

## 7 Water Quality in the Distribution System

In 2004 some 1,453 samples of water were taken from all parts of the distribution system and analysed for physical, bacteriological and chemical standards. The following table (Table G) shows the results of the check and audit monitoring programmes and the percentage compliance.

**Table F**  
**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	726	100
Coliform bacteria	0 per 100ml	0	0	24	726	99
Residual disinfectant	No value mg Cl <sub>2</sub> /l	<0.02	0.21	0.58	627	100
Aluminium	200 µg Al/l	<5	22	112	99	100
Ammonium	0.50 mg NH <sub>4</sub> /l	<0.04	0.07	0.38	99	100
Clostridium perfringens	0 per 100ml	0	0	1	100	99
Colony counts	No abnormal change	No abnormal change			627	100
Colour	20 mg/l Pt/Co	<0.69	1.70	9.88	99	100
Conductivity	2500 µS/cm at 20°C	450	525	586	99	100
Hydrogen ion	10.0 pH value 6.5 (min)	6.61	7.65	8.43	99	100
Iron	200 µg Fe/l	<10	22	80	99	100
Manganese	50 µg Mn/l	<1.0	6.0	25.0	99	100
Nitrate	50 mg NO <sub>3</sub> /l	20.2	41.8	51.8	99	95
Nitrite	0.5 mg NO <sub>2</sub> /l	<0.013	0.039	0.279	99	100
Odour	3 at 250C Dilution number	1	1	1	99	100
Taste	3 at 250C Dilution number	1	1	3	97	100
Turbidity	4 NTU	0.11	0.30	0.58	99	100

## 7 Water Quality in the Distribution System (continued)

**Table G**  
**Audit Monitoring Results: 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	0.60	11	100
Arsenic	10 µg As/l	<0.40	<0.40	1.30	11	100
Benzene	1.0 µg/l	<0.06	<0.06	<0.06	11	100
Benzo(a)pyrene	0.010 µg/l	<0.001	<0.001	<0.001	11	100
Boron	1.0 mg B/l	<0.040	0.075	0.137	11	100
Cadmium	5.0 µg Cd/l	<0.5	<0.5	<0.5	11	100
Chromium	50 µg Cr/l	<0.6	<0.6	<0.6	11	100
Copper	2.0 mg Cu/l	<0.004	0.020	0.062	11	100
Cyanide	50 µg CN/l	<0.005	<0.005	<0.005	11	100
1,2 dichloroethane	3.0 µg/l	<0.1	<0.1	<0.1	11	100
Enterococci	0 per 100ml	0	0	0	11	100
Fluoride	1.5 mg F/l	0.050	0.065	0.090	11	100
Lead	25 µg Pb/l	<1	1	14	11	100
Mercury	1.0 µg Hg/l	<0.002	<0.002	0.002	11	100
Nickel	20 µg Ni/l	<2	<2	2	11	100
Linuron <sup>1</sup>	0.1 µg/l	<0.010	<0.010	0.051	10	100
Diuron <sup>1</sup>	0.1 µg/l	<0.010	<0.010	0.029	10	100
Mecoprop <sup>1</sup>	0.1 µg/l	<0.010	0.023	0.240	11	91
Atrazine <sup>1</sup>	0.1 µg/l	<0.010	0.011	0.031	11	100
Simazine <sup>1</sup>	0.1 µg/l	<0.010	0.011	0.022	11	100
Terbutryn <sup>1</sup>	0.1 µg/l	<0.010	<0.010	0.012	11	100
Cyanazine <sup>1</sup>	0.1 µg/l	0.018	0.045	0.111	10	90
Terbutylazine <sup>1</sup>	0.1 µg/l	<0.010	<0.010	0.016	11	100
Dalapon <sup>1</sup>	0.1 µg/l	<0.010	0.012	0.053	7	100
Pesticides total	0.5 µg/l	0.034	0.112	0.290	11	100

<sup>1</sup> Detected pesticide – 74 other pesticides analysed for and not detected.

## 7 Water Quality in the Distribution System (continued)

**Table H**  
**Audit Monitoring Results: Supply Zone** continued

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	11	100
Selenium	10 µg Se/l	<1.0	<1.0	<1.0	11	100
Sodium	200 mg Na/l	37.6	52.6	63.8	11	100
Trichloroethene and Tetrachloroethene	10 µg/l	<0.5	<0.5	<0.5	11	100
Tetrachloromethane	3 µg/l	<0.12	<0.12	<0.12	11	100
Trihalomethanes	100 µg/l	2.9	10.3	20.4	11	100
Chloride	250 mg Cl/l	48.7	60.1	65.7	11	100
Sulphate	250 mg SO <sub>4</sub> /l	76.1	92.4	103.0	11	100
Total Organic Carbon	No abnormal change	1.76	2.12	2.53	11	100
Tritium	100 Bq/l	<10.0	<10.0	<10.0	11	100
Gross alpha	0.1 Bq/l	<0.03	<0.03	<0.03	11	100
Gross beta	1.0 Bq/l	0.17	0.24	0.43	11	100