Table B1: Analytical Results for Nutrients in Surface Water

	BCAWWQG[2]		E292898 ANCILLARY DISCHARGE	E305365 SW-1	E292898 ANCILLARY DISCHARGE	E305365 SW-1	E292898 ANCILLARY DISCHARGE	E305365 SW-1
Laboratory ID			**6100918-01**	**6100918-02**	**6101011-01**	**6101011-02**	**6101054-01**	**6101054-02**
Sample ID			**1**	**2**	**1**	**2**	**WEIR**	**SW-1**
Date Sampled/Time			**14-Oct-16**	**14-Oct-16**	**15-Oct-16**	**15-Oct-16**	**16-Oct-16**	**16-Oct-16**
Physical Tests								
Colour, True (Colour Units)	**15 [4] units absolute, or 5 units above background**		<5	<5	<5	<5	<5	<5
Conductivity (uS/cm)	-		528	591	520	443	645	631
Hardness (as CaCO3)	-		187	221	226	179	239	243
pH	-		7.54	7.51	7.3	7.25	7.14	7.17
Total Suspended Solids (mg/L)	**25 mg/L above background (24-hr during clear flow)**		13	6	3	<2	7	<2
Total Dissolved Solids (mg/L)	-		304	346	334	269	383	378
Turbidity (NTU)	**5 NTU above background when background is <50 NTU (raw drinking water with treatment) Change from background of 10% when background is >50 NTU at any time during high flows or in turbid waters**		21.1	9.95	20.6	6.16	15.4	3.39
Anions and Nutrients mg/L								
Alkalinity Total (as CaCO3)	**<10 high sensitivity to acid inputs 10-20 moderate sensitivity to acid inputs >20 low sensitivity to acid inputs**		25	44	28	28	33	43
Acid Sensitivity			Low	Low	Low	Low	Low	Low
Chloride (Cl)	**600 (instant max) 150 (30-day average)**		42.3	42.8	29.4	29.3	68.1	59.1
Fluoride (F)	**1.5 (instant max) 1.0 (30-day average)**		<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	Hardness-Dependent BCAWWQG to protect AW [7]		**1.59**	**1.65**	**1.66**	**1.57**	**1.68**	**1.69**
Nitrate (as N)	**32.8 (instant maximum) 3.0 (30-day average)**		1.02	1.35	1.44	0.969	0.943	1.07
Nitrite (as N) [3] Cl <2 mg/L	**0.06 (max)**	**0.02 (30-day average)**						
Cl 2 - <4 mg/L	**0.12 (max)**	**0.04 (30-day average)**						
Cl 4 - <6 mg/L	**0.18 (max)**	**0.06 (30-day average)**						
Cl 6 - <8 mg/L	**0.24 (max)**	**0.08 (30-day average)**						
Cl 8 - <10 mg/L	**0.3 (max)**	**0.1 (30-day average)**						
Cl ≥ 10 mg/L	**0.6 (max)**	**0.2 (30-day average)**	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Sulfate (SO4) H 0-30 mg/L	**128 (30-day average)**							
H 31 - 75 mg/L	**218 (30-day average)**							
H 76 - 180 mg/L	**309 (30-day average)**					134		
H 181 - 250 mg/L	**429 (30-day average)**		149	165	178		167	167
H > 250 mg/L	**TBD**							

Notes: Refer to Table Endnotes (attached)

Table B2: Analytical Results for Total and Dissolved Metals in Surface Water

		E292898 ANCILLARY DISCHARGE	E305365 SW-1	E292898 ANCILLARY DISCHARGE	E305365 SW-1	E292898 ANCILLARY DISCHARGE	E305365 SW-1
Laboratory ID	**BCAWWQG[2]**	**6100918-01**	**6100918-02**	**6101011-01**	**6101011-02**	**6101054-01**	**6101054-02**
Sample ID		**1**	**2**	**1**	**2**	**WEIR**	**SW-1**
Date Sampled/Time		**14-Oct-16**	**14-Oct-16**	**15-Oct-16**	**15-Oct-16**	**16-Oct-16**	**16-Oct-16**
Physical Tests							
Hardness (as CaCO3) (mg/L)	**-**	187	221	226	179	239	243
pH	**-**	7.54	7.51	7.3	7.25	7.14	7.17
Total Metals (mg/L)							
Aluminum (Al)-Total	**-**	1.93	0.583	0.828	0.172	0.462	0.101
Antimony (Sb)-Total	**0.009**	0.0004	0.0004	0.0003	0.0003	0.0005	0.0004
Arsenic (As)-Total	**0.005**	0.0006	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Barium (Ba)-Total	**1.0**	0.027	0.024	0.018	0.015	0.02	0.022
Boron (B)-Total	**1.2**	0.03	0.031	0.042	0.036	0.037	0.039
Cadmium (Cd)-Total	**-**	0.00002	0.00002	0.00003	0.00002	0.00001	0.00001
Calcium (Ca)-Total	**-**	67.7	80.9	77.2	60.6	76.6	79.2
Chromium (Cr)-Total	**0.001[8]**	0.0038	0.0016	0.0015	0.0006	0.0010	<0.0005
Copper (Cu)-Total	**Hardness-Dependent[7]**	0.0044	0.0029	0.0029	0.0018	0.0022	0.002
	Hardness-Dependent BCAWWQG to protect AW [7] (instant max)	**0.0196**	**0.0228**	**0.0232**	**0.0188**	**0.0245**	**0.0248**
	Hardness-Dependent BCAWWQG to protect AW [7] (30-d average)	**0.0075**	**0.0088**	**0.0090**	**0.0072**	**0.0096**	**0.0097**
Iron (Fe)-Total	**1**	**1.91**	0.58	0.87	0.17	0.54	0.11
Lead (Pb)-Total	**Hardness-Dependent[7]**	0.0008	0.0004	0.0005	0.0002	0.0003	0.0002
	Hardness-Dependent BCAWWQG to protect AW [7] (instant max)	**0.1811**	**0.2240**	**0.2305**	**0.1713**	**0.2475**	**0.2528**
	Hardness-Dependent BCAWWQG to protect AW [7] (30-d average)	**0.0104**	**0.0120**	**0.0123**	**0.0100**	**0.0130**	**0.0132**
Magnesium (Mg)-Total	**-**	12.6	13.5	11.2	9.81	12.3	13.2
Manganese (Mn)-Total	**Hardness Dependent [7]**	0.0848	0.0545	0.0364	0.0252	0.0212	0.024
	Hardness-Dependent BCAWWQG to protect AW [7] (instant max)	**2.6**	**3.0**	**3.0**	**2.5**	**3.2**	**3.2**
	Hardness-Dependent BCAWWQG to protect AW [7] (30-d average)	**1.4**	**1.6**	**1.6**	**1.4**	**1.7**	**1.7**
Mercury (Hg)-Total	**0.00002**	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Molybdenum	**≤1 (instant max) 2 (30-d average)**	0.001	0.0015	0.0008	0.0009	0.0009	0.0015
Potassium (K)-Total	**-**	1.92	1.91	1.43	1.4	1.78	1.93
Selenium (Se)-Total	**0.002**	<0.0005	0.0007	0.0007	0.0007	<0.0005	0.0005
Sodium (Na)-Total	**-**	25.4	25.1	18.2	18	33.4	31.1
Uranium (U)-Total	**0.0085**	0.00016	0.00075	0.00017	0.00019	0.00023	0.00043
Zinc (Zn)-Total	**Hardness Dependent [7]**	0.008	0.005	0.005	<0.004	<0.004	<0.004
	Hardness-Dependent BCAWWQG to protect AW [7] (instant max)	**0.106**	**0.131**	**0.135**	**0.100**	**0.145**	**0.148**
	Hardness-Dependent BCAWWQG to protect AW [7] (30-d average)	**0.080**	**0.106**	**0.110**	**0.074**	**0.119**	**0.122**
Dissolved Metals (mg/L)							
Aluminum (Al)-Dissolved	**0.05 (30-day average where median pH > 6.5) 0.1 (maximum where instantaneous pH > 6.5) "*" indicates pH-dependent maximum where instant pH ≤ 6.5**	0.006	0.009	0.005	<0.005	<0.005	<0.005
Antimony (Sb)-Dissolved	**-**	0.0008	0.0005	0.0003	0.0003	0.0004	0.0004
Arsenic (As)-Dissolved	**-**	0.0013	0.0006	<0.0005	<0.0005	<0.0005	<0.0005
Barium (Ba)-Dissolved	**-**	0.014	0.018	0.014	0.014	0.017	0.021
Boron (B)-Dissolved	**-**	0.025	0.024	0.033	0.033	0.037	0.038
Cadmium (Cd)-Dissolved	**Hardness-Dependent[7]**	0.00004	0.00002	<0.00001	0.00001	0.00002	0.00001
	Calculated Hardness-Dependent BCAWWQG to protect AW [7] (short-term max) e[1.03 * ln(Hss) - 5.274] ug/L H<455mg/L	**0.00112**	**0.00133**	**0.00136**	**0.00107**	**0.00144**	**0.00147**
	Calculated Hardness-Dependent BCAWWQG to protect AW [7] (long-term max) e[0.736 * ln(Hss) - 4.943] ug/L H<285mg/L	**0.00034**	**0.00038**	**0.00039**	**0.00032**	**0.00040**	**0.00041**
Calcium (Ca)-Dissolved	**up to 4, highly sensitive to acid inputs 4 to 8, moderately sensitive over 8 low sensitivity**	58 Low	68.4 Low	73 Low	55.7 Low	76 Low	76.7 Low
Chromium (Cr)-Dissolved [8]	**-**	0.0006	0.0006	0.0006	0.0007	0.0009	0.0007
Copper (Cu)-Dissolved	**-**	0.001	0.0012	0.0009	0.0012	0.001	0.0014
Iron (Fe)-Dissolved	**0.35**	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Lead (Pb)-Dissolved	**-**	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Magnesium (Mg)-Dissolved	**-**	10.3	12.1	10.7	9.76	12	12.6
Manganese (Mn)-Dissolved	**-**	0.0538	0.0384	0.0233	0.0196	0.0134	0.0193
Mercury (Hg)-Dissolved	**-**	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Molybdenum	**-**	0.0009	0.0013	0.0008	0.001	0.001	0.0015
Potassium (K)-Dissolved	**-**	1.52	1.7	1.47	1.5	1.71	1.86
Selenium (Se)-Dissolved	**-**	<0.0005	0.0006	0.0006	0.0006	<0.0005	0.0005
Sodium (Na)-Dissolved	**-**	23.4	22.7	17.5	17.3	34.1	29.7
Uranium (U)-Dissolved	**-**	0.00012	0.0006	0.00014	0.00016	0.00022	0.00042
Zinc (Zn)-Dissolved	**-**	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004

Notes: Refer to Table Endnotes (attached)

Table B3: Analytical Results for Volatile Organic Compounds (VOCs) in Surface Water		E292898 ANCILLARY DISCHARGE	E305365 SW-1	E292898 ANCILLARY DISCHARGE	E305365 SW-1	E292898 ANCILLARY DISCHARGE	E305365 SW-1
Laboratory ID	**BCAWWQG[(2)]**	**6100918-01**	**6100918-02**	**6101011-01**	**6101011-02**	**6101054-01**	**6101054-02**
Sample ID		**1**	**2**	**1**	**2**	**WEIR**	**SW-1**
Date Sampled/Time		**14-Oct-16**	**14-Oct-16**	**15-Oct-16**	**15-Oct-16**	**16-Oct-16**	**16-Oct-16**
Volatile Organic Compounds (ug/L)							
Benzene	**40**	<0.5	<0.5	1.7	<0.5	<0.5	<0.5
Bromodichloromethane	**-**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Bromoform	**-**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Carbon Tetrachloride	**13.3**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chlorobenzene	**1.3**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chloroethane	**-**	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Chloroform	**1.8**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chloromethane	**-**	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Dibromochloromethane	**-**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dichlorobenzene	**0.7**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,3-Dichlorobenzene	**150**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,4-Dichlorobenzene	**26**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethane	**-**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dichloroethane	**100**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethene	**-**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
cis-1,2-Dichloroethene	**-**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
trans-1,2-Dichloroethene	**-**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Methylene chloride	**98.1**	<3.0	<3.0	-	-	-	-
1,2-Dichloropropane	**-**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
cis-1,3-Dichloropropene	**-**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
trans-1,3-Dichloropropene	**-**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,3-Dichloropropene (cis & trans)	**-**	-	-	<3.0	<3.0	<3.0	<3.0
Ethylbenzene	**200**	<1.0	<1.0	1.0	<1.0	<1.0	<1.0
Methyl t-butyl ether (MTBE)	**3400**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Styrene	**72**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,1,2-Tetrachloroethane	**-**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2,2-Tetrachloroethane	**-**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Tetrachloroethene	**110**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	**0.5**	<1.0	<1.0	**14.3**	2.9	<1.0	<1.0
1,1,1-Trichloroethane	**-**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2-Trichloroethane	**-**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethene	**21**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Trichlorofluoromethane	**-**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Vinyl Chloride	**-**	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Xylenes	**30**	<2.0	<2.0	6.1	<2.0	2.1	<2.0

Notes: Refer to Table Endnotes (attached)

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

		E292898 ANCILLARY DISCHARGE	E305365 SW-1	E292898 ANCILLARY DISCHARGE	E305365 SW-1	E292898 ANCILLARY DISCHARGE	E305365 SW-1
Laboratory ID	**BCAWWQG[2]**	**6100918-01**	**6100918-02**	**6101011-01**	**6101011-02**	**6101054-01**	**6101054-02**
Sample ID		**1**	**2**	**1**	**2**	**WEIR**	**SW-1**
Date Sampled/ Time		**14-Oct-16**	**14-Oct-16**	**15-Oct-16**	**15-Oct-16**	**16-Oct-16**	**16-Oct-16**
Hydrocarbons ug/L							
LEPH	**-**	<250	<250	<250	<250	<250	<250
HEPH	**-**	<250	<250	<250	<250	<250	<250
ug/l							
Acenaphthene	**6**	<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
Acridine	**3**	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Anthracene	**4**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benz(a)anthracene	**0.1**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo(a)pyrene	**0.01**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo(b)fluoranthene	**-**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(g,h,i)perylene	**-**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(k)fluoranthene	**-**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chrysene	**-**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dibenz(a,h)anthracene	**-**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluoranthene	**4**	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Fluorene	**12**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	**-**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Naphthalene	**1**	<0.20	<0.20	0.22	<0.20	<0.20	<0.20
Phenanthrene	**0.3**	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Pyrene	**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
Glycols mg/l							
Diethylene Glycol	**-**	<5	<5	<5	<5	<5	<5
Ethylene Glycol	**192[6]**	<5	<5	<5	<5	<5	<5
1,2-Propylene Glycol	**500[6]**	<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 Workling 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