	Low	High	Moderate	Moderate	-	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	-
Chloride (Cl)	500 (instant max) 150 (30-day average)	-	-	39.3	8.38	54.8	54.8	0%	12.6	42.3	28.4	66.1	74.1	60.8	187	64.1	40.1	47	225	93	132	42.8	29.3	98.1	96.2	74.1	118	85.3	47.3	95.6	<0.10	
Fluoride (F)	1.5 (instant max) 1.1 (30-day average) Hardness Dependent (BCAWWQD to protect AW ⁽¹⁾)	-	-	<0.10	<0.10	<0.10	<0.10	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Nitrate (as N)	32.8 (instant maximum) 3.0 (30-day average)	-	-	1.49	<0.015	0.903	0.904	2%	0.29	1.02	1.44	0.943	0.418	0.489	0.416	0.427	0.29	0.324	0.309	0.886	1.12	1.36	0.969	1.07	1.07	0.936	0.788	0.746	0.63	1.07	0.03	
Nitrite (as N) < 2 mg/L	0.06 (max) 0.12 (30-day average)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.010	-	-	-	-	-	-	-	-	-	-	-	<0.010	
Cyanide (Cyanide)	0.4 - <4 mg/L 0.18 (max) 0.06 (30-day average)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cyanide (Cyanide)	0.4 - <4 mg/L 0.24 (max) 0.08 (30-day average)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cyanide (Cyanide)	0.4 - <4 mg/L 0.3 (max) 0.1 (30-day average)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cyanide (Cyanide)	0.4 - <4 mg/L 0.6 (max) 0.2 (30-day average)	-	-	0.222	-	<0.010	<0.010	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.005	0.007	<0.100	<0.005	0.019	0.018	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.005	<0.005	<0.010	<0.010	<0.005	-
Sulfate (SO ₄) 10-300 mg/L	178 (30-day average)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
H 31 - 75 mg/L	218 (30-day average)	-	-	-	6.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
H 76 - 180 mg/L	309 (30-day average)	-	-	-	87.9	86.1	0%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
H 101 - 250 mg/L	429 (30-day average)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
H > 250 mg/L	760	-	-	666	-	-	-	-	79	149	178	167	97.1	-	202	-	-	-	259	215	205	165	167	173	141	128	128	92.6	108	-	<1.0	

Notes: Refer to Table Endnotes (attached)

Table B2. Analytical Results for Total and Dissolved Metals in Surface Water. The table is organized into columns for CONTACT WATER, E292179 WTS, E292988 ANCILLARY DISCHARGE, and E305365 SW-1, with a final column for Field Blank. Rows include Laboratory ID, Sample ID, Date Sampled/Time, Physical Data (pH, Conductivity, etc.), Total Metals (Aluminum, Arsenic, Barium, Bismuth, Cadmium, Calcium, Chromium, Copper, Iron, Lead, Manganese, Mercury, Molybdenum, Potassium, Selenium, Sodium, Uranium, Zinc), Dissolved Metals (Aluminum, Arsenic, Barium, Bismuth, Cadmium, Calcium, Chromium, Copper, Iron, Lead, Manganese, Mercury, Molybdenum, Potassium, Selenium, Sodium, Uranium, Zinc), and Hardness (Calcium, Magnesium). Each data point includes a numerical value and a corresponding risk assessment (e.g., 13%, 4%, 3%, 1%, 0%, 1%, 2%, 3%, 4%, 5%, 6%, 7%, 8%, 9%, 10%, 11%, 12%, 13%, 14%, 15%, 16%, 17%, 18%, 19%, 20%, 21%, 22%, 23%, 24%, 25%, 26%, 27%, 28%, 29%, 30%, 31%, 32%, 33%, 34%, 35%, 36%, 37%, 38%, 39%, 40%, 41%, 42%, 43%, 44%, 45%, 46%, 47%, 48%, 49%, 50%).

Analytical Table Footnotes: Analytical Results for Surface Water

- All concentrations in mg/L, except pH or as indicated.
- "<" less than the laboratory detection limit indicated.
- "-" means not analyzed or no standard or guideline applies.
- * RPDs are not normally calculated where one or more concentrations are less than five times MDL.
- (2) A Compendium of Approved and Working Water Quality Guidelines for BC (updated January 2010). Applicable water uses include Drinking Water (for toxicity, not odour/taste), and Freshwater Aquatic Life.
- (3) Nitrite BCAWWQG Guideline is Chloride dependent. Nitrite AW Standard is dissolved Chloride-dependent. The most conservative standard has been applied.
- (4) Guideline of 15 mg/L Pt for Drinking Water. Once background levels are established, colour should also not exceed 5 mg/L above background, to protect for Aquatic Life. This is considered a clearwater system (background less than 20 mg/L Pt.)
- (6) Working Water Quality Guidelines for Glycols
- (7) Standard is calculated based on the hardness dependent BCAWWQG formula, and has been calculated and shown for each individual result
- (8) Standards exist for Trivalent (III) and Hexavalent (VI) Chromium. As chromium results were not speciated, the most stringent standard has been applied.
- (9) Standard applies to all sites irrespective of water use.
- (10) pH-dependent maximum where instant pH < 6.5
- ** No hardness value was reported for the WTP Outlet sample from March 10, 2014. The Hardness value from the previous sampling event (3 March 14) has been used for calculating hardness-dependend guidelines.

BOLD, UNDERLINE

Laboratory Detection Limit exceeds one or more applicable Standard

BOLD, BLUE SHADING

Concentration greater than BCAWWQG Guideline