

Drinking Water Quality Report for Chelmer Blackwater Supply Zone ZES0101

Areas covered by Report:	Maldon, Essex and Hockley, Essex
Report Period:	01 January 2019 to 31 December 2019
Upstream Zone:	Northumbrian Water Maldon WSZ (Z619) and Hockley and Rochford WSZ (Z614)
Population:	55
Notices:	n/a

Commentary on Water Quality

The water supplied to the Chelmer Blackwater Zone originates from a surface water source that is chloraminated. The analysis results indicate the quality of the water supplied to this zone is very good. IWNL had 1 compliance failure during 2019 for Nickel, which was attributed to water fittings. IWNL received 0 customer contacts during the period of this report.

Hardness Rating:	The water supplied to this zone is classified as hard as it contains naturally elevated concentrations of calcium and magnesium.					
	Soft	Moderately Soft	Slightly Hard	Moderately Hard	Hard	Very Hard
CaCO ₃ mg/l	0-50	50-100	100-150	150-200	200-300	300+

Microbiological Indicators

Parameter	units of measurement	Number of Samples	Minimum	Maximum	Average	Prescribed Concentration or Value
Coliform Bacteria (Indicator)	No. 100/ml	1	0	0	0.0	0
E.coli (faecal coliforms Confirmed)	No. 100/ml	1	0	0	0.0	0
Enterococci (Confirmed)	No. 100/ml	1	0	0	0.0	0
Sulphite-reducing Clostridia (Confirmed)	No. 100/ml	1	0	0	0.0	0

Physio-Chemical Parameters

Parameter	units of measurement	Number of Samples	Minimum	Maximum	Average	Prescribed Concentration or Value
Ammonium (Total)	mg/l NH ₄	1	0.190	0.190	0.1900	0.5
Boron	mg/l B	1	0.06	0.06	0.058	1
Bromate	ug/l BrO ₃	1	0.5	0.5	0.50	10
Chloride	mg/l	1	80.7	80.7	80.70	250
Colour	mg/l Pt/Co	1	1	1	1.00	20
Cyanide (Total)	ug/l CN	1	5.5	5.5	5.50	50

Physio-Chemical Parameters continued

Parameter	units of measurement	Number of Samples	Minimum	Maximum	Average	Prescribed Concentration or Value
Electrical Conductivity	uS/cm @ 20 C	1	737	737	737.0	2500
Fluoride (Total)	mg/l F	1	0.18	0.18	0.180	1.5
Free Residual Chlorine	mg/l	1	0.07	0.07	0.07	No Specific PCV
Hydrogen ion	pH value	1	7.42	7.42	7.420	6.5-9.5
Nitrate (Total)	mg/l NO3	1	24.8	24.8	24.80	50
Nitrite - Consumer's Taps	mg/l NO3	1	0.017	0.017	0.0170	0.5
Nitrite/Nitrate formula	No Units	1	0.5	0.5	0.500	1
Sodium	mg/l Na	1	47.1	47.1	47.10	200
Sulphate	mg/l SO4	1	107	107	107.00	250
Total Residual Chlorine	mg/l	1	0.44	0.44	0.440	No Specific PVC
Turbidity (CT)	FTU	1	0.22	0.22	0.220	4

Hydrocarbons / Organics

Parameter	units of measurement	Number of Samples	Minimum	Maximum	Average	Prescribed Concentration or Value
1 1 1-Trichloroethane (Total)	ug/l	1	0.1	0.1	0.100	0.1
1 2-Dichloroethane (Total)	ug/l	1	0.13	0.13	0.130	3
Benzene (Total)	ug/l	1	0.03	0.03	0.030	1
Benzo[a]Pyrene (Total)	ug/l	1	0.00022	0.00022	0.000220	0.01
Benzo[b]Fluoranthene (Total)	ug/l	1	0.00052	0.00052	0.000520	The sum of PAHs must be <0.1 ug/l
Benzo[ghi]Perylene (Total)	ug/l	1	0.0004	0.0004	0.000400	The sum of PAHs must be <0.1 ug/l
Benzo[k]Fluoranthene (Total)	ug/l	1	0.00047	0.00047	0.000470	The sum of PAHs must be <0.1 ug/l
Bromodichloromethane (Total)	ug/l	1	8.71	8.71	8.710	60
ChloroDibromomethane (Total)	ug/l	1	12.23	12.23	12.230	100
Indeno[1 2 3-cd]Pyrene (Total)	ug/l	1	0.00048	0.00048	0.000480	The sum of PAHs must be <0.1 ug/l
Polycyclic Aromatic Hydrocarbons (Total by Calculation)	ug/l	1	0	0	0.000	0.1
Tetrachloroethene (Total)	ug/l	1	0.12	0.12	0.120	10
Tetrachloromethane (Total)	ug/l	1	0.04	0.04	0.040	3
Total Organic Carbon	mg/l C	1	3.7	3.7	3.70	NO ABNORMAL CHANGE
Total Trichloroethene & Tetrachloroethene (Total by Calculation)	ug/l	1	0	0	0.0	100

Hydrocarbons / Organics continued

Parameter	units of measurement	Number of Samples	Minimum	Maximum	Average	Prescribed Concentration or Value
Tribromomethane-Bromoform (Total)	ug/l	1	3.7	3.7	3.700	100
Trichloroethene (Total)	ug/l	1	0.1	0.1	0.100	10
Trichloromethane-Chloroform (Total)	ug/l	1	6.51	6.51	6.510	300
Trihalomethanes (Total by Calculation)	ug/l	1	31.14	31.14	31.140	100

Metals

Parameter	units of measurement	Number of Samples	Minimum	Maximum	Average	Prescribed Concentration or Value
Aluminium (Total)	ug/l Al	1	7.22	7.22	7.220	200
Antimony	ug/l Sb	1	0.54	0.54	0.540	5
Arsenic (Total)	ug/l As	1	0.26	0.26	0.260	10
Cadmium (Total)	ug/l Cd	1	0.013	0.013	0.0130	5
Chromium (Total)	ug/l Cr	1	0.26	0.26	0.260	50
Copper (Total)	mg/l Cu	1	0.0414	0.0414	0.04140	2
Iron (Total)	ug/l Fe	1	16.8	16.8	16.800	200
Lead (10)	ug/l Pb	1	0.25	0.25	0.250	10
Manganese (Total)	ug/l Mn	1	0.22	0.22	0.220	50
Mercury (Total)	ug/l Hg	1	0.03	0.03	0.030	1
Nickel (Total)	ug/l Ni	1	185	185	185.000	20
Selenium (Total)	ug/l Se	1	0.4	0.4	0.4	10

Organoleptic Parameters

Parameter	units of measurement	Number of Samples	Minimum	Maximum	Average	Prescribed Concentration or Value
Odour (Quantitative)	Dilution Number	1	0	0	0.0	0
Taste(Quantitative)	Dilution Number	1	0	0	0.0	0

Radioactivity Parameters

Parameter	units of measurement	Number of Samples	Minimum	Maximum	Average	Prescribed Concentration or Value
Gross Alpha	Bq/l	1	0.026	0.026	0.026	0.1
Gross Beta	Bq/l	1	0.258	0.258	0.258	1
Tritium	Bq/l	1	5.6	5.6	5.600	100
Radon	Bq/l	#N/A	#N/A	#N/A	#N/A	100

Notes

1. For some parameters, monitoring occurs at the supplying Water Treatment Works rather than the Water Supply Zone.

Glossary of Terms

Term	Definition
PCV	Prescribed Concentration or Value
mg/l	Milligrammes per Litre or parts per million
µg/l	Microgrammes per Litre or parts per billion
Pt/Co	Platinum/Cobalt
µS/cm	Micro Siemens per Centimetre
Bq/l	Becquerel per Litre
NTU	Nephelometric Turbidity Units
