

A18.1

**Baseline Surface Water – Laboratory  
Summary July to August 2018**

Sample ID	Details - SURFACE WATER					SW01	SW02	SW03	SW04	SW05	SW06	SW07	SW08	SW09	SW10	SW11	SW14	SW15	SW16	SW17	
Laboratory						Exova	Exova	Exova	Exova	Exova	Exova	Exova	Exova	Exova	Exova	Exova	Exova	Exova	Exova		
Report Ref.	18/11692_b1	18/11692_b1	18/11692_b1	18/12103.b1	18/11692_b1	18/11692_b4	18/11692_b1	18/11692_b1	18/11692_b4	18/11692_b1	18/11692_b2	18/11692_b1	18/11692_b4	18/11692_b2	18/11692_b2	18/11692_b4	18/11692_b2	18/11692_b4	18/11692_b2		
Sample Type	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary		
Overall sampling period	Inland Waters Other Surface Waters																				
Parameters	Units	MDL	SWTV (AA-EQS)	SWTV (MAC-EQS)	SWTV (AA-EQS)	SWTV (MAC-EQS)															
Aluminium	mg/l	0.02	nv	nv	nv	nv	-	-	-	-	-	-	-	-	-	-	-	-	0.025		
Antimony	mg/l	0.002	nv	nv	nv	nv	-	-	-	-	0.005	-	0.011	0.003	-	-	-	-	-		
Arsenic	mg/l	0.0025	0.025	nv	0.020	nv	-	-	-	-	-	0.0028	-	-	-	-	-	0.0063	0.0026	0.0029	
Barium	mg/l	0.003	nv	nv	nv	nv	0.023	0.022	0.02	0.013	0.04	0.04	0.041	0.043	0.043	0.089	0.074	0.051	0.102	0.086	0.087
Beryllium	mg/l	0.0005	nv	nv	nv	nv	-	-	-	-	-	-	-	-	-	-	-	-	-		
Boron	mg/l	0.012	nv	nv	nv	nv	0.021	0.025	1.208	2.451	0.032	0.031	0.03	0.29	0.03	0.059	0.029	0.018	0.037	0.034	0.031
Cadmium	mg/l	0.0005	0.00008	0.00045	0.0002	0.00045	-	-	-	-	-	-	-	-	-	-	-	-	-		
Calcium	mg/l	0.2	nv	nv	nv	nv	79.2	77.9	163.6	297.8	103.8	100.9	124	108.9	94	121.2	103.9	97.5	112.8	119.9	96
Chromium	mg/l	0.0015	0.0034 <sup>1</sup> /0.0047 <sup>2</sup>	nv <sup>1</sup> /0.0032 <sup>2</sup>	0.0006 <sup>1</sup> /nv <sup>2</sup>	0.0032 <sup>1</sup> /nv <sup>2</sup>	-	-	-	-	-	-	-	-	-	-	-	-	0.0019		
Cobalt	mg/l	0.002	nv	nv	nv	nv	-	-	-	-	-	-	-	-	-	-	-	-	-		
Copper	mg/l	0.007	0.005/0.03 <sup>3</sup>	nv	0.005	nv	-	-	-	-	-	-	-	-	-	-	-	-	-		
Iron	mg/l	0.02	nv	nv	nv	nv	-	0.038	0.026	0.025	0.041	0.045	-	0.027	0.047	0.028	0.035	-	0.123	0.078	0.284
Lead	mg/l	0.005	0.0012	0.014	0.0013	0.014	-	-	-	-	-	-	-	-	-	-	-	-	-		
Magnesium	mg/l	0.1	nv	nv	nv	nv	7.3	8.5	370.3	772	10.3	10.8	16.6	15.5	9.5	12.4	10.3	7.5	10.4	9.8	7.9
Manganese	mg/l	0.002	nv	nv	nv	nv	0.03	0.019	0.024	0.016	0.049	0.038	0.016	0.013	0.07	0.042	0.07	0.015	0.829	0.116	0.175
Mercury	mg/l	0.001	0.00005	0.00007	0.00005	0.00007	-	-	-	-	-	-	-	-	-	-	-	-	-		
Molybdenum	mg/l	0.002	nv	nv	nv	nv	-	-	0.002	0.004	0.003	-	-	-	-	-	-	0.004	-	0.002	0.004
Nickel	mg/l	0.002	0.004	0.034	0.0086	0.034	-	-	-	-	-	0.004	0.002	-	-	0.002	-	0.005	0.004	0.005	
Phosphorus	mg/l	0.005	nv	nv	nv	nv	0.034	0.038	0.061	0.036	0.096	0.116	0.028	0.05	0.106	0.046	0.073	0.018	0.555	0.268	0.442
Potassium	mg/l	0.1	nv	nv	nv	nv	1.8	2.3	114.8	241.1	4.4	3.3	2.4	3.3	2.9	7	3.6	2.6	42.9	31.8	23.4
Selenium	mg/l	0.003	nv	nv	nv	nv	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Sodium	mg/l	0.1	nv	nv	nv	nv	19.2	29.3	3142	6563	32.8	33.7	21	20.8	29.3	80.1	67.7	60	28.7	37	137.3
Thallium	mg/l	0.003	nv	nv	nv	nv	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Vanadium	mg/l	0.0015	nv	nv	nv	nv	-	-	-	-	-	-	-	-	-	-	-	-	0.0019		
Zinc	mg/l	0.003	0.008/0.05/0.1 <sup>4</sup>	nv	0.04	nv	-	-	0.003	-	0.01	0.005	0.004	0.01	0.014	0.003	0.022	0.008	0.01	0.008	0.023
TPH CWG																					
Aliphatics																					
>C10-C12	mg/l	0.005	nv	nv	nv	nv	-	-	-	-	-	-	-	-	-	-	-	-	-		
>C12-C16	mg/l	0.01	nv	nv	nv	nv	-	-	-	-	-	-	-	-	-	-	-	-	-		
>C16-C21	mg/l	0.01	nv	nv	nv	nv	-	-	-	-	-	-	-	-	-	-	-	-	-		
>C21-C35	mg/l	0.01	nv	nv	nv	nv	-	-	-	-	-	-	-	-	-	-	-	-	-		
Total aliphatics >C10-35	mg/l	0.01	nv	nv	nv	nv	-	-	-	-	-	-	-	-	-	-	-	-	-		
Aromatics																					
>EC10-EC12	mg/l	0.005	nv	nv	nv	nv	-	-	-	-	-	-	-	-	-	-	-	-	-		
>EC12-EC16	mg/l	0.01	nv	nv	nv	nv	-	-	-	-	-	-	-	-	-	-	-	-	-		
>EC16-EC21	mg/l	0.01	nv	nv	nv	nv	-	-	-	-	-	-	-	-	-	-	-	-	-		
>EC21-EC35	mg/l	0.01	nv	nv	nv	nv	-	-	-	-	-	-	-	-	-	-	-	-	-		
Total aromatics >C10-35	mg/l	0.01	nv	nv	nv	nv	-	-	-	-	-	-	-	-	-	-	-	-	-		
Total aliphatics and aromatics >C10-35	mg/l	0.01	nv	nv	nv	nv	-	-	-	-	-	-	-	-	-	-	-	-	-		
MTBE	mg/l	0.005	nv	nv	nv	nv	-	-	-	-	-	-	-	-	-	-	-	-	-		
Benzene	mg/l	0.005	0.01	0.05	0.008	0.05	-	-	-	-	-	-	-	-	-	-	-	-	-		
Toluene	mg/l	0.005	0.01	nv	0.01	nv	-	-	-	-	-	-	-	-	-	-	-	-	-		
Ethylbenzene	mg/l	0.005	nv	nv	nv	nv	-	-	-	-	-	-	-	-	-	-	-	-	-		
m/p-Xylene	mg/l	0.005	0.01	nv	0.01	nv	-	-	-	-	-	-	-	-	-	-	-	-	-		
c-Xylene	mg/l	0.005	0.01	0.01	0.01	0.01	-	-	-	-	-	-	-	-	-	-	-	-	-		
Fluoride	mg/l	0.3	0.5	nv	1.5	nv	-	-	0.5	0.8	-	-	-	0.3	-	-	-	-	-		
Sulphate as SO4	mg/l	0.5	nv	nv	nv	nv	26.1	28.7	909.9	1779.4	90.1	83.1	150.3	130.9	58.3	147.3	75.6	71	74.4	176.6	54.5
Chloride	mg/l	0.3	nv	nv	nv	nv	32	54.5	5828.5	13706.6	52.5	55.7	38.5	38	46.8	139.8	129.7	89.5	48.5	42.4	274.4
Ortho Phosphate as P	mg/l	0.03	0.075 <sup>5</sup>	0.075 <sup>5</sup>	nv	nv	-	-	-	-	0.05	0.06	-	0.06	-	-	-	0.47	0.18	0.29	
Total Ammonia as N	mg/l	0.03	nv	nv	nv	nv	0.05	0.03	0.26	0.59	0.09	0.08	0.12	0.12	0.05	0.09	0.06	-	1.37	0.14	12.38
Total Alkalinity as CaCO3	mg/l	1	nv	nv	nv	nv	224	208	174	154	222	226	238	226	228	204	214	224	342	238	268
BOD (Settled)	mg/l	1	nv	nv	nv	nv	-	-	-	2	-	-	-	1	-	-	2	-	2	3	
COD (Settled)	mg/l	7	nv	nv	nv	nv	-	-	335	327	12	15	-	-	-	16	11	16	48	27	31
Kjedahl Nitrogen	mg/l	0.5	nv	nv	nv	nv	1.2	1.6	1.5	2	1.1	1.7	1.5	1.5	2.1	2.1	1.6	1.8	3.2	2	15.5
Total Suspended Solids	mg/l	10	nv	nv	nv	nv	23	-	29	44	-	10	-	101	-	28	-	-	-	13	25
Key																					
Inland waters	Value exceeds the MAC-EQS Surface Water Threshold Value (SWTV used - Surface Water Regs SI No. 272 of 2009; Surface Water Amendment Regs SI No. 386 of 2015) for Inland Waters; <u>Underlined</u> exceeds the AA-EQS for same SWTVs, where available																				
Other surface waters	Value exceeds the MAC-EQS Surface Water Threshold Value (SWTV used - Surface Water Regs SI No. 272 of 2009; Surface Water Amendment Regs SI No. 386 of 2015) for Other Surface Waters; <u>Underlined</u> exceeds the AA-EQS for same SWTVs, where available																				
Notes	SWTV (MAC-EQS) means that for each representative monitoring point within the waterbody no measured concentration exceeds the standard.																				
Note 1	Chromium VI																				
Note 2	Chromium III																				

