

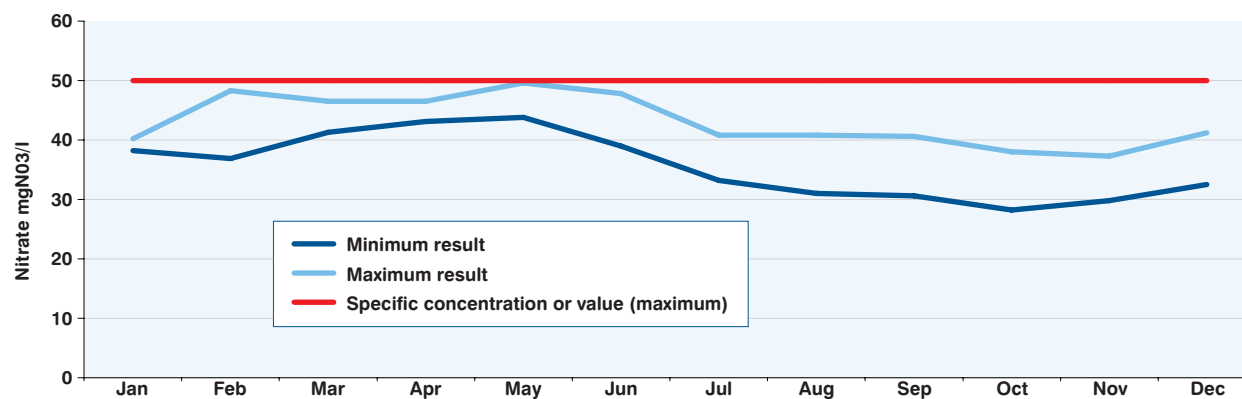
5 Water Quality in the Distribution System

During 2008, 1,376 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	688	100
Coliform bacteria	0 per 100ml	0	0	1	688	99.9
Residual disinfectant	No value mg Cl ₂ /l	<0.02	0.14	0.52	591	
Aluminium	200 µg Al/l	<20	27	99	98	100
Ammonium	0.50 mg NH ₄ /l	<0.04	0.05	0.22	98	100
Clostridium perfringens	0 per 100ml	0	0	0	100	100
Colony counts	No abnormal change	No abnormal change			591	100
Colour	20 mg/l Pt/Co	<0.69	2.18	9.38	98	100
Conductivity	2500 µS/cm at 20 °C	385	455	606	98	100
Hydrogen ion	10.0 pH value 6.5 (min)	7.26	7.79	8.40	251	100
Iron	200 µg Fe/l	<10	22	94	98	100
Manganese	50 µg Mn/l	<0.7	3.4	21.0	98	100
Nitrate	50 mg NO ₃ /l	28.2	39.7	49.6	98	100
Nitrite	0.5 mg NO ₂ /l	<0.013	0.026	0.262	98	100
Odour	3 at 25 °C Dilution number	1	1	1	100	100
Taste	3 at 25 °C Dilution number	1	1	1	99	100
Turbidity	4 NTU	0.09	0.19	0.49	98	100

Nitrate levels in distribution 2008



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	0.23	0.29	0.38	12	100
Arsenic	10 µg As/l	0.26	0.47	0.67	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	0.041	0.088	0.150	12	100
Cadmium	5.0 µg Cd/l	<0.5	<0.5	<0.5	12	100
Chromium	50 µg Cr/l	0.17	0.36	0.63	12	100
Copper	2.0 mg Cu/l	0.002	0.008	0.024	12	100
Cyanide	50 µg CN/l	<0.005	0.417	3.000	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	0.113	0.710	12	100
Lead	25 µg Pb/l ¹	<0.5	<0.5	<0.5	12	100
Mercury	1.0 µg Hg/l	<0.002	<0.002	0.003	12	100
Nickel	20 µg Ni/l	1.20	1.54	2.10	12	100
Linuron ¹	0.1 µg/l	<0.004	0.008	0.026	12	100
Diuron ¹	0.1 µg/l	<0.005	0.005	0.015	12	100
M.C.P.A. ¹	0.1 µg/l	<0.009	<0.009	0.017	12	100
2,4-D ¹	0.1 µg/l	<0.011	<0.011	0.042	12	100
Atrazine ¹	0.1 µg/l	<0.002	0.002	0.005	12	100
Terbutryn ¹	0.1 µg/l	<0.003	<0.003	0.003	12	100
Pesticides total	0.5 µg/l	<0.010	0.022	0.083	12	100

¹ Detected pesticide - 80 other pesticides analysed for and not detected.

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
Polycyclic aromatic hydrocarbons	0.10 µg/l	<0.010	<0.010	<0.010	12	100
Selenium	10 µg Se/l	<0.20	0.81	1.10	12	100
Sodium	200 mg Na/l	42.3	49.1	55.0	12	100
Trichloroethene and Tetrachloroethene	10 µg/l	<0.1	<0.1	<0.1	11	100
Tetrachloromethane	3 µg/l	<0.1	<0.1	<0.1	11	100
Trihalomethanes	100 µg/l	6.6	11.7	17.3	11	100
Chloride	250 mg Cl/l	54.0	62.5	70.0	12	100
Sulphate	250 mg SO ₄ /l	84.0	88.8	99.1	12	100
Total Organic Carbon	No abnormal change	1.73	1.98	2.40	12	100
Tritium	100 Bq/l	<10.0	<10.0	<10.0	12	100
Gross alpha	0.1 Bq/l	<0.03	<0.03	<0.03	12	100
Gross beta	1.0 Bq/l	0.17	0.21	0.24	12	100