

Annex F6

Effluent Quality Monitoring Results

Table F6.1 Effluent Monitoring Results

		1 Jan 22	2 Jan 22	3 Jan 22	4 Jan 22	5 Jan 22	6 Jan 22	7 Jan 22	8 Jan 22	9 Jan 22	10 Jan 22	11 Jan 22
On-site Measurements												
Temperature	°C	27.2	28.1	27.1	28.2	26.8	29.4	29.5	29	28.7	21.0	25.7
pH Value	pH Unit	8.4	8.4	8.4	8.4	8.4	8.5	8.4	8.4	8.6	8.6	8.5
Volume Discharged	m ³	1194	810	588	1363	1230	1235	1392	1273	804	616	1229
Laboratory Analysis												
Suspended Solids (SS)	mg/L	75	24.7	23.8	24.2	22.1	22.9	21.1	29.1	23.6	16.2	21.6
Alkalinity	mg/L	2240	2260	2300	2330	2310	2240	2250	2270	2260	2270	2280
Ammoniacal-nitrogen	mg/L	0.3	0.27	0.56	0.43	0.46	0.49	0.47	0.51	0.36	1.2	0.3
Chloride	mg/L	2070	2110	2080	1980	2320	2130	2290	2230	2280	2370	2410
Nitrite-nitrogen	mg/L	0.14	0.17	0.55	0.19	0.32	0.19	0.23	0.37	0.39	0.88	0.2
Phosphate	mg/L	7.99	8.34	8.82	8.7	8.31	9.53	8.95	8.45	7.76	8.13	8.07
Sulphate	mg/L	92	94	94	100	103	108	108	100	94	97	96
Total Nitrogen	mg/L	114	99.3	98.4	93.1	101	105	119	124	121	118	114
Nitrate-nitrogen	mg/L	56.6	50.2	52.5	48.3	52.7	59.2	61.9	66.9	65.1	61.2	57.9
Biochemical Oxygen Demand (BOD)	mg/L	14	10	8	9	9	15	9	14	9	20	6
Chemical Oxygen Demand (COD)	mg/L	1090	999	1010	1090	892	957	948	1080	984	993	1010
Oil & Grease	mg/L	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Total Organic Carbon (TOC)	mg/L	360	391	356	349	358	375	385	373	394	366	359
Boron	µg/L	5680	5440	5590	5760	5730	5380	5400	5240	5760	5380	5160
Calcium	mg/L	13.4	15.4	15.3	14.2	16.5	17.3	16.5	16.4	15.1	14.8	18.1
Iron	mg/L	1.04	1.25	1.26	1.15	1.64	1.35	1.43	1.47	1.19	1.26	1.56
Magnesium	mg/L	14.9	16.1	16.1	16.7	25.2	23.2	24.8	26.2	22.4	22.9	28.9
Potassium	mg/L	890	883	888	845	907	930	971	975	899	892	828
Cadmium	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chromium	µg/L	131	125	125	127	143	134	133	130	123	121	144
Copper	µg/L	22	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Nickel	µg/L	118	115	113	122	132	127	122	122	120	118	128
Zinc	µg/L	64	46	50	52	64	57	50	48	54	48	52

		12 Jan 22	13 Jan 22	14 Jan 22	15 Jan 22	16 Jan 22	17 Jan 22	18 Jan 22	19 Jan 22	20 Jan 22	21 Jan 22	22 Jan 22
On-site Measurements												
Temperature	°C	24.6	25	25.5	25.3	29.8	27	27	27.8	28	21.7	28.3
pH Value	pH Unit	8.5	8.6	8.5	8.5	8.6	8.6	8.5	8.5	8.5	8.5	8.5
Volume Discharged	m³	1041	825	1052	1144	1182	1090	1251	1186	1444	836	1034
Laboratory Analysis												
Suspended Solids (SS)	mg/L	22.7	13.8	23.5	15.4	24.9	17.6	13.6	17.9	17.7	16.2	35.8
Alkalinity	mg/L	2270	2270	2300	2290	2250	2270	2280	2290	2280	2360	2310
Ammoniacal-nitrogen	mg/L	0.35	0.36	0.34	0.3	0.34	0.35	0.35	0.32	0.3	4.74	0.38
Chloride	mg/L	2310	2220	2320	2360	2370	2330	2250	2230	2310	2270	2360
Nitrite-nitrogen	mg/L	0.23	0.3	0.2	0.15	0.28	0.36	0.29	0.3	0.21	0.63	0.19
Phosphate	mg/L	7.56	8.9	9.81	9.52	8.98	9.32	9.48	8.5	8.64	9.6	8.37
Sulphate	mg/L	100	94	94	102	101	96	97	101	100	106	102
Total Nitrogen	mg/L	112	114	118	110	117	120	120	119	125	123	109
Nitrate-nitrogen	mg/L	59.3	60.2	57	58.9	63.3	65	68.4	66.3	72.1	61.5	56.4
Biochemical Oxygen Demand (BOD)	mg/L	8	7	9	8	10	8	8	13	13	18	15
Chemical Oxygen Demand (COD)	mg/L	1040	1020	989	943	1010	943	1050	1070	1050	1090	1050
Oil & Grease	mg/L	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Total Organic Carbon (TOC)	mg/L	373	353	376	337	391	354	351	356	363	392	379
Boron	µg/L	5300	5610	5540	5400	5830	6380	6060	5990	5890	6100	6220
Calcium	mg/L	20	15.8	15.3	16.8	14.4	15.4	16.7	12.5	13.5	22	19.8
Iron	mg/L	1	1.3	1.27	1.23	1.34	1.34	1.24	1.25	1.26	1.58	1.36
Magnesium	mg/L	30	26.6	25.6	26.2	26.6	27.6	27.4	20.4	21.1	26.9	25.1
Potassium	mg/L	990	962	879	906	1010	996	944	696	706	1010	974
Cadmium	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chromium	µg/L	144	125	130	121	144	136	131	139	130	139	132
Copper	µg/L	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Nickel	µg/L	128	118	122	119	126	126	124	127	122	129	129
Zinc	µg/L	49	45	51	47	49	50	50	49	48	51	49

		23 Jan 22	24 Jan 22	25 Jan 22	26 Jan 22	27 Jan 22	28 Jan 22	29 Jan 22	30 Jan 22	31 Jan 22
On-site Measurements										
Temperature	°C	33.5	28.9	29.5	27.1	30.7	27.9	32.6	27.2	25.5
pH Value	pH Unit	8.5	8.4	8.5	8.5	8.3	8.5	8.5	8.5	8.5
Volume Discharged	m ³	819	597	930	1220	1109	1136	1089	1059	791
Laboratory Analysis										
Suspended Solids (SS)	mg/L	38.5	20.5	19.2	36.1	23.4	19.8	30	38.2	20.5
Alkalinity	mg/L	2310	2380	2310	2290	2310	2290	2280	2320	2300
Ammoniacal-nitrogen	mg/L	0.57	0.59	0.4	0.34	0.45	0.98	0.39	0.42	0.38
Chloride	mg/L	2440	2430	2200	2230	2310	2290	2290	2260	2290
Nitrite-nitrogen	mg/L	0.27	0.41	0.25	0.22	0.3	0.55	0.19	0.22	0.26
Phosphate	mg/L	8.27	8.22	7.96	8.41	8.43	9.25	8.89	9.47	8.94
Sulphate	mg/L	113	113	113	127	98	100	98	86	99
Total Nitrogen	mg/L	117	110	98.1	99.9	119	122	127	128	119
Nitrate-nitrogen	mg/L	57.7	55	47.7	48.6	62.8	67.3	66.6	66.5	62.3
Biochemical Oxygen Demand (BOD)	mg/L	13	13	9	10	9	13	14	16	9
Chemical Oxygen Demand (COD)	mg/L	1040	1000	948	975	992	993	1050	1080	1000
Oil & Grease	mg/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
Total Organic Carbon (TOC)	mg/L	369	370	380	406	445	438	394	386	381
Boron	µg/L	5640	5840	5190	5270	4830	4720	5040	5100	5010
Calcium	mg/L	21.4	22	19.8	19.7	16.8	16.5	19.2	16.6	14.3
Iron	mg/L	1.38	1.34	1.4	1.52	1.52	1.5	1.47	1.56	1.43
Magnesium	mg/L	26.1	26.1	28.8	31.2	28.4	28.2	29.3	28.2	25.9
Potassium	mg/L	979	1000	913	891	887	862	937	807	875
Cadmium	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chromium	µg/L	130	132	129	143	130	132	127	128	127
Copper	µg/L	<10	<10	<10	<10	<10	<10	<10	<10	<10
Nickel	µg/L	130	132	122	138	122	122	122	123	121
Zinc	µg/L	50	47	51	57	43	43	49	47	50