

DCS2 - Discharge Point

Parameter	Discharge Consent Threshold	Detection limit (typical)	27/11/2014	16/12/2014	18/12/2014	14/01/2015	04/02/2015	Duplicate/DCS7	11/02/2015	Duplicate/DCS7	Duplicate	23/03/2015	26/03/2015	Duplicate	23/04/2015	Duplicate
Total Suspended Solids	50	10	3	11	18	22	6	<3	13	11	8	3	27	31	7	10
Biochemical Oxygen Demand	10	1	<1	<1	<1	1.58 [#]	1.76 [#]	1.61 [#]	1.03 [#]	<1	<2	<2	1.23 [#]	<2	1.04 [#]	<2
pH	>6 & <9	-	7.38	7.47	7.08	7.18	7.34 (7.00)	6.92	7.5 (7.48)	7.68	7.8	7.7	7.83 (8.54)	7.8	7.83	7.9
Total zinc ⁴	33.8	3	<18	<18	30	30	<18	<18	<18	<18	11.47	10.21	<18	30.07	<18	<3.73
Dissolved mercury ⁴	1.7	0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.1	<0.2	<0.1	<0.04
Dissolved cadmium ⁴	0.7	0.03	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.09	<0.09	<0.6	<0.09	<0.6	<0.05
Dissolved iron ⁴	3.9	0.0047	<0.23	<0.23	<0.23	<0.23	<0.23	0.34	<0.23	<0.23	0.04908	0.03045	<0.23	0.8087	<0.23	0.18
Dissolved copper ⁴	16.2	3	12	10	<9	<9	<9	<9	<9	<9	9.065	7.101	10	2.202	<9	4.765
Dissolved chromium ²	8.1	0.2	<2	<2	2	7	2	<2	<2	<2	<0.68	<0.68	<2	<0.68	<2	<0.28
Chromium VI	N/A	2	<5	<5	<5	9	<5	<5	<5	<5			<5		<5	
Chromium III	N/A	2	<30	<30	<30	<30	<30	<30	<30	<30			<30		<30	
Dissolved nickel ³	20	0.2	<3	<3	6	14	10	<3	14	11	12.01	6.544	5	0.833	7	5.578
Dissolved arsenic ¹	50	0.9	1	<1	<1	3	4.8	1.1	5.1	4.3	6.23	2.971	7.9	1.929	2.5	2.214
Dissolved lead ³	7.2	0.4	<6	<6	<6	<6	<6	<6	<6	<6	<0.173	<0.173	<6	<0.173	<6	<0.12
Total hardness as CaCO3	N/A	1	123	137	132	135	137	24.1	150	146	139	136	106	114	147	159
Visible oil or grease	N/A	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:

pH values presented in pH units. Values in brackets are field pH measurements. Total Suspended Solids, Biochemical Oxygen Demand, Total hardness & Dissolved iron concentrations are presented in mg/L, all other parameters are in µg/L.

^{1,2&3} Discharge Consent Threshold from The Water Framework Directive (Priority Substances and Classification) Regulations (Northern Ireland) 2011

¹ Annual mean value presented for 'Good Standard for rivers and freshwater lakes'

² Annual mean environmental standard for chromium III (4.7µg/L) plus annual mean environmental standard for chromium VI (3.4µg/L) presented for 'Good Standard for rivers and freshwater lakes'

³ Annual mean environmental standard (AA-EQS) value presented for priority substance and its compounds for all rivers and lakes

⁴ Department Specific

[#] BOD over diluted, therefore result indicative only

^A Container with headspace

Exceedance of threshold

Duplicate sample

28/05/2015	28/05/2015	02/06/2015	30/07/2015	04/08/2015	Duplicate	02/09/2015	28/09/2015	Duplicate	01/10/2015	22/10/2015	Duplicate	05/11/2015	Duplicate	09/12/2015	Duplicate	06/01/2016	Duplicate	03/02/2016	Duplicate	03/02/2016 Retest	Duplicate Retest	02/03/2016	Duplicate
23	36	39	<10	14	23	11	<10	12	12	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	-	-	<10	<10
1.71 [#]	1.49 [#]	<1	<1	1	8	3	3	3	2	2	1	1	<1	<1	1	<1	<1	<1	<1	-	-	<1	3
8.29	8.27	7.82	7.98	7.69 (8.41)	7.7	8.09	7.74	7.73	8.96	7.35	7.14	7.85 (7.53)	8.06	7.76 (7.28)	8.07	7.58 (7.05)	7.47	7.32 (7.10)	7.27	-	-	7.08 (7.02)	7.09
17.8	14.6	<18	4	6	14.59	13	28	31	7	12	10	5	5	13	12	9	9	33	35	30	30	13	11
<0.01	<0.01	<0.1	<0.01	<0.01	1.051	<0.01	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	0.6	<0.5
<0.1	<0.1	<0.6	0.13	0.06	0.121	0.36	0.2	0.21	0.25	0.16	0.21	0.24	0.14	0.43	0.19	0.25	0.12	<0.03	<0.03	-	-	<0.03	<0.03
<0.019	<0.019	<0.23	<0.0047	0.1384	0.9932	0.0082	0.5821	0.5538	0.3261	0.6625	0.6613	0.2782	0.2208	0.0352	0.0075	0.1227	0.2064	0.1852	0.2213	-	-	0.4409	0.3247
9.39	8.77	<9	<3	<3	13.99	<0.3	5	5	4	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	-	-	<3	<3
2.13	2.01	<2	<0.2	<0.2	<0.68	0.6	<0.2	<0.2	0.2	<0.2	<0.2	<0.2	<0.2	1.4	<0.2	0.3	<0.2	0.7	<0.2	-	-	0.5	0.3
<30	<30	<5	<2	<2		<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	<2	<2
<30	<30	<30	<2	<2		<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	<2	<2
5.22	5.09	5	6.5	7	9.321	5.3	5	4.9	2.7	3.3	3.7	5.5	5.2	7.4	5.8	5.5	5.1	5.3	4.7	-	-	6.3	4.4
16	13.7	7.7	6.7	6.5	8.64	4.2	7.5	6.5	4.7	3.5	1.8	3.2	3.9	0.9	2.6	6.7	5.1	<0.9	<0.9	-	-	2.4	<0.9
<0.02	<0.02	<6	2.6	2.5	0.37	4.7	4.4	4.5	<0.4	1.9	1.8	3.6	2.8	6.5	3.8	3.3	4	<0.4	<0.4	-	-	<0.4	<0.4
140	148	141	179	175	183	163	157	157	93	167	168	197	198	200	202	208	207	195	193	-	-	171	170
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

06/04/2016	Duplicate	04/05/2016	Duplicate	02/06/2016	Duplicate	04/07/2016	Duplicate	03/08/2016	Duplicate	06/09/2016	Duplicate	05/10/2016	Duplicate	03/11/2016	Duplicate	06/12/2016	Duplicate	18/01/2017	Duplicate	01/02/2017	Duplicate	20/03/2017	Duplicate	04/04/2017
<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
1	1	2	2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	1	2	<1	<1	<1	<1	<1	<1	<1	3
7.27 (7.11)	7.42	7.36 (7.07)	7.39	7.06 (7.35)	7.07	7.38 (7.08)	7.17	7.29 (6.95)	7.19	7.34 (7.18)	7.37	7.53 (6.81)	7.06	7.47 (6.91)	7.29	7.16 (6.88)	7	7.05 (7.00)	6.68	7.39 (7.18)	7.53	7.51 (7.00)	7.5	7.34 (7.22)
19	18.6	<3	<3	5	6	3	3	3	3	<3	<3	7	6	7	6	<3	<3	25	26	29	28	29	32	12
<0.5	<0.5	<0.5	<0.5	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.5	<0.5	<0.5	<0.5	<0.01	<0.01	<0.5	<0.5	<0.5
<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
0.4914	0.4934	0.5691	0.596	0.4472	0.4561	0.9222	0.9363	0.4984	0.5022	0.4894	0.4811	0.3381	0.3371	0.5496	0.6054	0.4327	0.44	0.1683	0.1642	0.1571	0.1609	<0.0047	<0.0047	0.7468
<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.3	<0.2	0.3	<0.2	<0.2	0.5	<0.2	<0.2	<0.2	0.3	<0.2	<0.2	0.3	0.2	<0.2	<0.2	<0.2	<0.2
<2	<2	<2	<2	<2	<2	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	NA
<2	<2	<2	<2	<2	<2	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6
3	3	4.5	3.2	4.7	4.9	3.3	4.7	4.6	4	3.3	3.5	5.6	5.2	5.4	5.3	4.2	3.2	5.9	5.7	8	7.6	4.4	3.9	3.8
<0.9	<0.9	2.5	6	2.6	2.5	<0.9	<0.9	<0.9	<0.9	<0.9	<0.9	<0.9	<0.9	4	5.6	3.9	4.3	3.3	2	2.6	2.2	<0.9	<0.9	1.5
<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
189	191	190	212	223	215	194	195	179	176	186	186	176	177	192	200	197	190	284	284	196	199	191	188	186
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Duplicate	09/05/2017	Duplicate	06/06/2017	Duplicate	06/07/2017	Duplicate	03/08/2017	Duplicate
<10	<10	<10	<10	<10	<10	11	<10	<10
3	2	2	<1	<1	3	3	<1	<1
7.36	7.63 (7.27)	7.35	7.35 (7.27)	7.32	7.05 (6.95)	7.27	7.75 (7.26)	7.7
11	3	3	10	10	2.6	2.7	14	14
<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<1	<1
<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
0.7717	0.4589	0.4493	0.257	0.2594	1.981	1.87	0.407	0.3984
<3	<3	<3	<3	<3	<3	<3	<3	<3
<0.2	<0.2	<0.2	<0.2	<0.2	0.9	<0.2	<0.2	<0.2
NA	<6	<6	<6	<6	<6	<6	<6	<6
<6	<6	<6	<6	<6	<6	<6	<6	<6
4	3.2	2.7	2	2.9	1.7	1.5	1.8	2.1
2.1	<0.9	2.5	2.1	<0.9	5.8	4.3	<0.9	<0.9
<0.4	<0.4	<0.4	<0.4	<0.4	0.5	<0.4	<0.4	<0.4
186	179	183	173	172	200	204	175	167
-	-	-	-	-	-	-	-	-

DCS1 - Curraghinalt Burn upstream

Parameter	Detection limit (typical)	27/11/2014	16/12/2014	18/12/2015	14/01/2015	04/02/2015	11/02/2015	Duplicate	26/03/2015	23/04/2015	21/05/2015	28/05/2015	02/06/2015	28/07/2015	30/07/2015	04/08/2015	02/09/2015	01/10/2015
Total Suspended Solids	10	<3	<3	<3	9	<3	<3	<2	18	<3	3	5	4	9	<10	<10	32	<10
Biochemical Oxygen Demand	1	<1	<1	<1	1.87 [#]	1.39 [#]	<1	<2	1.23 [#]	<1	1.29 [#]	<1	<1	1.49 ^{#A}	1	2	1	2
pH	-	6.7	6.75	7	6.9	7.23 (6.73)	6.8 (7.33)	8.2	6.81 (7.05)	6.99	7.19	7.7	6.57	5.94 (6.49)	6.85	5.74 (8.36)	7.46	6.75
Total zinc	3	<18	<18	<18	20	<18	<18	5.394	<18	<18	<18	7.49	<18	14	8	7	8	7
Dissolved mercury	0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.01	<0.1	0.51	<0.01	<0.01	<0.01	<0.5
Dissolved cadmium	0.03	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.09	<0.6	<0.6	<0.6	<0.1	<0.6	6.9	<0.03	<0.03	<0.03	<0.03
Dissolved iron	0.0047	2.07	0.52	0.67	0.39	0.36	0.36	0.6633	<0.23	1.34	1.34	1.47	0.52	1.2	2.569	2.046	6.269	6.646
Dissolved copper	3	<9	<9	<9	<9	<9	<9	7.207	<9	<9	<9	2.56	<9	9.6	<3	<3	4	<3
Dissolved chromium	0.2	<2	<2	<2	<2	<2	<2	<0.68	<2	<2	<2	0.956	<2	4.7	<0.2	0.6	1.2	0.4
Chromium VI	2	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<30	<5	<20	<2	<2	<2	<2
Chromium III	2	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<20	<2	<2	<2	<2
Dissolved nickel	0.2	<3	<3	<3	<3	<3	<3	0.702	<3	<3	<3	0.913	<3	3.1	0.7	1	1.6	1.3
Dissolved arsenic	0.9	2.4	<1	<1	<1	1.3	<1	1.197	2	3.2	2.2	3.69	1.2	2.8	2.5	2.6	4.6	5.9
Dissolved lead	0.4	<6	<6	<6	<6	<6	<6	0.284	<6	<6	<6	0.315	<6	2.1	<0.4	<0.4	2.7	<0.4
Total hardness as CaCO3	1	21.7	16.2	21.1	30.1	24.2	19.7	19	13.4	33.1	17.6	29.4	9.98	<15	229	12	23	30
Visible oil or grease	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:

pH values presented in pH units. Values in brackets are field pH measurements. Total Suspended Solids, Biochemical Oxygen Demand, Total hardness & Dissolved iron concentrations are presented in mg/L, all other parameters are in µg/L.

[#] BOD over diluted, therefore result indicative only ^A Container with headspace

DCS3 - Curraghinalt Burn downstream

Parameter	Detection limit (typical)	27/11/2014	16/12/2014	18/12/2014	14/01/2015	04/02/2015	11/02/2015	26/03/2015	23/04/2015	21/05/2015	28/05/2015	02/06/2015	Duplicate	28/07/2015	30/07/2015	04/08/2015	02/09/2015	01/10/2015
Total Suspended Solids	10	3	8	4	5	3	5	28	72	<3	18	9	3	16	<10	<10	<10	<10
Biochemical Oxygen Demand	1	1.08 [#]	<1	<1	1.65 [#]	1.91 [#]	<1	1.31 [#]	<1	1.25 [#]	1.22 [#]	<1	<2	1.42 ^{#A}	1	2	1	1
pH	-	7.19	7.46	6.95	7.44	7.16 (6.93)	7.45 (7.2)	6.91 (7.31)	7.82	7.88	7.76	6.81	7.4	6.02 (6.28)	7.12	5.95 (6.40)	7.12	6.45
Total zinc	3	<18	<18	<18	20	<18	<18	<18	<18	<18	11.2	<18	36.51	13	9	7	9	7
Dissolved mercury	0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	<0.1	<0.2	<0.5	<0.01	<0.01	<0.01	0.6
Dissolved cadmium	0.03	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.1	<0.6	<0.09	0.45	<0.03	<0.03	<0.03	<0.03
Dissolved iron	0.0047	1.78	0.54	0.65	0.38	0.25	0.25	0.24	0.8	1.13	1.03	0.52	1.485	1.2	2.634	1.843	3.455	6.574
Dissolved copper	3	<9	<9	<9	<9	<9	<9	<9	<9	<9	5.58	<9	19.83	4.2	3	<3	3	<3
Dissolved chromium	0.2	<2	<2	<2	6	<2	<2	<2	<2	<2	1.8	<2	1.017	4.6	<0.2	<0.2	<0.2	<0.2
Chromium VI	2	<5	<5	<5	8	<5	<5	<5	<5	<5	<30	<5	<5	<20	<2	<2	<2	<2
Chromium III	2	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<20	<2	<2	<2	<2
Dissolved nickel	0.2	<3	<3	<3	<3	<3	4	<3	<3	<3	2.12	<3	6.816	4.6	0.7	0.4	2.4	1.4
Dissolved arsenic	0.9	2.1	<1	<1	<1	2	1.3	2.7	5.3	8.3	7.7	1.5	7.069	1.3	<0.9	2	3.4	6.5
Dissolved lead	0.4	<6	<6	<6	<6	<6	<6	<6	<6	<6	0.187	<6	0.381	<1	1	0.7	1.2	0.9
Total hardness as CaCO3	1	35.5	27.5	21	34.5	41.4	49.4	13.7	71.4	36.6	65.1	10.8	25	<15	21	21	68	31
Visible oil or grease	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:

pH values presented in pH units. Values in brackets are field pH measurements. Total Suspended Solids, Biochemical Oxygen Demand, Total hardness & Dissolved iron concentrations are presented in mg/L, all other parameters are in µg/L.

[#] BOD over diluted, therefore result indicative only ^A Container with headspace

22/10/2015	05/11/2015	09/12/2015	06/01/2015	03/02/2015	02/03/2016	06/04/2016	04/05/2016	02/06/2016	04/07/2016	03/08/2016	06/09/2016	05/10/2016	03/11/2016	06/12/2016	18/01/2017	01/02/2017	20/03/2017	04/04/2017	09/05/2017	06/06/2017	06/07/2017	03/08/2017	
<10	17	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	19	<10	<10	<10	<10	
<1	2	2	1	<1	2	2	2	<1	<1	2	2	2	1	1	<1	9	<1	2	1	<1	1	<1	
7.34	7.74 (7.54)	6.79 (6.49)	7.59 (6.64)	6.09 (4.82)	7.18 (6.87)	6.70 (6.71)	6.94 (7.5)	7.21 (7.78)	7.04 (7.34)	6.51 (6.99)	6.5 (7.52)	7.76 (7.33)	7.81 (7.42)	6.55 (7.36)	6.85 (7.33)	6.57 (6.66)	6.14 (6.72)	7.15 (6.8)	8.8 (7.62)	6.55 (6.71)	6.49 (7.49)	6.28 (5.28)	
6	28	4	4	20	8	4	<3	<3	5	10	7	7	5	3	4	5	5	7	<3	5	3.8	7	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.5	<0.5	<0.01	<0.5	<0.5	<0.5	<0.5	<1	<1	
<0.03	0.09	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	
5.39	4.41	1.131	1.276	0.3198	0.7347	0.7676	1.861	3.229	1.876	3.405	3.162	8.689	7.586	3.364	0.6952	0.7231	0.7234	1.113	1.456	1.272	2.382	2.006	
<3	4	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	4	6	<3	<3	<3	<3	<3	<3	<3	<3	<3	
<0.2	0.3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.5	<0.2	0.5	0.2	0.7	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	
<2	<2	<2	<2	<2	<2	<2	<2	<2	<6	<6	<6	<6	<6	<6	<6	<6	<6	NA	<6	<6	<6	<6	
<2	<2	<2	<2	<2	<2	<2	<2	<2	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	
0.3	0.7	<0.2	1.2	0.4	0.3	<0.2	<0.2	0.3	0.4	0.7	0.2	2.2	1.5	0.9	0.5	0.6	0.3	0.6	0.4	<0.2	<0.2	<0.2	
2.8	<0.9	1.2	1.8	<0.9	<0.9	<0.9	2.5	2.9	4	<0.9	1.1	7.2	10.5	5.4	0.9	<0.9	<0.9	<0.9	3.6	2.1	1.7	<0.9	
<0.4	1.2	1.1	1.2	<0.4	0.6	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	0.9	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	
24	37	7	12	18	16	9	21	33	16	16	14	27	31	27	18	13	10	127	38	10	17	8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

22/10/2015	05/11/2015	09/12/2015	06/01/2015	03/02/2015	02/03/2016	06/04/2016	04/05/2016	02/06/2016	04/07/2016	03/08/2016	06/09/2016	05/10/2016	03/11/2016	06/12/2016	18/01/2017	01/02/2017	20/03/2017	04/04/2017	09/05/2017	06/06/2017	06/07/2017	03/08/2017	
<10	10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	25	<10	<10	<10	<10	
<1	2	3	<1	<1	2	2	1	1	1	2	1	2	<1	1	<1	<1	<1	2	1	<1	<1	<1	
7.46	7.73 (7.5)	7.45 (6.5)	7.47 (6.68)	7.35 (5.77)	6.86 (7.14)	7.12 (6.77)	7.4 (7.25)	7.06 (7.47)	6.74 (7.20)	6.95 (7.12)	7.02 (7.13)	7.52 (7.12)	7.62 (6.97)	7.45 (6.91)	7.32 (6.74)	7.48 (6.71)	6.93 (7.06)	7.41 (7.16)	7.76 (7.39)	7.14 (7.09)	7.37 (7.49)	6.41 (6.9)	
8	17	4	6	18	8	4	<3	5	5	6	6	7	7	6	8	10	5	9	3	6	4.6	7	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.5	<0.5	<0.01	<0.5	<0.5	<0.5	<0.5	<1	<1	
<0.03	0.07	<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	
3.424	2.834	1.016	0.993	0.305	0.508	0.7319	1.043	1.172	1.901	3.003	3.11	3.905	3.272	1.987	0.5208	0.7368	0.7424	0.904	0.5302	1.058	2.146	1.896	
<3	7	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	
<0.2	0.9	<0.2	<0.2	<0.2	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.4	0.3	1.3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	
<2	<2	<2	<2	<2	<2	<2	<2	<2	<6	<6	<6	<6	<6	<6	<6	<6	<6	NA	<6	<6	<6	<6	
<2	<2	<2	<2	<2	<2	<2	<2	<2	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	
2.3	2.5	<0.2	1.1	0.7	1	<0.2	1.8	3	<0.2	1	0.4	3.7	3.9	2.2	1.6	1.2	<0.2	0.9	1.4	0.4	<0.2	<0.2	
3.9	3.6	2.8	5.3	1.3	<0.9	<0.9	2.1	1.6	4.2	1.4	3.8	1.3	7.4	4.2	<0.9	2.4	<0.9	2.9	<0.9	1.5	6.6	1.7	
<0.4	2.8	<0.4	0.8	2	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	
84	100	22	57	33	41	12	102	157	26	35	35	110	124	93	71	23	12	49	128	41	39	16	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

DCS4 - Owenkillie River upstream

Parameter	Detection limit (typical)	27/11/2014	16/12/2014	18/12/2014	14/01/2015	04/02/2015	11/02/2015	26/03/2015	Duplicate	23/04/2015	Duplicate	21/05/2015	02/06/2015	07/07/2015	28/07/2015	30/07/2015	04/08/2015	Duplicate	02/09/2015
Total Suspended Solids	10	<3	<3	6	<3	<3	<3	42	43	<3	<2	6	9	13	9	<10	12	3	<10
Biochemical Oxygen Demand	1	<1	<1	<1	1.47 [#]	1.29 [#]	<1	2.57 [#]	8	<1	<2	1.95 [#]	1.28 [#]	2.47 [#]	1.95 ^{#A}	1	1	<2	2
pH	-	6.84	7.07	6.68	6.77	6.7 (5.92)	7.06 (8.15)	6.9 (8.54)	7.7	7.93	7.2	7.23	6.79	(7.36)	6.1 (6.50)	6.68	7.28 (9.90)	7.4	7.79
Total zinc	3	<18	<18	<18	<18	<18	<18	<18	9.716	<18	<0.63	<18	<18	6.7	9.6	6	6	10.31	4
Dissolved mercury	0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.03	<0.1	<0.1	<0.5	<0.5	0.04	<0.01	<0.2	<0.01
Dissolved cadmium	0.03	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.09	<0.6	<0.01	<0.6	<0.6	<0.08	0.6	<0.03	<0.03	<0.09	0.05
Dissolved iron	0.0047	1.05	0.5	0.45	0.43	0.4	0.36	0.25	0.2771	0.56	0.806	0.53	0.36	0.56	0.78	1.146	2.459	1.482	1.806
Dissolved copper	3	<9	<9	<9	<9	<9	<9	<9	20.09	<9	0.445	<9	<9	1.1	3.2	<3	<3	11.24	<3
Dissolved chromium	0.2	<2	<2	<2	<2	<2	<2	<2	<0.68	<2	<0.58	<2	<2	<1	5.8	<0.2	<0.2	<0.68	1
Chromium VI	2	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<20	<20	<2	<2	<2	<2
Chromium III	2	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<20	<20	<2	<2	<2	<2
Dissolved nickel	0.2	<3	57	<3	<3	<3	<3	4	6.45	<3	0.569	<3	<3	<1	6.3	0.4	0.7	1.513	1.3
Dissolved arsenic	0.9	<1	<1	<1	<1	<1	<1	4.8	5.032	1.5	1.399	1.4	1.1	<1	1.2	2.4	2.4	3.454	2.2
Dissolved lead	0.4	<6	<6	<6	<6	<6	<6	<6	0.543	<6	<0.02	<6	<6	<1	<1	2.2	0.5	0.573	4
Total hardness as CaCO3	1	28.8	24.3	19.1	25.1	31	27.9	17.6	21	37.5	38	23.7	16.2	30	<15	25	23	22	32
Visible oil or grease	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:

pH values presented in pH units. Values in brackets are field pH measurements. Total Suspended Solids, Biochemical Oxygen Demand, Total hardness & Dissolved iron concentrations are presented in mg/L, all other parameters are in µg/L.

[#] BOD over diluted, therefore result indicative only

^A Container with headspace

DCS5 - Owenkillie River downstream

Parameter	Detection limit (typical)	27/11/2014	16/12/2014	18/12/2014	14/01/2015	04/02/2015	11/02/2015	23/03/2015	26/03/2015	23/04/2015	21/05/2015	Duplicate	02/06/2015	07/07/2015	28/07/2015	30/07/2015	04/08/2015	02/09/2015	01/10/2015
Total Suspended Solids	10	<3	<3	8	<3	<3	<3	5	35	<3	<3	2	<3	14	12	<10	<10	<10	<10
Biochemical Oxygen Demand	1	<1	<1	<1	1.61 [#]	1.37 [#]	<1	<2	2.59 [#]	<1	1.17 [#]	<2	1.1 [#]	2.01 [#]	2.04 ^{#A}	1	2	1	1
pH	-	7.04	7.15	6.61	6.76	6.66 (5.54)	7.03 (7.45)	7.5	6.9 (6.77)	7.71	6.94	7.5	6.88	7.23 (7.41)	6.2 (6.96)	6.88	6.51 (7.41)	6.51	7.91
Total zinc	3	<18	<18	<18	<18	<18	<18	11.69	20	<18	<18	4.396	<18	8.8	11	7	5	5	<3
Dissolved mercury	0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.2	<0.1	<0.5	<0.5	0.05	0.03	0.01	<0.5
Dissolved cadmium	0.03	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.09	<0.6	<0.6	<0.6	<0.09	<0.6	<0.08	0.5	<0.03	<0.03	0.19	<0.03
Dissolved iron	0.0047	0.98	0.5	0.42	0.43	0.37	0.39	0.6379	0.25	0.58	0.56	0.5218	0.38	0.63	0.83	1.241	2.749	1.835	1.938
Dissolved copper	3	<9	<9	<9	<9	<9	<9	0.322	<9	<9	<9	2.819	<9	<1	3.2	<3	<3	<3	<3
Dissolved chromium	0.2	<2	<2	<2	<2	<2	<2	<0.68	<2	<2	<2	<0.68	<2	<1	6.5	<0.2	0.3	1	<0.2
Chromium VI	2	<5	<5	<5	8	<5	<5	<5	<5	<5	<5	<5	<5	<20	<20	<2	<2	<2	<2
Chromium III	2	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<20	<20	<2	<2	<2	<2
Dissolved nickel	0.2	<3	<3	<3	<3	<3	<3	0.649	<3	<3	<3	0.997	<3	<1	7.1	0.5	0.8	1.4	0.5
Dissolved arsenic	0.9	<1	<1	<1	<1	1.2	<1	1.158	5	1.5	1.3	1.183	1.1	<1	1.2	2.4	5.4	<0.9	1.8
Dissolved lead	0.4	<6	<6	<6	<6	<6	<6	<0.173	<6	<6	<6	<0.173	<6	<1	<1	2.4	<0.4	2.2	<0.4
Total hardness as CaCO3	1	29.3	23.8	18.2	25.3	31	27.1	35	17.2	41.6	23	25	16.3	31	<15	27	21	36	43
Visible oil or grease	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:

pH values presented in pH units. Values in brackets are field pH measurements. Total Suspended Solids, Biochemical Oxygen Demand, Total hardness & Dissolved iron concentrations are presented in mg/L, all other parameters are in µg/L.

[#] BOD over diluted, therefore result indicative only

^A Container with headspace

01/10/2015	22/10/2015	05/11/2015	09/12/2015	06/01/2016	03/02/2016	02/03/2016	06/04/2016	04/05/2016	02/06/2016	04/07/2016	03/08/2016	06/09/2016	05/10/2016	03/11/2016	06/12/2016	18/01/2017	01/02/2017	20/03/2017	04/04/2017	09/05/2017	06/06/2017	06/07/2017	03/08/2017	
<10	<10	<10	11	<10	<10	<10	10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	10	<10	<10	<10	10	<10	
1	2	2	1	1	1	2	2	1	1	<1	1	1	<1	1	2	1	1	<1	2	1	1	2	<1	
6.45	7.46	7.65 (7.14)	6.83 (6.65)	7.1 (6.16)	7.08 (6.24)	7.19 (6.29)	7.2 (7.19)	7.08 (7.58)	7.23 (7.89)	6.74 (7.27)	7.08 (7.25)	7.07 (7.25)	7.61 (7.07)	7.73 (7.21)	7.59 (7.20)	7.39 (6.52)	7.38 (6.71)	6.69 (7.06)	7.34 (7.19)	7.3 (7.59)	7.22 (6.84)	7.14 (6.94)	6.89 (6.33)	
3	<3	3	5	4	10	6	4	<3	<3	4	25	5	8	<3	<3	4	3.9	4	3	<1.5	4	3.6	7.3	
0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.01	0.39	<0.01	<0.01	<0.01	<0.01	<0.5	<0.5	<0.01	<0.5	<0.5	<0.5	<0.5	<1	<1	
0.14	<0.03	0.08	0.2	0.15	<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	
1.503	0.9033	1.269	0.7594	0.7784	0.242	0.6605	0.6255	0.6549	0.8637	0.97	1.596	1.553	1.797	1.34	1.051	0.6403	0.7023	0.6057	0.8926	0.533	0.8258	1.041	1.359	
<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	
0.6	<0.2	<0.2	<0.2	0.3	<0.2	0.3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.4	0.2	<0.2	<0.2	<0.2	0.3	<0.2	0.3	<0.2	
<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	
<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	
0.6	0.4	0.7	<0.2	1.6	0.8	<0.2	<0.2	<0.2	<0.2	<0.2	0.6	0.6	0.4	1.3	1	<0.2	0.7	<0.2	0.5	0.6	<0.2	0.9	<0.2	
2.8	1.6	<0.9	2.7	<0.9	<0.9	<0.9	<0.9	<0.9	<0.9	2.5	<0.9	4.7	1.6	2.9	3.4	<0.9	<0.9	<0.9	<0.9	<0.9	1.2	6.6	1.6	
<0.4	<0.4	1.9	<0.4	<0.4	1.2	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	1.5	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	
41	29	38	16	15	21	17	20	26	43	25	45	26	37	43	39	28	19	16	27	41	18	25	17	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

22/10/2015	05/11/2015	09/12/2015	06/01/2016	03/02/2016	02/03/2016	06/04/2016	04/05/2016	02/06/2016	04/07/2016	03/08/2016	06/09/2016	05/10/2016	03/11/2016	06/12/2016	18/01/2017	01/02/2017	20/03/2017	04/04/2017	09/05/2017	06/06/2017	06/07/2017	03/08/2017	
<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	14	<10	
<1	1	2	1	1	2	2	2	1	1	1	1	<1	<1	2	2	<1	<1	1	1	1	2	<1	
7.12	7.49 (7.11)	7.55 (6.66)	7.31 (6.49)	6.91 (6.22)	7.07 (6.32)	7.2 (7.23)	7.09 (7.7)	6.64 (7.87)	6.94 (7.11)	7.08 (7.29)	7.1 (7.20)	7.63 (6.90)	7.97 (7.17)	6.96 (7.18)	7.3 (6.59)	6.19 (6.74)	6.64 (7.04)	6.72 (7.32)	6.54 (7.60)	6.33 (6.95)	6.49 (6.9)	6.71 (6.37)	
4	4	5	5	9	5	4	<3	<3	5	4	5	4	<3	<3	3	4.4	5	3.7	<1.5	6	5.2	8.9	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.01	<0.01	<0.01	0.06	<0.01	<0.01	<0.5	<0.5	<0.01	<0.5	<0.5	<0.5	<0.5	<1	<1	
0.2	0.14	0.11	<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	
1.312	1.37	0.7792	0.7899	0.2365	0.6817	0.6246	0.646	0.8452	1.166	1.868	1.675	1.824	1.374	1.063	0.6517	0.6844	0.6228	0.8342	0.505	0.8812	1.069	1.381	
<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	
<0.2	0.3	<0.2	0.5	<0.2	0.8	<0.2	<0.2	<0.2	0.6	<0.2	<0.2	0.3	0.5	<0.2	0.7	<0.2	0.3	<0.2	<0.2	0.4	0.8	<0.2	
<2	<2	<2	<2	<2	<2	<2	<2	<2	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	
<2	<2	<2	<2	<2	<2	<2	<2	<2	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	
0.6	0.9	0.5	1.1	0.9	<0.2	<0.2	<0.2	<0.2	0.9	1.2	0.9	1.5	1	0.8	0.4	<0.2	<0.2	<0.2	0.5	0.8	<0.2	<0.2	
1.7	<0.9	<0.9	<0.9	<0.9	1	<0.9	1.9	<0.9	<0.9	<0.9	2.3	3.8	3.7	2.3	<0.9	<0.9	<0.9	<0.9	1.6	3	<0.9	2.1	
2.1	<0.4	<0.4	<0.4	0.6	0.8	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	
30	41	16	18	22	18	21	29	47	26	38	29	43	45	45	30	21	18	28	48	20	26	17	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-