

Table B1: Analytical Results for Nutrients in Surface Water		Upstream Background		CONTACT WATER		E292170 WTS			E292998 ANCILLARY DISCHARGE										E305345 SW-1										Field Blank		
Sample ID	BCAWWQG <sup>3</sup>	6101529-01	6101996-01	6100550-01	6101012-01	6101429-01	6101429-02	RPO	6100550-02	6100918-01	6101011-01	6101054-01	6101423-01	6101528-01	6101990-01	6110232-01	6110509-01	6100550-03	6100550-04	6100550-06	6100918-02	6101011-02	6101054-02	6101423-02	6101528-02	6101990-02	6110232-02	6110509-02	6100550-05		
Date Sampled/Time		Bridge	Bridge	PEA	PEA	WTS	WTS DUP		Weir	1	1	WEIR	Weir (1)	Weir	Weir	1	Weir	SW1	SW1	SW1	2	2	SW-1	SW-1 (2)	SW-1	SW-1	2	SW-1	FB		
		21-Oct-16	26-Oct-16	08-Oct-16/10:00	14-Oct-16	20-Oct-16	20-Oct-16		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	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	08-Oct-16/17:45		
<b>Physical Tests</b>																															
Colour, True (Colour Units)	15 <sup>th</sup> 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
Conductivity (µS/cm)	-	-	-	1360	53	441	442	0%	275	528	520	645	647	514	1120	518	393	1360	861	1060	591	443	631	619	662	606	591	518	3		
Hardness (as CaCO <sub>3</sub> )	-	-	-	651	11.3	128	128	2%	61.6	187	228	239	193	150	356	169	128	479	345	413	231	119	263	281	236	332	213	166	0.58		
pH	-	-	-	6.72	6.49	7.11	7.15	1%	7.35	7.54	7.3	7.14	7.58	7.65	7.47	7.49	7.58	7.22	7.33	7.28	7.51	7.25	7.17	7.62	7.63	7.2	7.57	7.81	7.21		
Total Suspended Solids (mg/L)	25 mg/L above background (24-hr during clear flow)	25	34	25200	175	<2	<2	*	95	13	3	7	43	46	27	21	63	28	3	<2	6	<2	<2	11	21	<2	6	20	<2		
Total Dissolved Solids (mg/L)	-	-	-	1050	79	254	243	4%	159	304	334	383	409	330	721	323	223	833	534	663	346	269	378	540	410	596	365	321	<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	-	-	-	-	9.95	6.16	3.39	11.9	21.7	1.44	12.8	19.6		
	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		
<b>Inorganics and Nutrients mg/L</b>																															
Alkalinity Total (as CaCO <sub>3</sub> )	<10 high sensitivity to acid inputs moderate sensitivity to acid inputs >30 low sensitivity to acid inputs	10-20	-	25	3	10	13	26%	25	25	28	33	39	43	58	51	40	118	96	77	44	28	43	63	59	83	69	59	<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	
Chloride (Cl)	600 (instant max) 150 (30-day average)	-	-	39.3	8.38	54.8	54.8	0%	12.6	42.3	29.4	68.1	74.1	60.8	187	64.1	0.37	225	93	132	42.8	29.3	59.1	96.2	74.1	118	65.3	47.3	<0.10		
Fluoride (F)	1.5 (instant max) 1.0 (30-day average)	-	-	<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	
	Hardness-Dependent BCAWWQG to protect AW <sup>1</sup>	-	-	2.09	0.55	1.42	1.43	-	1.33	1.59	1.66	1.68	1.60	1.52	1.84	1.55	1.43	1.96	1.83	1.90	1.65	1.57	1.69	1.75	1.68	1.62	1.64	1.58	-		
Nitrate (as N)	32.8 (instant maximum) 3.0 (30-day average)	-	-	1.49	<0.015	0.063	0.064	2%	0.29	1.02	1.44	0.943	0.418	0.489	0.416	0.427	<0.010	0.309	0.886	1.12	1.35	0.969	1.07	1.07	0.936	0.788	0.746	0.63	0.03		
Nitrite (as N) Cl < 3 mg/L	0.06 (max)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.010	
Cl 2 - < 4 mg/L	0.12 (max)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Cl 4 - < 6 mg/L	0.18 (max)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Cl 6 - < 8 mg/L	0.24 (max)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Cl 8 - < 10 mg/L	0.3 (max)	-	-	-	-	-	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Cl 10 mg/L	0.6 (max)	-	-	0.222	6.4	<0.010	<0.010	*	<0.010	<0.010	<0.010	<0.010	<0.010	<0.005	0.007	<0.100	-	0.019	0.018	<0.010	<0.010	<0.010	<0.010	<0.010	<0.005	<0.005	<0.010	<0.010	-		
Sulfate (SO <sub>4</sub> ) H 0-30 mg/L	128 (30-day average)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
H 31 - 75 mg/L	218 (30-day average)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
H 76 - 180 mg/L	308 (30-day average)	-	-	-	-	87.9	88.1	0%	-	-	-	-	-	88.7	-	-	-	-	-	-	-	134	-	-	-	-	-	-	-		
H 181 - 250 mg/L	429 (30-day average)	-	-	-	-	-	-	-	149	178	167	97.1	-	-	-	-	-	-	-	-	-	165	-	-	141	-	126	92.6	-		
H > 250 mg/L	TBD	-	-	666	-	-	-	-	79	-	-	-	-	-	202	-	-	259	215	265	-	-	-	173	184	-	-	-	<1.0		

Notes: Refer to Table Envelopes (attached)





Table B4: Analytical Results for Hydrocarbons, PAHs, and Glycols in Surface Water

Laboratory ID Sample ID Date Sampled/ Time	BCAWWG <sup>(2)</sup>	CONTACT WATER		E292170 WTS			E292898 ANCILLARY DISCHARGE										E305365 SW-1										Field Blank	
		6100550-01	6101012-01	6101420-01	6101420-02	RPD	6100550-02	6100918-01	6101011-01	6101054-01	6101423-01	6101528-01	6101990-01	6110232-01	6110509-01	6100550-03	6100550-04	6100550-06	6100918-02	6101011-02	6101054-02	6101423-02	6101528-02	6101990-02	6110232-02	6110509-02	6100550-05	
		PEA	PEA	WTS	WTS DUP		Weir	1	1	WEIR	Weir (1)	Weir	Weir	1	Weir	SW1	SW1	SW1	2	2	SW-1	SW-1 (2)	SW-1	SW-1	2	SW-1	FB	
		08-Oct-16/10:00	14-Oct-16	20-Oct-16	20-Oct-16		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	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	08-Oct-16/17:45	
<b>Hydrocarbons ug/L</b>																												
LEPH	-	<250	<250	<250	<250	*	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250
HEPH	-	899	612	<250	265	*	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250
<b>ug/L</b>																												
Acenaphthene	6	0.08	<0.05	<0.05	<0.05	*	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthylene	-	<0.20	<0.20	<0.20	<0.20	*	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Acridine	3	<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
Anthracene	4	0.12	<0.01	<0.01	<0.01	*	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo(a)anthracene	0.1	0.19	<0.01	<0.01	<0.01	*	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo(a)pyrene	0.01	0.26	<0.01	<0.01	<0.01	*	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo(b)fluoranthene	-	0.2	<0.05	<0.05	<0.05	*	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(g,h)perylene	-	0.36	<0.05	<0.05	<0.05	*	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(k)fluoranthene	-	0.13	<0.05	<0.05	<0.05	*	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chrysene	-	0.21	<0.05	<0.05	<0.05	*	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dibenz(a,h)anthracene	-	0.1	<0.05	<0.05	<0.05	*	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluoranthene	4	0.06	<0.03	<0.03	<0.03	*	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Fluorene	12	0.06	<0.05	<0.05	<0.05	*	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	-	0.27	<0.05	<0.05	<0.05	*	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Naphthalene	1	<0.20	<0.20	<0.20	<0.20	*	<0.20	<0.20	0.22	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Phenanthrene	0.3	0.41	<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
Pyrene	0.02	0.45	<0.02	<0.02	<0.02	*	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Quinoline	3.4	<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
<b>Glycols mg/L</b>																												
Diethylene Glycol	-	<5	<5	<5	<5	*	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Ethylene Glycol	192 <sup>m</sup>	<5	<5	<5	<5	*	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,2-Propylene Glycol	500 <sup>m</sup>	<5	<5	<5	<5	*	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

Notes: Refer to Table Endnotes (attached)

## 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