

## **APPENDIX**

### **D QA/QC RESULTS (2017 – 2019 BASELINE)**

## APPENDIX D: QAQC Results

Table D-1 Blank samples with parameters recorded above detection.

Date	Parameter	Unit	LOD	Result	x LOD
10/10/2017	Al_D	mg/l	0.0015	0.0017	1.1
03/08/2017	Al_T	mg/l	0.0015	0.0018	1.2
09/07/2018	Al_T	mg/l	0.0015	0.0022	1.5
05/09/2018	Al_T	mg/l	0.0015	0.0020	1.3
03/10/2018	Al_T	mg/l	0.0015	0.0040	2.7
06/11/2018	Al_T	mg/l	0.0015	0.0022	1.5
03/12/2018	Al_T	mg/l	0.0015	0.0025	1.7
10/01/2019	Al_T	mg/l	0.0015	0.0096	6.4
10/10/2017	As_D	mg/l	0.0009	0.0012	1.3
10/10/2017	As_T	mg/l	0.0009	0.0013	1.4
07/03/2018	BOD_Setttled	mg/l	1.0000	12.0000	12.0
06/08/2018	BOD_Setttled	mg/l	1.0000	2.0000	2.0
03/10/2018	BOD_Setttled	mg/l	1.0000	3.0000	3.0
10/10/2017	Co_D	mg/l	0.0001	0.0002	2.0
05/09/2018	Cr_D	mg/l	0.0002	0.0022	11.0
05/01/2017	Cr_T	mg/l	0.0002	0.0028	14.0
10/10/2017	Cr_T	mg/l	0.0002	0.0003	1.5
05/09/2018	Cr_T	mg/l	0.0002	0.0005	2.5
05/01/2017	Cu_T	mg/l	0.0030	0.0040	1.3
06/08/2018	EPH>C8C40	mg/l	0.0100	0.1900	19.0
03/08/2017	F	mg/l	0.3000	0.7000	2.3
10/10/2017	F	mg/l	0.3000	0.9000	3.0
05/01/2017	Fe_T	mg/l	0.0047	0.0194	4.1
07/03/2018	Hg_T_CVAF	mg/l	0.000010	0.0001	5.0
10/10/2017	Mo_D	mg/l	0.0002	0.0003	1.5
10/10/2017	Mo_T	mg/l	0.0002	0.0005	2.5
07/12/2016	MRP_PTotal	mg/l	0.0050	0.0500	10.0
05/01/2017	MRP_PTotal	mg/l	0.0050	0.0240	4.8
01/02/2017	MRP_PTotal	mg/l	0.0050	0.0090	1.8
07/12/2016	NH4N_NH4	mg/l	0.0300	0.0400	1.3
05/01/2017	NH4N_NH4	mg/l	0.0300	0.0900	3.0
06/07/2017	NH4N_NH4	mg/l	0.0100	0.0900	9.0
03/08/2017	NH4N_NH4	mg/l	0.0100	0.1400	14.0
10/10/2017	NH4N_NH4	mg/l	0.0100	0.0200	2.0
11/06/2018	NH4N_NH4	mg/l	0.0100	0.3400	34.0
06/08/2018	NH4N_NH4	mg/l	0.0100	0.0200	2.0
05/09/2018	NH4N_NH4	mg/l	0.0100	0.0600	6.0
03/10/2018	NH4N_NH4	mg/l	0.0100	0.0700	7.0
06/11/2018	NH4N_NH4	mg/l	0.0100	0.0600	6.0
03/12/2018	NH4N_NH4	mg/l	0.0100	0.3600	36.0
10/10/2017	Ni_D	mg/l	0.0002	0.0005	2.5
05/01/2017	Ni_T	mg/l	0.0002	0.0006	3.0

Date	Parameter	Unit	LOD	Result	x LOD
10/10/2017	Ni_T	mg/l	0.0002	0.0003	1.5
03/10/2018	NO3_N	mg/l	0.0500	0.0600	1.2
03/10/2018	NO3_NO3	mg/l	0.2000	0.3000	1.5
07/12/2016	P_Total	mg/l	0.0050	0.0500	10.0
05/01/2017	P_Total	mg/l	0.0007	0.0226	32.3
01/02/2017	P_Total	mg/l	0.0007	0.0086	12.3
06/07/2017	P_Total	mg/l	0.0007	0.0225	32.1
03/08/2017	P_Total	mg/l	0.0007	0.0264	37.7
10/10/2017	P_Total	mg/l	0.0007	0.0178	25.4
04/04/2018	P_Total	mg/l	0.0007	0.0216	30.9
11/06/2018	P_Total	mg/l	0.0007	0.0177	25.3
09/07/2018	P_Total	mg/l	0.0007	0.0358	51.1
06/08/2018	P_Total	mg/l	0.0007	0.0220	31.4
05/09/2018	P_Total	mg/l	0.0007	0.0201	28.7
03/10/2018	P_Total	mg/l	0.0007	0.0327	46.7
06/11/2018	P_Total	mg/l	0.0007	0.0209	29.9
03/12/2018	P_Total	mg/l	0.0007	0.0301	43.0
10/01/2019	P_Total	mg/l	0.0007	0.0132	18.9
07/12/2016	Sb_T	mg/l	0.0020	0.0030	1.5
03/08/2017	Sb_T	mg/l	0.0020	0.0070	3.5
10/10/2017	Sb_T	mg/l	0.0020	0.0050	2.5
06/08/2018	Sb_T	mg/l	0.0020	0.0040	2.0
05/09/2018	Sb_T	mg/l	0.0020	0.0050	2.5
05/01/2017	TDS	mg/l	35.0000	376.0000	10.7
01/02/2017	TDS	mg/l	35.0000	89.0000	2.5
06/07/2017	TDS	mg/l	35.0000	55.0000	1.6
04/04/2018	TDS	mg/l	35.0000	66.0000	1.9
05/09/2018	TDS	mg/l	35.0000	87.0000	2.5
06/11/2018	TDS	mg/l	35.0000	69.0000	2.0
10/10/2017	Th_D	mg/l	0.0009	0.0017	1.9
10/10/2017	V_T	mg/l	0.0006	0.0010	1.7
10/10/2017	Zn_T	mg/l	0.0015	0.0022	1.5
03/10/2018	Zn_T	mg/l	0.0015	0.0022	1.5
Indicates values > 5x the limit of detection.					
Indicates values > 10x the limit of detection.					

**Table D-2 Relative percent difference results (> ±20%) for surface water sample duplicates for results > 5x the limit of detection.**

Sample ID	Date	Parameter	RPD (%)
SW02	2016-12-06	AlkCaCO3_Total	30.3
SW02	2016-12-06	Anions_Total	22.5
SW02	2016-12-06	Ca_D	38.0
SW22	2016-12-07	Cr_T	62.9
SW09	2018-12-05	Al_T	47.2
SW09	2018-12-05	Fe_T	23.6
SW09	2018-12-05	Mn_T	35.7
SW11	2018-09-10	Al_T	86.9
SW11	2018-09-10	Fe_T	40.7
SW11	2018-09-10	Zn_T	-38.8*
SW13	2018-02-07	NH4_NH4	76.9
SW13	2018-02-07	Sulphate	-25.6
SW15	2018-06-11	NH4_NH4	-23.7
SW27	2017-12-14	Al_T	30.0
SW27	2017-12-14	Anions_Total	-81.0
SW25	2017-11-04	AlkCaCO3_Total	-115.8
SW25	2017-12-13	AlkCaCO3_Total	-32.3
SW25	2017-12-13	Mn_T	-28.2
SW25	2018-01-10	P_Total	-27.8
SW25	2018-02-06	EC_Lab	-37.4
SW25	2018-03-07	P_Total	-34.9
SW25	2018-03-07	Sulphate	-23.0
SW25	2018-04-04	NO3_N	26.4
SW25	2018-04-04	NO3_NO3	29.8
SW25	2018-04-04	P_Total	-26.8
SW25	2018-06-11	Mn_T	-31.6
SW25	2018-06-11	NH4_NH4	-109.1
SW25	2018-06-11	P_Total	30.9
SW25	2018-07-09	Al_T	-27.3
SW25	2018-07-09	AlkCaCO3_Total	-66.7
SW25	2018-07-09	Anions_Total	-50.7
SW25	2018-07-09	NH4_NH4	66.7
SW25	2018-07-09	pH_Lab	-27.5
SW25	2018-08-06	Co_T	-22.2
SW25	2018-08-06	Cr_T	-103.7
SW25	2018-08-06	Ni_T	66.7
SW25	2018-10-03	NH4_NH4	31.6
SW25	2018-12-03	Zn_D	-34.0
*Negative values indicate an increase in the parameter in the duplicate sample.			

**Table D-3** Relative differences between duplicate results which are > 2x the limit of detections for results < 5x detection.

Sample ID	Date	Parameter	x LOD
SW07	2017-09-06	As_D	2.2x
SW07	2017-09-06	Cr_T	3.5x
SW27	2017-12-14	Cu_D	3.0x
SW25	2017-08-03	As_D	2.2x
SW25	2017-08-03	Cr_T	3.5x
SW25	2017-10-11	As_D	2.8x
SW25	2018-10-03	Ni_D	3.0x