



**Water
Quality
Report
2004**

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1 Executive Summary

I am pleased to report that 99.80% of the water supplied by Jersey Water in 2004 complied with the Maximum Allowable Concentrations set out in the Water (Jersey) Law 1972.

During 2004, Jersey Water treated and distributed 7,305 Million litres of drinking water to supply the needs of our customers. The water quality department have taken 8,485 samples of water from streams, reservoirs, treatment works, treated water reservoirs, the distribution system and from customers taps for analysis to ensure the water we supply is safe to drink.

From the 1st January 2004 an amendment to the Water (Jersey) Law 1972 governing water quality was introduced. The amendment to the law sets out the Maximum Allowable Concentrations (MAC) for physical, bacteriological and chemical parameters measured in the treated water we supply. The law also requires the Company to obtain approval for its monitoring programme for treated water on an annual basis. The law amendment and MACs set are based on the Water Supply (Water Quality) Regulations for England & Wales 2000.

Due to the fact that the Company has no control over the catchment areas and land use, the Environment & Public Services Committee agreed to a dispensation under the law for nitrates. The dispensation allows 33% of the samples taken for nitrate to be above the MAC (50 mg/l) but not greater than 70 mg/l. In 2004 only 5% of samples taken for nitrate in the distribution system failed to comply with the MAC and the maximum level recorded was 51.8 mg/l.

Given the very good overall results on water quality for 2004, it was with some disappointment that a relatively high concentration of the herbicide cyanazine in a sample from Augrès Water Treatment Works was detected on 29 December 2004. The source of the substance, used in daffodil production, was found to be in Grands Vaux Reservoir and its feeder streams. Advice from a leading toxicologist, who advises the UK government and the World Health Organisation confirmed that the level detected was not harmful to human health and the water was safe to drink. The incident was reported immediately to the Environment and Public Services Department and Health Protection Unit.

Jersey Water's monitoring programme for herbicides and pesticides at the treatment works exceeds the regulatory requirement by four times which, given that the substances have to be analyzed in the UK, clearly assists us in monitoring for these substances.

Howard N Snowden

Managing Director & Engineer

2 Water Quality Regulations & Monitoring programme

On the 1st January 2004 the Water (Jersey) Law 1972 was amended to include regulations on water quality. The amendment to the law sets out the Maximum Allowable Concentrations (MAC) for physical, bacteriological and chemical in the treated water supplied by the Jersey Water. The law also requires the water quality monitoring programme to be approved by the Environment & Public Services Committee (E&PSC), who are responsible for administering the law.

The water quality regulations and MACs included in the law are in-line with the Water Supply (Water Quality) Regulations 2000 for England & Wales which also follow European directives on drinking water quality.

Jersey Water has to submit its proposed treated water quality monitoring programme to the E&PSC by July the year before and accordingly the programme for 2004 was approved by the E&PSC in 2003.

The monitoring programme adopted by Jersey Water follows the principles set out in the Water Supply (Water Quality) Regulations 2000 for England & Wales, which is based on the total population served. For simplicity Jersey Water uses a total population figure of 100,000 to determine the monitoring programme.

There is no legislation regarding the quality of water resources, however, Jersey Water follows the European Directive (75/440/EEC) which sets standards on the quality of surface water to be used for drinking water for the type of water treatment process used.

For the purposes of water quality monitoring, the treatment works are defined as supply points.

The water quality monitoring regulations requires two types of monitoring - check and audit monitoring. The check monitoring is done on a more frequent basis to ensure that the treatment works and the water in distribution is suitable for supply, whereas the audit monitoring is used to investigate the quality of the water more thoroughly.

The results of the check monitoring of treated water leaving the treatment works, their respective Maximum Allowable concentrations and compliance levels are shown in the Tables A - H. The results of the audit monitoring programme can be found in the appendices (Appendix A - E).

3 The Water Quality Monitoring Team



The Laboratory staff



Water samples ready for testing

Jersey Water has a modern and comprehensive water quality monitoring laboratory facility at Millbrook Depot, St Lawrence.

The laboratory is managed by David Mayman, a Chartered Chemist and a Member of the Royal Society of Chemistry with 20 years experience in the water supply industry. Other members of the team are; Assistant Analyst Anna Powell, Laboratory Technician Sarah Gavey and Samplers Keith Quemard, Bob Langford and Edward Huchet. The samplers are responsible for the collection of all water samples and attending customer homes to answer any water quality queries that may arise as well as carrying out preparatory work in the laboratory.

The water quality laboratory is a modern and purpose designed facility, consisting of a preparatory room with auto-claves for sterilisation of sample bottles and equipment, a bacteriological laboratory and chemical laboratory. The laboratory uses membrane type technology for bacteriological testing, which is a highly sensitive analytical process.



The Laboratory, Millbrook, St Lawrence

4 Raw Water Quality



Millbrook Reservoir



Surface water stream at Vallée des Vaux

The majority of water supplied by Jersey Water is derived from surface water streams. A small volume of water (typically around 3% of the total water supplied) is abstracted from the aquifer at the southern end of St Ouen's Bay and is transferred to Val de la Mare Reservoir.

Some 908 water samples were taken from stream sources and analysed for physical, bacteriological and chemical parameters. There were 19 herbicides and pesticides detected in water samples taken from the streams.

Samples taken on the 29th December 2004 recorded relatively high levels of the herbicide cyanazine in samples from Grands Vaux Reservoir and its feeder streams. The E&PS department, who are responsible for the Water Pollution (Jersey) Law are investigating the source of this substance, which is primarily used in the production of daffodils and daffodil bulbs.

5 Treatment Works and Service Reservoir Performance



Handois Water Treatment Works

Jersey Water has two water treatment facilities located at Handois, St Lawrence and at Augrès, Trinity. Both treatment processes are identical and use a physio-chemical primary treatment system, which uses aluminium sulphate, followed by dual media rapid gravity filtration using sand and anthracite.

Disinfection of the treated water is carried out by the use of chlorine and ammonia, which provides a compound called chloramine. The primary purpose of the disinfection process is to ensure a residual concentration of chlorine exists in the water throughout the relatively long and radial type distribution system to ensure bacteriological standards are maintained.

Jersey Water operates two treated water reservoirs located at Westmount Road, St Helier and Les Platons, Trinity. The combined storage capacity of the service reservoirs is 18 MI, which is just under the average daily demand. Both these reservoirs are underground concrete tanks situated on high-level ground and they ensure adequate treated water is available to supply our customers at periods of peak daily demand, which are normally in the early morning and evening.

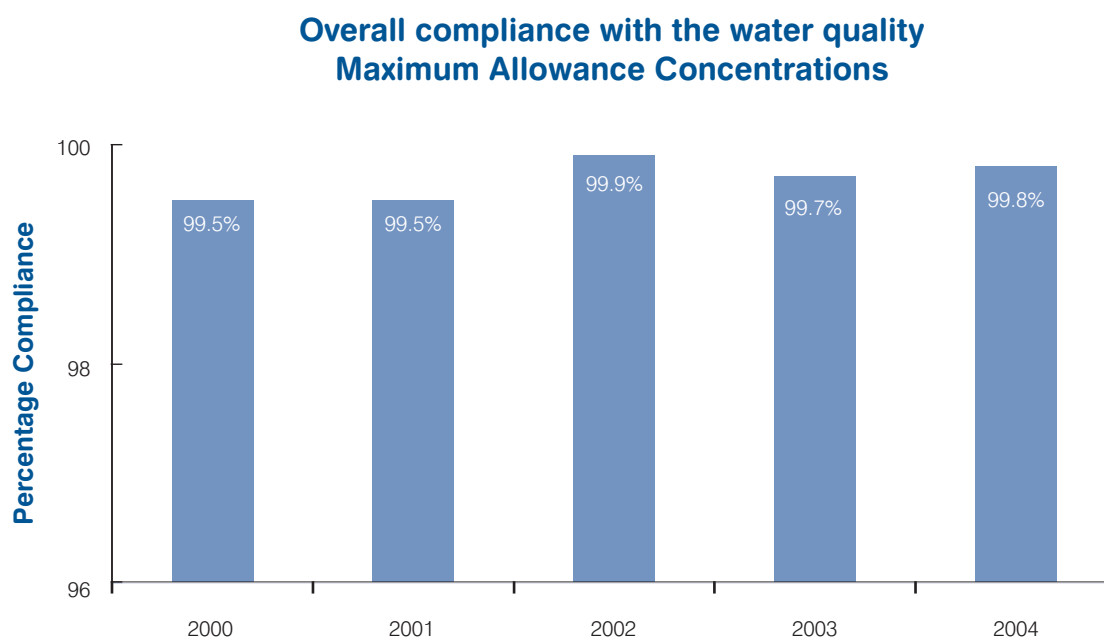


Les Platons treated water service reservoir

6 Treated Water Quality Monitoring Results

14,444 water quality analyses were undertaken during 2004, of which 28 were non-compliant. This gives an overall compliance level of 99.8%.

The following graph illustrates the overall compliance levels for the years 2000 to 2004.



6 Treated Water Quality Monitoring Results (continued)

The following tables (Tables A to F) show the results of the check monitoring programme from the supply points and the percentage compliance.

Table A

Supply point: Handois WTW

Substances and parameters	Max	Specific concentration or value (maximum) or state	% compliance
E.coli	0	0 per 100ml	100
Coliform bacteria	1	0 per 100ml	99.5
Colony counts	No abnormal change	No abnormal change	100
Nitrite	0.040	0.1 mg NO ₂ /l	100
Residual disinfectant	0.76	No value mg Cl ₂ /l	100
Turbidity	0.46	4 NTU	100
Clostridium perfringens	0	0 per 100ml	100
Conductivity	564	2500 µS/cm at 20°C	100

Table B

Supply point: Augrès WTW

Substances and parameters	Max	Specific concentration or value (maximum) or state	% compliance
E.coli	0	0 per 100ml	100
Coliform bacteria	14	0 per 100ml	99.5
Colony counts	No abnormal change	No abnormal change	100
Nitrite	0.020	0.1 mg NO ₂ /l	100
Residual disinfectant	0.46	No value mg Cl ₂ /l	100
Turbidity	1.18	4 NTU	100
Clostridium perfringens	0	0 per 100ml	100
Conductivity	546	2500 µS/cm at 20°C	100

6 Treated Water Quality Monitoring Results (continued)

Table C

Supply point: Les Platons Service Reservoir (East Compartment)

Substances and parameters	Max	Specific concentration or value (maximum) or state	% compliance
E.coli	0	0 per 100ml	100
Coliform bacteria	3	0 per 100ml (95% of samples)	98.3
Colony counts	No abnormal change	No abnormal change	100
Clostridium perfringens	0	0 per 100ml	100
Conductivity	560	2500 μ S/cm at 20°C	100

Table D

Supply point: Les Platons Service Reservoir (West Compartment)

Substances and parameters	Max	Specific concentration or value (maximum) or state	% compliance
E.coli	0	0 per 100ml	100
Coliform bacteria	1	0 per 100ml (95% of samples)	99.5
Colony counts	No abnormal change	No abnormal change	100
Clostridium perfringens	0	0 per 100ml	100
Conductivity	0	2500 μ S/cm at 20°C	100

Table E

Supply point: Westmount Service Reservoir

Substances and parameters	Max	Specific concentration or value (maximum) or state	% compliance
E.coli	0	0 per 100ml	100
Coliform bacteria	0	0 per 100ml (95% of samples)	100
Colony counts	No abnormal change	No abnormal change	100
Clostridium perfringens	0	0 per 100ml	100
Conductivity	546	2500 μ S/cm at 20°C	100

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 ₂ /l	<0.02	0.21	0.58	627	100
Aluminium	200 µg Al/l	<5	22	112	99	100
Ammonium	0.50 mg NH ₄ /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 ₃ /l	20.2	41.8	51.8	99	95
Nitrite	0.5 mg NO ₂ /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 ¹	0.1 µg/l	<0.010	<0.010	0.051	10	100
Diuron ¹	0.1 µg/l	<0.010	<0.010	0.029	10	100
Mecoprop ¹	0.1 µg/l	<0.010	0.023	0.240	11	91
Atrazine ¹	0.1 µg/l	<0.010	0.011	0.031	11	100
Simazine ¹	0.1 µg/l	<0.010	0.011	0.022	11	100
Terbutryn ¹	0.1 µg/l	<0.010	<0.010	0.012	11	100
Cyanazine ¹	0.1 µg/l	0.018	0.045	0.111	10	90
Terbutylazine ¹	0.1 µg/l	<0.010	<0.010	0.016	11	100
Dalapon ¹	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

¹ Detected pesticide – 74 other pesticides analysed for and not detected.

7 Water Quality in the Distribution System (continued)

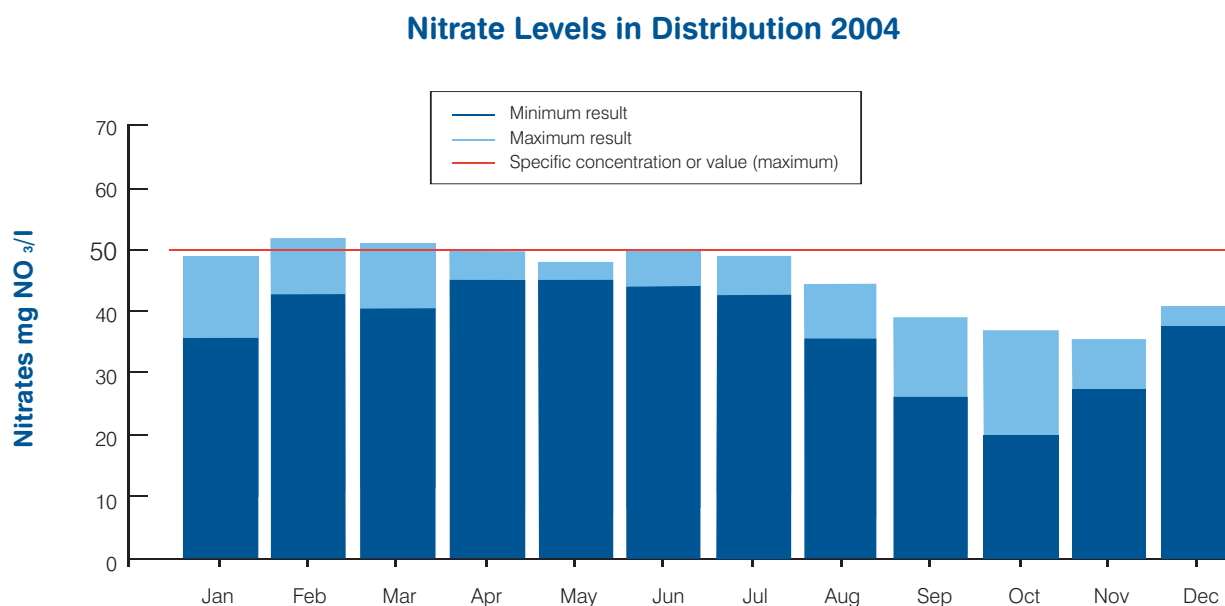
Table H
Audit Monitoring Results: Supply Zone continued

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 ₄ /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

8 Nitrates

In 2004 95% of the samples taken for nitrates were compliant with the MAC (50 mg/l). The highest level of nitrate detected in the 5% non compliant samples was 51.8 mg/l.

The following line graph for 2004 shows the maximum and minimum levels of nitrate recorded in the supply zone. The highest result was recorded in February, which is normally the critical time for nitrates, the levels are always rainfall dependant.



9 Water Quality Queries

During 2004, Jersey Water received 131 queries from customers relating to water quality. The following table shows a break-down of these queries, from which it can be seen that there were 126 water quality complaints. The majority of these complaints were due to discolouration of the water caused by old corroded steel and unlined cast iron pipes, some of which were privately owned pipe work which is not the responsibility of the Company.

All samples taken from customer queries undergo a full physical, bacteriological and chemical analyses and a detailed report is sent to the customer. As part of the monitoring procedure the water quality queries and sample results are inspected by an officer from the Environment and Public Services Department on a quarterly basis.

Type of query	No.	Bacteriological compliance (%)	2003 No.	Compliance (%)
Discoloured water	87	98.9	86	98.8
Taste/odour	21	100	24	91.6
Requests for analysis	5	100	13	100
Illness	2	100	3	100
Other	16	100	18	100
Total	131	99.2	144	97.8

Jersey Water has an ongoing programme to replace old unlined cast iron and steel pipe work in areas where water is becoming affected. In 2004 some 2.5 km of old water pipes were replaced with modern lined-pipes, which has improved water quality for customers in these areas.

Jersey Water plans further investment in the renewal of old water pipes in future years.



10 New Water Mains

In 2004 Jersey Water extended its distribution system by the laying of 7,295 metres of new water mains, with 812 new dwelling units connected. New and replacement water mains are disinfected, flushed and sampled to ensure that the pipes are thoroughly sterilised and fit for operation. All new water mains are subject to 3 separate samples, each 24 hours apart, to ensure bacteriological standards are satisfactory before the main is approved for operation.

In 2004, the laboratory took 345 samples from new and replacement water mains for analysis.



Foreman Kevin Bassett and Joe McGowan laying a replacement 150mm diameter water main in St Helier

11 Appendices

Appendix A

Audit Monitoring Supply Point: Handois WTW

Substances and parameters	Specific concentration or value (maximum or state)	Min	Mean	Max	No. of samples	% compliance
Benzene	1.0 µg/l	<0.06	<0.06	<0.06	12	100
Boron	1.0 mg B/l	<0.040	0.085	0.225	12	100
Bromate	10 µg BrO ₃ /l	<1.0	<1.0	<1.0	13	100
Cyanide	50 µg CN/l	<5	<5	<5	12	100
1,2 dichloroethane	3.0 µg/l	<0.1	<0.1	<0.1	11	100
Fluoride	1.5 mg F/l	<0.05	0.06	0.11	12	100
Mercury	1.0 µg Hg/l	<0.002	<0.002	<0.002	12	100
Linuron ¹	0.1 µg/l	<0.010	<0.010	0.055	38	100
Diuron ¹	0.1 µg/l	<0.010	<0.010	0.036	38	100
Carbetamide ¹	0.1 µg/l	<0.010	<0.010	0.045	38	100
Monolinuron ¹	0.1 µg/l	<0.010	<0.010	0.012	38	100
Mecoprop ¹	0.1 µg/l	<0.010	<0.010	0.012	38	100
Triclopyr ¹	0.1 µg/l	<0.010	<0.010	0.016	37	100
Atrazine ¹	0.1 µg/l	<0.010	<0.010	0.023	38	100
Simazine ¹	0.1 µg/l	<0.010	<0.010	0.023	38	100
Propazine ¹	0.1 µg/l	<0.010	<0.010	0.017	38	100
Terbutryn ¹	0.1 µg/l	<0.010	<0.010	0.015	38	100
Cyanazine ¹	0.1 µg/l	<0.010	0.040	0.144	38	95
Terbutylazine ¹	0.1 µg/l	<0.010	<0.010	0.021	37	100
Tebuconazole ¹	0.1 µg/l	<0.010	<0.010	0.016	38	100
Dalapon ¹	0.1 µg/l	<0.010	0.020	0.039	8	100
Pesticides total	0.5 µg/l	0.034	0.086	0.201	12	100
Trichloroethene and Tetrachloroethene	10 µg/l	<0.5	<0.5	<0.5	12	100
Tetrachloromethane	3 µg/l	<0.12	<0.12	0.17	12	100
Chloride	250 mg Cl/l	56.6	61.9	64.8	12	100
Sulphate	250 mg SO ₄ /l	84.9	94.0	114.0	12	100
Total Organic Carbon	No abnormal change	1.77	2.12	2.45	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	0.1 Bq/l	0.10	0.22	0.30	12	100

¹ Detected pesticide - 68 other pesticides analysed for and not detected

11 Appendices (continued)

Appendix B Audit Monitoring Supply Point: Augrès WTW

Substances and parameters	Specific concentration or value (maximum or state)	Min	Mean	Max	No. of samples	% compliance
Benzene	1.0 µg/l	<0.06	<0.06	<0.06	12	100
Boron	1.0 mg B/l	0.045	0.085	0.129	12	100
Bromate	10 µg BrO ₃ /l	<1.0	<1.0	<1.0	12	100
Cyanide	50 µg CN/l	<5	<5	<5	12	100
1,2 dichloroethane	3.0 µg/l	<0.1	<0.1	<0.1	12	100
Fluoride	1.5 mg F/l	<0.05	0.05	0.09	12	100
Mercury	1.0 µg Hg/l	<0.002	<0.002	0.002	12	100
Linuron ¹	0.1 µg/l	<0.010	<0.010	0.023	38	100
Diuron ¹	0.1 µg/l	<0.010	0.012	0.064	38	100
Carbetamide ¹	0.1 µg/l	<0.010	<0.010	0.034	38	100
Mecoprop ¹	0.1 µg/l	<0.010	0.015	0.260	38	95
Atrazine ¹	0.1 µg/l	<0.010	0.016	0.033	38	100
Simazine ¹	0.1 µg/l	<0.010	<0.010	0.027	38	100
Propazine ¹	0.1 µg/l	<0.010	<0.010	0.016	38	100
Terbutryn ¹	0.1 µg/l	<0.010	<0.010	0.012	38	100
Cyanazine ¹	0.1 µg/l	<0.010	0.074	1.410	38	95
Terbutylazine ¹	0.1 µg/l	<0.010	0.033	0.020	38	100
Propiconazole ¹	0.1 µg/l	<0.010	<0.010	0.018	38	100
Tebuconazole ¹	0.1 µg/l	<0.010	<0.010	0.016	38	100
Dalapon ¹	0.1 µg/l	<0.010	<0.010	0.027	10	100
Pesticides total	0.5 µg/l	0.035	0.143	1.486	38	97
Trichloroethene and Tetrachloroethene	10 µg/l	<0.5	<0.5	<0.5	12	100
Tetrachloromethane	3 µg/l	<0.12	<0.12	0.251	12	100
Chloride	250 mg Cl/l	48.5	55.9	60.2	12	100
Sulphate	250 mg SO ₄ /l	77.4	89.9	95.7	12	100
Total Organic Carbon	No abnormal change	1.87	2.25	2.54	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	0.1 Bq/l	0.19	0.25	0.34	12	100

¹ Detected pesticide - 75 other pesticides analysed for and not detected.

11 Appendices (continued)

Appendix C

Audit Monitoring Supply Point: Les Platons Service Reservoir, East Compartment ¹

Substances and parameters	Specific concentration or value (maximum or state)	Min	Mean	Max	No. of samples	% compliance
Benzene	1.0 µg/l	<0.06	<0.06	<0.06	4	100
Boron	1.0 mg B/l	<0.04	0.055	0.083	4	100
Bromate	10 µg BrO ₃ /l	<1.0	<1.0	<1.0	4	100
Cyanide	50 µg CN/l	<5	<5	<5	4	100
1,2 dichloroethane	3.0 µg/l	<0.1	<0.1	<0.1	4	100
Fluoride	1.5 mg F/l	0.06	0.10	0.15	4	100
Mercury	1.0 µg Hg/l	<0.002	<0.002	<0.002	4	100
Carbetamide ²	0.1 µg/l	<0.010	<0.010	0.018	4	100
Monolinuron ²	0.1 µg/l	<0.010	<0.010	0.012	4	100
Atrazine ²	0.1 µg/l	<0.010	0.014	0.021	4	100
Simazine ²	0.1 µg/l	<0.010	0.010	0.018	4	100
Cyanazine ²	0.1 µg/l	0.027	0.052	0.087	4	100
Tebuconazole ²	0.1 µg/l	<0.010	<0.010	0.023	4	100
Hexachlorobenzene ²	0.1 µg/l	<0.001	<0.001	0.0012	4	100
Dalapon ²	0.1 µg/l	<0.010	0.017	0.028	3	100
Glyphosate ²	0.1 µg/l	<0.010	<0.010	0.032	4	100
Pesticides total	0.5 µg/l	0.056	0.110	0.196	4	100
Trichloroethene and Tetrachloroethene	10 µg/l	<0.5	<0.5	<0.5	4	100
Tetrachloromethane	3 µg/l	<0.12	<0.12	<0.12	4	100
Chloride	250 mg Cl/l	57.8	62.5	72.9	4	100
Sulphate	250 mg SO ₄ /l	86.6	91.1	93.4	4	100
Total Organic Carbon	No abnormal change	1.80	2.02	2.25	4	100
Tritium	100 Bq/l	<10.0	<10.0	<10.0	4	100
Gross alpha	0.1 Bq/l	<0.03	<0.03	<0.03	4	100
Gross beta	0.1 Bq/l	0.15	0.19	0.23	4	100

¹ The Les Platons service reservoirs were sampled at the same frequency as Westmount but due to their being in service for only part of the year they do not have the full annual quota of samples taken.

² Detected pesticide - 74 other pesticides analysed for and not detected.

11 Appendices (continued)

Appendix D

Audit Monitoring Supply Point: Les Platons Service Reservoir, West Compartment ¹

Substances and parameters	Specific concentration or value (maximum or state)	Min	Mean	Max	No. of samples	% compliance
Benzene	1.0 µg/l	<0.06	<0.06	<0.06	7	100
Boron	1.0 mg B/l	<0.04	0.077	0.121	7	100
Bromate	10 µg BrO ₃ /l	<1.0	<1.0	<1.0	7	100
Cyanide	50 µg CN/l	<5	<5	13.0	7	100
1,2 dichloroethane	3.0 µg/l	<0.1	<0.1	<0.1	7	100
Fluoride	1.5 mg F/l	0.06	0.10	0.24	7	100
Mercury	1.0 µg Hg/l	<0.002	<0.002	0.003	7	100
Diuron ²	0.1 µg/l	<0.010	<0.010	0.022	7	100
Carbetamide ²	0.1 µg/l	<0.010	<0.010	0.015	7	100
Monolinuron ²	0.1 µg/l	<0.010	<0.010	0.012	7	100
Atrazine ²	0.1 µg/l	<0.010	<0.010	0.020	7	100
Simazine ²	0.1 µg/l	<0.010	<0.010	0.012	7	100
Cyanazine ²	0.1 µg/l	0.025	0.034	0.060	7	100
Terbutylazine ²	0.1 µg/l	<0.010	<0.010	0.013	7	100
Dalapon ²	0.1 µg/l	<0.010	0.017	0.024	7	100
Pesticides total	0.5 µg/l	0.026	0.079	0.196	7	100
Trichloroethene and Tetrachloroethene	10 µg/l	<0.5	<0.5	<0.5	7	100
Tetrachloromethane	3 µg/l	<0.12	<0.12	<0.12	6	100
Chloride	250 mg Cl/l	57.9	64.3	79.8	7	100
Sulphate	250 mg SO ₄ /l	67.0	88.1	97.3	7	100
Total Organic Carbon	No abnormal change	1.83	2.06	2.26	7	100
Tritium	100 Bq/l	<10.0	<10.0	<10.0	7	100
Gross alpha	0.1 Bq/l	<0.03	<0.03	0.04	7	100
Gross beta	0.1 Bq/l	0.16	0.20	0.22	7	100

¹ The Les Platons service reservoirs were sampled at the same frequency as Westmount but due to their being in service for only part of the year they do not have the full annual quota of samples taken.

² Detected pesticide - 75 other pesticides analysed for and not detected.

11 Appendices (continued)

Appendix E

Audit Monitoring Supply Point: Westmount Service Reservoir

Substances and parameters	Specific concentration or value (maximum or state)	Min	Mean	Max	No. of samples	% compliance
Benzene	1.0 µg/l	<0.06	<0.06	<0.06	12	100
Boron	1.0 mg B/l	0.055	0.090	0.147	12	100
Bromate	10 µg BrO ₃ /l	<1.0	<1.0	<1.0	12	100
Cyanide	50 µg CN/l	<5	<5	<5	12	100
1,2 dichloroethane	3.0 µg/l	<0.1	<0.1	<0.1	12	100
Fluoride	1.5 mg F/l	0.05	0.08	0.15	12	100
Mercury	1.0 µg Hg/l	<0.002	0.003	0.015	12	100
Linuron ¹	0.1 µg/l	<0.010	<0.010	0.065	12	100
Diuron ¹	0.1 µg/l	<0.010	<0.010	0.047	12	100
Methabenzthiazuron ¹	0.1 µg/l	<0.010	<0.010	0.015	12	100
Carbetamide ¹	0.1 µg/l	<0.010	<0.010	0.043	12	100
Mecoprop ¹	0.1 µg/l	<0.010	<0.010	0.030	12	100
Atrazine ¹	0.1 µg/l	<0.010	<0.010	0.020	12	100
Simazine ¹	0.1 µg/l	<0.010	<0.010	0.021	12	100
Propazine ¹	0.1 µg/l	<0.010	<0.010	0.013	12	100
Terbutryn ¹	0.1 µg/l	<0.010	<0.010	0.010	12	100
Cyanazine ¹	0.1 µg/l	0.023	0.053	0.121	12	83
Terbutylazine ¹	0.1 µg/l	<0.010	<0.010	0.029	11	100
Dalapon ¹	0.1 µg/l	<0.010	0.024	0.042	9	100
Pesticides total	0.5 µg/l	0.035	0.123	0.332	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
Chloride	250 mg Cl/l	55.8	60.5	65.1	12	100
Sulphate	250 mg SO ₄ /l	80.4	88.7	97.8	11	100
Total Organic Carbon	No abnormal change	1.89	2.32	3.75	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	0.1 Bq/l	0.06	0.21	0.33	12	100

¹ Detected pesticide – 75 other pesticides analysed for and not detected.



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