

5 Water Quality in the Distribution System

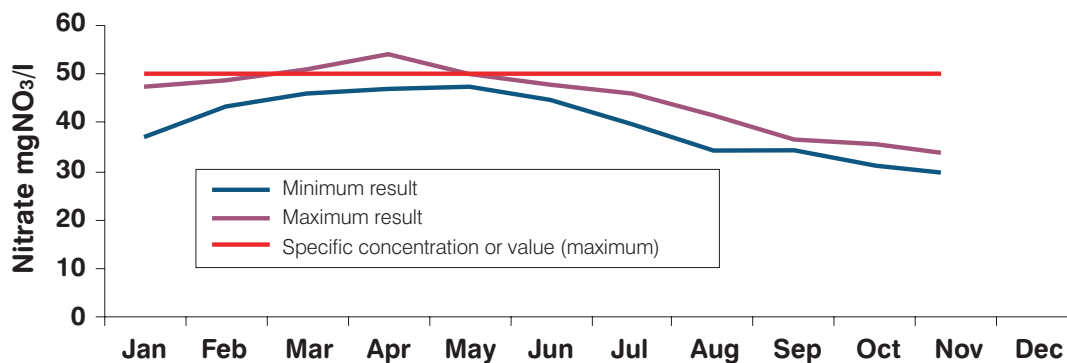
During 2005, 1,272 water samples were taken from all parts of the distribution system and analysed for physical, bacteriological and chemical standards.

The following tables show the results of the check and audit monitoring programmes and the percentage compliance of samples taken from the distribution system.

Check Monitoring : Supply Zone

Substances and parameters	Specific concentration or value (maximum) or state	Min	Mean	Max	No. of samples	% compliance
E.coli	0 per 100ml	0	0	0	636	100
Coliforms	0 per 100ml	0	0	1	636	99.4
Residual disinfectant	No value mg Cl ₂ /l	<0.02	0.11	0.44	536	100
Aluminium	200 µg Al/l	<20	26	115	100	100
Ammonium	0.50 mg NH ₄ /l	<0.04	<0.04	0.23	100	100
Clostridium perfringens	0 per 100ml	0	0	0	100	100
Colony counts	No abnormal change	No abnormal change			536	100
Colour	20 mg/l Pt/Co	<0.69	1.30	3.03	100	100
Conductivity	2500 µS/cm at 20°C	392	521	580	100	100
Hydrogen ion	10.0 pH value 6.5 (min)	6.66	7.57	8.25	100	100
Iron	200 µg Fe/l	<10	29	120	100	100
Manganese	50 µg Mn/l	<1.0	5.0	50.0	100	100
Nitrate	50 mg NO ₃ /l	28.3	41.6	54.0	100	92
Nitrite	0.5 mg NO ₂ /l	<0.013	0.031	0.413	100	100
Odour	3 at 25°C Dilution number	1	1	1	100	100
Taste	3 at 25°C Dilution number	1	1	1	98	100
Turbidity	4 NTU	0.12	0.29	0.73	100	100

Nitrate levels in distribution 2005



5 Water Quality in the Distribution System (continued)

Audit Monitoring : Supply Zone

Substances and parameters	Specific concentration or value (maximum) or state	Min	Mean	Max	No. of samples	% compliance
Antimony	5.0 µg Sb/l	<0.40	<0.40	0.50	12	100
Arsenic	10 µg As/l	<0.40	<0.40	0.70	12	100
Benzene	1.0 µg/l	<0.06	<0.06	<0.06	12	100
Benzo(a) pyrene	0.010 µg/l	<0.001	<0.001	<0.001	12	100
Boron	1.0 mg B/l	<0.040	0.060	0.100	12	100
Cadmium	5.0 µg Cd/l	<0.5	<0.5	<0.5	12	100
Chromium	50 µg Cr/l	<0.6	<0.6	<0.6	12	100
Copper	2.0 mg Cu/l	<0.004	0.007	0.032	12	100
Cyanide	50 µg CN/l	<0.005	<0.005	<0.005	12	100
1,2 dichloroethane	3.0 µg/l	<0.1	<0.1	<0.1	12	100
Enterococci	0 per 100ml	0	0	0	12	100
Fluoride	1.5 mg F/l	<0.050	0.066	0.130	12	100
Lead	25 µg Pb/l	<1	<1	<1	12	100
Mercury	1.0 µg Hg/l	<0.002	<0.002	0.007	12	100
Nickel	20 µg Ni/l	<2	<2	2	12	100
Linuron ¹	0.1 µg/l	<0.004	0.006	0.035	11	100
Diuron ¹	0.1 µg/l	<0.005	<0.005	0.030	11	100
Carbetamide ¹	0.1 µg/l	<0.005	<0.005	0.017	11	100
MCPA ¹	0.1 µg/l	<0.010	0.015	0.160	12	92
Mecoprop ¹	0.1 µg/l	<0.010	0.013	0.140	12	92
Dicamba ¹	0.1 µg/l	<0.010	<0.010	0.039	12	100
Atrazine ¹	0.1 µg/l	<0.002	0.009	0.025	12	100
Simazine ¹	0.1 µg/l	<0.009	<0.009	0.019	12	100
Prometryne ¹	0.1 µg/l	<0.002	<0.002	0.004	12	100
Propazine ¹	0.1 µg/l	<0.003	<0.003	0.017	12	100

¹ Detected pesticide - 71 other pesticides analysed for and not detected.

5 Water Quality in the Distribution System (continued)

Audit Monitoring : Supply Zone (continued)

Substances and parameters	Specific concentration or value (maximum) or state	Min	Mean	Max	No. of samples	% compliance
Cyanazine ¹	0.1 µg/l	<0.007	0.022	0.083	11	100
Terbutylazine ¹	0.1 µg/l	<0.002	0.002	0.019	12	100
Propiconazole ¹	0.1 µg/l	<0.002	<0.002	0.005	12	100
Dalapon ¹	0.1 µg/l	<0.010	0.010	0.045	11	100
Pesticides total	0.5 µg/l	<0.010	0.090	0.465	12	100
Polycyclic aromatic hydrocarbons	0.10 µg/l	<0.010	<0.010	<0.010	12	100
Selenium	10 µg Se/l	<1.0	<1.0	<1.0	12	100
Sodium	200 mg Na/l	40.5	52.8	61.2	12	100
Trichloroethene and Tetrachloroethene	10 µg/l	<0.5	<0.5	<0.5	12	100
Tetrachloromethane	3 µg/l	<0.12	<0.12	<0.12	12	100
Trihalomethanes	100 µg/l	6.0	10.9	17.1	12	100
Chloride	250 mg Cl/l	50.7	59.3	63.0	12	100
Sulphate	250 mg SO ₄ /l	86.4	98.2	122.0	12	100
Total Organic Carbon	No abnormal change	0.95	1.69	2.35	12	100
Tritium	100 Bq/l	<10.0	<10.0	<10.0	12	100
Gross alpha	0.1 Bq/l	<0.03	<0.03	0.04	12	100
Gross beta	1.0 Bq/l	0.17	0.20	0.22	12	100

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