



CORPORATION OF THE TOWN OF HAWKESBURY

**2004
WATERWORKS
ANNUAL REPORT**

(period from January 1, 2004 to December 31, 2004)

PREPARED BY:

**TOWN OF HAWKESBURY
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SUBMITTED ON:

March 10, 2005

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The Town of Hawkesbury is presenting to the citizens of the Town of Hawkesbury its *Annual Report* for the period from January 1, 2004 to December 31, 2004. The province's Drinking Water System Regulation (O.Reg. 170/03) under the Safe Drinking Water Act, 2002 requires that we publish the report for your information.

OVERVIEW OF OUR SYSTEM

Our waterworks currently serves a population of 10,154 in Hawkesbury and a population of approximately 4,000 in the Township of Champlain. In accordance with its Official Plan, all development in the Town has been provided with municipal water and sewer services. Water is supplied by the Water Filtration Plant, which is owned and operated by the municipality, and sewage is treated at the Water Pollution Control Plant which is owned by the municipality and operated by the Ontario Clean Water Agency.

Our Water Filtration Plant is located at 670 Main Street West in Hawkesbury, Ontario. The plant was constructed in 1953 and upgraded and expanded in 1996. The system's upgrade and expansion consisted mainly of the following works:

- Construction and integration of a second clarifier unit in the treatment process complete with related piping, controls, etc...
- Construction and integration of a second 2,760 m³ potable water underground storage complete with related piping, controls, etc...
- Construction of new settling and decanting tanks for clarifier sludge and backwash wastewater.
- Supply and installation of new high lift pumping equipment.
- Supply and installation of a new SCADA control system.
- Replacement and/or relocation of yard piping.

We also have a 5,454 cubic metre elevated storage reservoir in our distribution system located on Spence Avenue.

WHERE YOUR WATER COMES FROM

Have you ever really thought about where your water comes from? In the Town of Hawkesbury, our source is the Ottawa River, a fairly large body of water. Our intake is located 90 metres from the river shore and is 4.5 metres in depth from the normal water level.

Because of the location and depth of the intake, the water quality does not change quickly. This makes it easier for waterworks staff to produce a consistently safe water. The outfall of the sewage plant discharges downstream from the water intake, and therefore has no impact on our water supply.

The source of water has to be treated to eliminate bacteria, turbidity, organic substances and colour (the natural colour in our water is elevated) in order to produce the best drinking water quality possible and having the lowest levels of aluminium, trihalomethanes (THMs), etc.... THMs are a byproduct of the chlorination of water with organic substances and colour content. By removing most of the organic substances and colour during treatment and monitoring our chlorine addition, we can control the formation of THMs.

WHAT IS IN YOUR WATER

Some parameters may be present in source water before we treat it. Here is a description of the various groups of parameters.

Microbiological parameters such as bacteria may come from sewage plants, livestock operations, septic systems and wildlife. Microbiological quality is the most important aspect of drinking water quality because of its association with dangerous water-borne diseases which can strike quickly.

Inorganic parameters such as salts and metals can be naturally occurring or a result of urban storm runoff, industrial or domestic wastewater discharge, mining or agriculture. Some may be a result of treatment and distribution of water (for example, lead from old solder in pipes).

Organic parameters can be naturally occurring but most organics of concern are synthetic. They originate from industrial discharges, urban storm runoff and other sources. Included in this group are pesticides that originate from both rural and urban areas. Some may originate from treatment of drinking water (for example, chlorination byproducts such as trihalomethanes).

The municipality participates in the Drinking Water Surveillance Program for Ontario which is a monitoring program providing immediate, reliable, current information on drinking water quality. Laboratory analysis are conducted to detect the presence of over 120 parameters in the source water. The municipality is immediately advised when a problem is detected.

TYPES OF TREATMENT

The conventional treatment used consists of the following :

- **Coagulation-floculation-decantation** : This process eliminates approximately 99 % of all organic substances, bacteria, color, etc... The chemicals used for this treatment are alum and activated silica.

- **Filtration** : This process eliminates the small particles not treated in above process.
- **Disinfection and fluoridation** : This process is carried out before the water is stored in the water tank. This chlorine disinfection ensures the elimination of all bacteria. A fluoridation is carried out simultaneously (the main purpose of the fluoridation is to prevent tooth decay in children). The disinfection process is a prime necessity to ensure that the quality of drinking water meets the Ontario Ministry of Environment regulations. Afterwards, the drinking water is pumped into the municipal water distribution system. The chemicals used for these treatments are chlorine, fluoride and lime.
- **Distribution** : The distribution is the final stage where the drinking water is distributed to residences, businesses, institutions and industries.

TERMS YOU NEED TO KNOW

Here are some terms you should know about before reading the information on the report of analysis.

DEFINITIONS:

MAC

Maximum Acceptable Concentration. This is a health-related Ontario drinking water standard established for contaminants that have known or suspected adverse health effects when above a certain concentration. The length of time the MAC can be exceeded without injury to health will depend on the nature and concentration of the parameter.

IMAC

Interim Maximum Acceptable Concentration. This is a health-related Ontario drinking water standard established for contaminants when there are insufficient toxicological data to establish a MAC with reasonable certainty, or when it is not practical to establish a MAC at the desired level.

Parameter

This is a substance that we sample and analyze for in the water.

mg/l

milligrams per litre. This is a measure of the concentration of a parameter in water, sometimes called parts per million (ppm).

µg/l

micrograms per litre. This is a measure of the concentration of a parameter in water.

ANALYSIS AND TESTING

The water treatment at the Water Filtration Plant undergoes continuous monitoring. In fact, sophisticated and precise equipment ensures a quality of water that is conforming to the Ontario Ministry of Environment regulations. Furthermore, the equipment at the Water Filtration Plant is verified daily to ascertain its proper functioning by conducting laboratory testing.

Once a week, water bacterial analysis are carried out by an independent laboratory, certified by the Canadian Association of Environmental Analytical Laboratories and the Standard Council of Canada. The operator takes 7 samples at different areas throughout the municipality, one sample of raw water and one sample at the Water Filtration Plant. These samples are then sent to the laboratory for analysis.

The following analysis are carried out :

- total coliform bacteria
- E-Coli
- background colonies

It is to be noted that all written results are obtained within a delay of 48 hours. However, if a problem arises, the municipality is advised within a delay of 24 hours, being the incubation period.

Samples from the distribution water, decanted water, filtered water and raw water are analysed for total coliform bacteria once a week by the personnel of the Waterworks Department of the Town of Hawkesbury. Various testing is also conducted daily, such as pH, turbidity, alkaline, hardness, chlorine, etc...).

REPORTS OF ADVERSE WATER QUALITY

First Quarter

Period from January 1, 2004 to March 31, 2004

During this period, no indicator of adverse water quality has been reported.

Second Quarter

Period from April 1, 2004 to June 30, 2004

During this period, no indicator of adverse water quality has been reported.

Third Quarter

Period from July 1, 2004 to September 30, 2004

The following Adverse Water Quality Notifications were issued during the Third Quarter:

July 14, 2004: Total coliform 1
Sample no. 6: location 898 Cartier Boulevard

Resampling was carried out on July 15, 2004 and July 19, 2004. The samples taken on July 15, 2004 did not reach the laboratory within the prescribed time. However, internal sampling carried out by the Waterworks Department did show negative results. The Report of Analysis from the laboratory showed negative results for the samples taken on July 19, 2004.

Notification by Laboratory received on: July 15, 2004
Notice of Adverse Test Result given on: July 15, 2004
Notice of Issue Resolution given on: July 22, 2004

August 3, 2004: TC Background >200
Sample no. 6: location 898 Cartier Boulevard

Resampling was carried out on August 5, 2004. The Report of Analysis from the laboratory showed negative results for location sample at 898 Cartier Boulevard. However, during the re-sampling, an adverse water quality result was obtained for sample no. 5 taken at 858 Cartier Boulevard.

Notification by Laboratory received on: August 5, 2004
Notice of Adverse Test Result given on: August 5, 2004
Notice of Issue Resolution given on: August 10, 2004

August 5, 2004: TC Background >200
Sample no. 5: location 858 Cartier Boulevard

The municipality proceeded with flushing of watermains and re-sampling was carried out on August 8, 2004. The Report of Analysis from the laboratory showed negative results for the samples taken.

Notification by Laboratory received on: August 7, 2004
Notice of Adverse Test Result given on: August 8, 2004
Notice of Issue Resolution given on: August 11, 2004

Fourth Quarter

Period from October 1, 2004 to December 31, 2004

During this period, no indicator of adverse water quality has been reported.

RESULTS OF ANALYSIS

First Quarter

Period from January 1, 2004 to March 31, 2004

During the reporting period of January 1, 2004 to March 31, 2004, the weekly analysis results for the samples collected on the distribution system and at the Water Filtration Plant met the Ontario Drinking Water Standards. The raw water analysis results met the requirements as defined under the provisions of the Ontario Drinking Water Standards as for total coliforms, E-coli and background colonies.

2004 First Quarter	Units	RAW WATER Minimum-maximum	PLANT TREATED Minimum-maximum	DISTRIBUTION Minimum-maximum
<i>Date</i>		Jan. 13– Mar. 9	Jan. 6 – Mar. 23	Jan. 6 – Mar. 23
Total coliform	cts/100mL	19– 3300	<1 – <1	<1 – <1
<i>Date</i>		Mar. 23 – Mar. 9	Jan. 6 – Mar. 23	Jan. 6 – Mar. 23
E. coli	cts/100mL	4 – 170	<1 – <1	<1 – <1
<i>Date</i>		Jan. 13 – Jan. 6	Jan. 6 – Mar. 23	Jan. 6 – Mar. 23
Background	cts/100mL	75– >20000	<1 – <1	<1 – 3
<i>Date</i>		--	Mar. 9 – Jan. 29	Feb. 26 – Mar. 9
Chlorine free	mg/L	--	0.77– 1.02	0.24 – 1.11
<i>Date</i>		--	Mar. 9 – Jan. 6	Jan. 29 – Jan. 6
Chlorine total	mg/L	--	1.04 – 1.39	0.30 - 1.30

Furthermore, the composite Total Suspended Solid for the reporting period met the requirement to not exceed 25 mg/L as an annual average concentration. The effluent discharge to the Ottawa River for this period is 12.33 mg/L. The annual composite Total Suspended Solid average was 9.58 mg/L.

The Maximum Acceptable Concentration (MAC) objective for the trihalomethanes (THMs) is 100 µg/L or 0.1 mg/L. This standard is expressed as a running annual average of quarterly samples measured at a point reflecting the maximum residence time in the distribution system.

The running annual average for treated water for this period, being April 1, 2003 to March 31, 2004 was 50.13 µg/L or 0.0501 mg/L at the Water Filtration Plant.

The running annual average in the distribution system for this period, being April 1, 2003 to March 31, 2004 was 73.0 µg/L or 0.073 mg/L.

The municipality did not exceed any standards during the reporting period, being January 1, 2004 to March 31, 2004.

Attached as Appendix “A” is a copy of the quarterly report of analysis for samples submitted on February 19, 2004.

Second Quarter

Period from April 1, 2004 to June 30, 2004

During the reporting period of April 1, 2004 to June 30, 2004, the weekly analysis results for the samples collected on the distribution system and at the Water Filtration Plant met the Ontario Drinking Water Standards. The raw water analysis results met the requirements as defined under the provisions of the Ontario Drinking Water Standards as for total coliforms, E-coli and background colonies.

2004 2nd Quarter	Units	RAW WATER Minimum-maximum	PLANT TREATED Minimum-maximum	DISTRIBUTION Minimum-maximum
Date		Apr. 7– June 23	Apr. 7 – June 23	Apr. 7 – June 23
Total coliform	cts/100mL	20 – 900	<1 – <1	<1 – <1
Date		Apr. 26 – June 7	Apr. 7 – June 23	Apr. 7 – June 23
E. coli	cts/100mL	3 – 25	<1 – <1	<1 – <1
Date		Apr. 7 – Apr. 14	Apr. 7 – June 23	Apr. 7 – June 23
Background	cts/100mL	320 – 4000	<1 – <1	<1 – <1
Date		--	June 23 – Apr. 26	May 11 – May 26
Chlorine free	mg/L	--	0.78 – 1.22	0.11 – 1.08
Date		--	June 23 – Apr. 26	May 26 – May 26
Chlorine total	mg/L	--	.99 – 1.48	0.19 - 1.13

Furthermore, the composite Total Suspended Solid for the reporting period met the requirement to not exceed 25 mg/L as an annual average concentration. The effluent discharge to the Ottawa River for this period is 7.67 mg/L. The annual composite Total Suspended Solid average is 9.083 mg/L.

The Maximum Acceptable Concentration (MAC) objective for the trihalomethanes (THMs) is 100 µg/L or 0.1 mg/L. This standard is expressed as a running annual average of quarterly samples measured at a point reflecting the maximum residence time in the distribution system.

The running annual average for treated water at the Water Filtration Plant was not available for this period. We had been advised by the laboratory, Caduceon Environmental Laboratories, that they did not perform said testing as, in their opinion, it is not required.

The running annual average in the distribution system for this period, being July 1, 2003 to June 30, 2004 was 63.28 µg/L or 0.063 mg/L.

The municipality did not exceed any standards during the reporting period, being April 1, 2004 to June 30, 2004.

Attached as Appendix “B” is a copy of the quarterly report of analysis for samples submitted on May 19, 2004.

Third Quarter
 Period from July 1, 2004 to September 30, 2004

During this reporting period, the weekly analysis results for the samples collected for Raw Water met the requirements as defined under the provisions of the Ontario Drinking Water Standards as for total coliforms, E-coli and background colonies. However, three adverse water quality notifications on the distribution system were issued as detailed in previous section.

2004 Third Quarter	Units	RAW WATER Minimum-maximum	PLANT TREATED Minimum-maximum	DISTRIBUTION Minimum-maximum
Date		July 27– Sept. 15	July 2 – Sept. 28	Sept. 28 – July 14
Total coliform	cts/100mL	1 – 220	<1 – <1	<1 – 1
Date		Aug. 23 – Sept. 15	July 2 – Sept. 28	July 2 – Sept. 28
E. coli	cts/100mL	<1 – 21	<1 – <1	<1 – <1
Date		July 27 – Sept. 22	July 2 – Aug. 4	Sept. 28 – Aug. 5 & 8
Background	cts/100mL	160 – >2000	<1 – 47	<1 – >200
Date		--	Aug. 18 – Sept. 22	Sept. 28 – July 7
Chlorine free	mg/L	--	0.70 – 1.02	0.13 – .96
Date		--	Aug. 18 – Sept. 22	Sept. 28 – July 7
Chlorine total	mg/L	--	.88 – 1.23	0.25 - 1.07

Furthermore, the composite Total Suspended Solid for the reporting period met the requirement to not exceed 25 mg/L as an annual average concentration. The effluent discharge to the Ottawa River for this period is 17.33 mg/L. The annual composite Total Suspended Solid average is 11.17 mg/L.

The Maximum Acceptable Concentration (MAC) objective for the trihalomethanes (THMs) is 100 µg/L or 0.1 mg/L. This standard is expressed as a running annual average of quarterly samples measured at a point reflecting the maximum residence time in the distribution system.

The running annual average for treated water at the Water Filtration Plant was not available for this period. We had been advised by the laboratory, Caduceon Environmental Laboratories, that they did not perform said testing as, in their opinion, it is not required.

The running annual average in the distribution system for this period, being October 1, 2003 to September 30, 2004 was 60.9 µg/L or 0.0609 mg/L.

Attached as Appendix “C” is a copy of the quarterly report of analysis for samples submitted on August 23, 2004.

Fourth Quarter

Period from October 1, 2004 to December 31, 2004

During the reporting period of October 1, 2004 to December 31, 2004, the weekly analysis for the samples collected on the distribution system and at the Water Filtration Plant met the Ontario Drinking Water Standards. The raw water analysis results met the requirements as defined under the provisions of the Ontario Drinking Water Standards as for total coliforms, E-coli and background colonies.

2004 Fourth Quarter	Units	RAW WATER Minimum-maximum	PLANT TREATED Minimum-maximum	DISTRIBUTION Minimum-maximum
Date		Oct. 6 – Dec. 14	Oct. 6 – Dec. 30	Oct. 6 – Dec. 30
Total coliform	cts/100mL	19 – 5000	<1 – <1	<1 – 1
Date		Dec. 22 – Dec. 30	Oct. 6 – Dec. 30	Oct. 6 – Dec. 30
E. coli	cts/100mL	<1 – 170	<1 – <1	<1 – <1
Date		Oct. 6 – Dec. 14	Oct. 6 – Dec. 30	Oct. 6 – Nov. 24
Background	cts/100mL	>200 – 5700	<1 – <1	<1 – 11
Date		--	Oct. 27 – Dec. 14	Dec. 2 – Nov. 3
Chlorine free	mg/L	--	0.74 – 1.10	0.16 – 1.06
Date		--	Oct. 27 – Dec. 14	Dec. 2 – Nov. 3
Chlorine total	mg/L	--	.89 – 1.27	0.29 - 1.20

Furthermore, the composite Total Suspended Solid for the reporting period met the requirement to not exceed 25 mg/L as an annual average concentration. The effluent discharge to the Ottawa River for this period is 15.33 mg/L. The annual composite Total Suspended Solid average is 13.17 mg/L.

The Maximum Acceptable Concentration (MAC) objective for the trihalomethanes (THMs) is 100 µg/L or 0.1 mg/L. This standard is expressed as a running annual average of quarterly samples measured at a point reflecting the maximum residence time in the distribution system.

The running annual average for treated water at the Water Filtration Plant was not available for this period. We had been advised by the laboratory, Caduceon Environmental Laboratories, that they did not perform said testing as, in their opinion, it is not required.

The running annual average in the distribution system for this period, being January 1, 2004 to December 31, 2004 was 65.73 µg/L or 0.0657 mg/L.

The municipality did not exceed any standards during the reporting period, being October 1, 2004 to December 31, 2004.

Attached as Appendix "D" is a copy of the quarterly report of analysis for samples submitted on November 23, 2004.

MEASURES TAKEN IN 2004 TO COMPLY WITH THE REGULATIONS

First Quarter

Period from January 1, 2004 to March 31, 2004

System's Approval:

The Town of Hawkesbury's drinking water system operates under an amended Certificate of Approval no. 1145-5UCLCJ, issued by the Ministry of the Environment on January 6, 2004, and under the Permit to Take Water no. 94-P-4011, issued on March 11, 1994 in accordance with Section 34 of the Ontario Water Resources Act. This permit was valid until March 30, 2004. On February 15 2004, the Ministry of the Environment issued to the Town of Hawkesbury a new Permit to Take Water that will expire on February 15, 2014.

2003 Annual Report on Drinking Water

As per Ontario Regulation no. 170/03, under the Safe Drinking Water Act, 2002, the Town of Hawkesbury published its Annual Report on drinking water for the period from January 1, 2003 to December 31, 2003. Said report has been submitted to the Ministry of the Environment on March 30, 2004.

2003 Summary Report on Drinking Water

As per Ontario Regulation no. 170/03, under the Safe Drinking Water Act, 2002, the Town of Hawkesbury published its Summary Report on drinking water for the period from January 1, 2003 to December 31, 2003. Said report has been submitted to the Municipal Council of the Corporation of the Town of Hawkesbury on March 31, 2004.

M.O.E. Compliance Inspection Report

Further to the Compliance Inspection Report dated February 6, 2004 from Donald Munro, Inspector of the Drinking Water Inspection Program, M.O.E. Eastern Region, it was noted that the Town of Hawkesbury was not sampling for the following inorganic parameters: Antimony, Barium, Boron, Cadmium, Chromium, Mercury, Selenium or Uranium outlined in Schedule 23 of the new Ontario Regulation 170/03 which required the plant to now sample for.

In 2004, the Town of Hawkesbury complied to Schedule 23 of the Drinking Water System Regulation 170/03 for above-mentioned parameters.

On March 16, 2004, the Town of Hawkesbury provided to the Ministry of the Environment a response on how the municipality planned to address the “Summary of Best Practice Recommendations” under Section 7 of the Compliance Inspection Report.

On March 23, 2004, the Ministry of the Environment reviewed the response to the recommendations and found it to be satisfactory and appropriate for each of the recommendations outlined in Section 7 of the inspection report.

Upgrading Requirements:

Work was underway for Phase II, as required under Part 8 of the Certificate of Approval no. 1145-5UCLCJ – “Studies and Upgrades Required”.

Temporary Suspension of Fluoridation of Drinking Water:

Due to the Waterworks Upgrades at the Water Filtration Plant, the Town of Hawkesbury temporarily suspended fluoridation of drinking water until July 1, 2004, as per the recommendation of J.L. Richards & Associates and under the authorization of the Eastern Ontario Health Unit.

Second Quarter

Period from April 1, 2004 to June 30, 2004

Upgrading Requirements:

Work at the Water Filtration Plant was completed at 95% for Phase II.

Third Quarter

Period from July 1, 2004 to September 30, 2004

Upgrading Requirements:

Work at the Water Filtration Plant was completed for Phase II. The Certificate of Substantial completion was issued on August 17, 2004. However, certain deficiencies remained to be addressed by the contractor.

On September 21, 2004, the Town of Hawkesbury advised the Ministry of the Environment that the municipality has met the deadline for implementation of the Waterworks upgrade, as per condition 8.1 of the Amended Certificate of Approval No. 1145-5UCLCJ.

Temporary Suspension of Fluoridation of Drinking Water:

Fluoridation of drinking water was restored in August 2004.

M.O.E. Inspection of Hawkesbury Waterworks:

On July 23, 2004, a Provincial Officer of the Ministry of the Environment carried out an unannounced inspection of the Hawkesbury Waterworks under the Drinking Water Inspections Program. The Compliance Inspection Report for 2004 was to be submitted by the Ministry of the Environment within a few months.

Fourth Quarter

Period from October 1, 2004 to December 31, 2004

Upgrading Requirements:

Certain deficiencies were being addressed by the contractor. The deficiencies should be corrected by the next reporting period.

M.O.E. Inspection of Hawkesbury Waterworks:

Further to the inspection on July 23, 2004, the Compliance Inspection Report was received on November 26, 2004 from the Ministry of the Environment.

Further to the inspection report, an Action Plan was being prepared by the municipality describing how the Town of Hawkesbury will be addressing the issues enumerated under the sections entitled “Actions Required” and “Recommended Actions” of the report. The Action Plan will be detailed in the 2005 First Quarter report.

AVAILABILITY OF REPORT

The Town of Hawkesbury has requested on February 28, 2005 an extension from the Ministry of the Environment until March 11, 2005 for the submission of the 2004 Annual Report. The Town of Hawkesbury will also be advising the users of water from the system, through local newspapers, that the Annual Report will be available for review and inspection, free of charge, at the following locations:

1. ***Town’s website***
www.hawkesbury.ca

2. *Technical Services Department*

Town of Hawkesbury
600 Higginson Street
Hawkesbury, Ontario
K6A 1H1
Tel. (613) 632-0106, ext. 2237

3. *Hawkesbury Public Library*

550 Higginson Street
Hawkesbury, Ontario
K6A 1H1

Furthermore, a copy of the Annual Report will also be forwarded to the Township of Champlain.

APPENDIXES

- APPENDIX “A”** - Report of Analysis for samples submitted on February 19, 2004
- APPENDIX “B”** - Report of Analysis for samples submitted on May 19, 2004
- APPENDIX “C”** - Report of Analysis for samples submitted on August 23, 2004
- APPENDIX “D”** - Report of Analysis for samples submitted on November 23, 2004
- APPENDIX “E”** - Report of Chemical Use for 2004

This 2004 Annual Report has been prepared and submitted on March 10, 2005 by:

Martin Bonhomme, P.Eng.,CMA,M.B.A.
Chief Administrative Officer/
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Fax (613) 636-2094

APPENDIX « A »



C.O.C.: 42980

CERTIFICATE OF ANALYSIS Final Report

REPORT No. B04-3693

Report To:

Hawkesbury, Town of
670 Main St. West
Hawkesbury Ontario K6A 2J3
Attention: Richard Guertin

Caduceon Environmental Laboratories
40 Camelot Drive
Ottawa Ontario K2G 5X8
Tel: 228-1145
Fax 228-1148

DATE SUBMITTED: 19-Feb-04

JOB/PROJECT NO.: Hawkesbury WTP

DATE REPORTED: 15-Mar-04

P.O. NUMBER: -

SAMPLE MATRIX: Drinking Water

WATERWORKS NO. 220002832

Client I.D.:	Raw	Treated Water	Distribution
Sample I.D.:	B04-3693-1	B04-3693-2	B04-3693-3
Date Collected:	18-Feb-2004	18-Feb-2004	18-Feb-2004

Parameter	Units	M.D.L.	Reference Method	Date Analyzed	Raw	Treated Water	Distribution
Conductivity	µmho/cm	1	SM 2510	20-Feb-04	77	119	127
Fluoride	mg/L	0.1	EPA 300.0	20-Feb-04	--	0.2	0.4
Chloride	mg/L	0.5	EPA 300.0	20-Feb-04	3.2	5.1	5.4
Nitrite (N)	mg/L	0.1	EPA 300.0	20-Feb-04	< 0.1	< 0.1	< 0.1
Nitrate (N)	mg/L	0.1	EPA 300.0	20-Feb-04	0.3	0.3	0.3
Sulphate	mg/L	1	EPA 300.0	20-Feb-04	7	21	22
Aluminum	mg/L	0.005	SM 3120	20-Feb-04	0.201	0.040	0.054
Arsenic	mg/L	0.001	SM 3114	20-Feb-04	0.001	0.001	0.001
Calcium	mg/L	0.02	SM 3120	20-Feb-04	8.47	16.0	17.5
Copper	mg/L	0.002	SM 3120	20-Feb-04	< 0.002	< 0.002	0.002
Iron	mg/L	0.005	SM 3120	20-Feb-04	0.248	0.022	0.030
Lead	mg/L	0.0002	SM 3113	20-Feb-04	0.0002	< 0.0002	< 0.0002
Manganese	mg/L	0.001	SM 3120	20-Feb-04	0.010	0.008	0.011
Sodium	mg/L	0.2	SM 3120	20-Feb-04	3.0	4.1	4.5
Zinc	mg/L	0.005	SM 3120	20-Feb-04	< 0.005	< 0.005	< 0.005
Total Ammonia (N)	mg/L	0.01	EPA 350.2	20-Feb-04	0.07	< 0.01	< 0.01
Total Kjeldahl Nitrogen	mg/L	0.05	EPA 351.2	23-Feb-04	0.28	0.09	0.08
Phenol	mg/L	0.001	EPA 420.2	24-Feb-04	< 0.001	--	--
DOC	mg/L	0.5	EPA 415.1	23-Feb-04	6.0	2.2	2.3
Benzene	µg/L	0.5	EPA 8260	23-Feb-04	--	< 0.5	--
Carbon Tetrachloride	µg/L	0.2	EPA 8260	23-Feb-04	--	< 0.2	--
Dichlorobenzene, 1,2-	µg/L	0.1	EPA 8260	23-Feb-04	--	< 0.1	--
Dichlorobenzene, 1,4-	µg/L	0.2	EPA 8260	23-Feb-04	--	< 0.2	--
Dichloroethane, 1,2-	µg/L	0.1	EPA 8260	23-Feb-04	--	< 0.1	--
Dichloroethene, 1,1-	µg/L	0.1	EPA 8260	23-Feb-04	--	< 0.1	--
Dichloromethane (Methylene Chloride)	µg/L	0.3	EPA 8260	23-Feb-04	--	< 0.3	--
Ethylbenzene	µg/L	0.5	EPA 8260	23-Feb-04	--	< 0.5	--

Greg Clarkin, BSc., C. Chem
Lab Manager - Ottawa District

M.D.L. = Method Detection Limit

Accredited by the Standards Council of Canada and CAEAL for specific tests.
The analytical results reported herein refer to the samples as received. Reproduction of this analytical report in full or in part is prohibited without prior written consent from Caduceon Environmental Laboratories.



C.O.C.: 42980

CERTIFICATE OF ANALYSIS Final Report

REPORT No. B04-3693

Report To:

Hawkesbury, Town of
670 Main St. West
Hawkesbury Ontario K6A 2J3
Attention: Richard Guertin

Caduceon Environmental Laboratories
40 Camelot Drive
Ottawa Ontario K2G 5X8
Tel: 228-1145
Fax 228-1148

DATE SUBMITTED: 19-Feb-04

JOB/PROJECT NO.: Hawkesbury WTP

DATE REPORTED: 15-Mar-04

P.O. NUMBER: -

SAMPLE MATRIX: Drinking Water

WATERWORKS NO. 220002832

Parameter	Units	M.D.L.	Client I.D.:		Raw	Treated Water	Distribution
			Sample I.D.:		B04-3693-1	B04-3693-2	B04-3693-3
			Date Collected:		18-Feb-2004	18-Feb-2004	18-Feb-2004
			Reference Method	Date Analyzed			
Monochlorobenzene (Chlorobenzene)	µg/L	0.2	EPA 8260	23-Feb-04	--	< 0.2	--
Tetrachloroethylene	µg/L	0.2	EPA 8260	23-Feb-04	--	< 0.2	--
Toluene	µg/L	0.5	EPA 8260	23-Feb-04	--	< 0.5	--
Trichloroethylene	µg/L	0.1	EPA 8260	23-Feb-04	--	< 0.1	--
Vinyl Chloride	µg/L	0.2	EPA 8260	23-Feb-04	--	< 0.2	--
Xylene, m,p,o-	µg/L	2.0	EPA 8260	23-Feb-04	--	< 2.0	--
Bromodichloromethane	µg/L	0.1	EPA 8260	23-Feb-04	--	2.9	4.7
Bromoform	µg/L	0.1	EPA 8260	23-Feb-04	--	< 0.1	< 0.1
Chloroform	µg/L	0.3	EPA 8260	23-Feb-04	--	34.9	51.6
Dibromochloromethane	µg/L	0.1	EPA 8260	23-Feb-04	--	0.3	0.4
Total Trihalomethanes	µg/L	0.3	EPA 8260	23-Feb-04	--	38.1	56.7
Alachlor	µg/L	0.3	EPA 8270	21-Feb-04	--	< 0.3	--
Aldicarb	µg/L	3	EPA 8270	21-Feb-04	--	< 3	--
Atrazine + Metabolites	µg/L	0.5	Calc.	21-Feb-04	--	< 0.5	--
Azinphos-methyl	µg/L	1	EPA 8270	21-Feb-04	--	< 1	--
Bendiocarb	µg/L	3	EPA 8270	21-Feb-04	--	< 3	--
Benzo(a)pyrene	µg/L	0.005	EPA 8270	21-Feb-04	--	< 0.005	--
Bromoxynil	µg/L	0.094	Subcontract	11-Mar-04	--	< 0.094	--
Carbaryl	µg/L	3	EPA 8270	21-Feb-04	--	< 3	--
Carbofuran	µg/L	1	EPA 8270	21-Feb-04	--	< 1	--
Chlorpyrifos	µg/L	0.5	EPA 8270	21-Feb-04	--	< 0.5	--
Cyanazine	µg/L	0.5	EPA 8270	21-Feb-04	--	< 0.5	--
Diazinon	µg/L	1	EPA 8270	21-Feb-04	--	< 1	--
Dicamba	µg/L	5	EPA 8270	21-Feb-04	--	< 5	--
Dichlorophenol, 2,4-	µg/L	0.1	EPA 8270	21-Feb-04	--	< 0.1	--
Dichlorophenoxy acetic acid, 2,4- (2,4-D)	µg/L	5	EPA 8270	21-Feb-04	--	< 5	--

Greg Clarkin, BSc., C. Chem
Lab Manager - Ottawa District

M.D.L. = Method Detection Limit

Accredited by the Standards Council of Canada and CAEAL for specific tests.

The analytical results reported herein refer to the samples as received. Reproduction of this analytical report in full or in part is prohibited without prior written consent from Caduceon Environmental Laboratories.



C.O.C.: 42980

CERTIFICATE OF ANALYSIS Final Report

REPORT No. B04-3693

Report To:

Hawkesbury, Town of
670 Main St. West
Hawkesbury Ontario K6A 2J3
Attention: Richard Guertin

Caduceon Environmental Laboratories
40 Camelot Drive
Ottawa Ontario K2G 5X8
Tel: 228-1145
Fax 228-1148

DATE SUBMITTED: 19-Feb-04
DATE REPORTED: 15-Mar-04
SAMPLE MATRIX: Drinking Water

JOB/PROJECT NO.: Hawkesbury WTP
P.O. NUMBER: -
WATERWORKS NO. 220002832

Parameter	Units	M.D.L.	Reference Method	Date Analyzed	Client I.D.:		
					Raw	Treated Water	Distribution
					B04-3693-1	B04-3693-2	B04-3693-3
					18-Feb-2004	18-Feb-2004	18-Feb-2004
Poly-Chlorinated Biphenyls (PCB's)	µg/L	0.05	EPA 8080	23-Feb-04	--	< 0.05	--
Diquat	µg/L	5	EPA 549.1	24-Feb-04	--	< 5	--
Paraquat	µg/L	1	EPA 549.1	24-Feb-04	--	< 1	--
Glyphosate	µg/L	25	EPA 547	24-Feb-04	--	< 25	--

1. Subcontracted to SGS Lakefield

Greg Clarkin, BSc., C. Chem
Lab Manager - Ottawa District

M.D.L. = Method Detection Limit

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APPENDIX « B »

C.O.C.: 58215

CERTIFICATE OF ANALYSIS Final Report

REPORT No. B04-11665

Report To:

Hawkesbury, Town of
670 Main St. West
Hawkesbury Ontario K6A 2J3

Attention: Richard Guertin

Caduceon Environmental Laboratories

40 Camelot Drive
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Tel: (613)228-1145
Fax (613)228-1148

DATE SUBMITTED: 19-May-04

JOB/PROJECT NO.: Hawkesbury WTP

DATE REPORTED: 13-Jun-04

P.O. NUMBER: -

SAMPLE MATRIX: Drinking Water

WATERWORKS NO. 220002832

Parameter	Units	M.D.L.	Client I.D.:		Raw	Treated Water	Distribution
			Reference Method	Date Analyzed	B04-11665-1	B04-11665-2	B04-11665-3
			Sample I.D.:		B04-11665-1	B04-11665-2	B04-11665-3
			Date Collected:		18-May-2004	18-May-2004	18-May-2004
Parameter	Units	M.D.L.	Reference Method	Date Analyzed	Raw	Treated Water	Distribution
Conductivity	µmho/cm	1	SM 2510	21-May-04	76	115	123
Fluoride	mg/L	0.1	EPA 300.0	25-May-04	--	< 0.1	< 0.1
Chloride	mg/L	0.5	EPA 300.0	25-May-04	3.1	4.9	5.0
Nitrite (N)	mg/L	0.1	EPA 300.0	25-May-04	< 0.1	< 0.1	< 0.1
Nitrate (N)	mg/L	0.1	EPA 300.0	25-May-04	0.3	0.2	0.3
Sulphate	mg/L	1	EPA 300.0	25-May-04	6	21	21
Aluminum	mg/L	0.005	SM 3120	20-May-04	0.301	0.056	0.043
Antimony	mg/L	0.001	SM 3114	20-May-04	--	0.001	--
Arsenic	mg/L	0.001	SM 3114	20-May-04	0.001	0.001	< 0.001
Barium	mg/L	0.001	SM 3120	20-May-04	--	0.013	--
Boron	mg/L	0.005	SM 3120	20-May-04	--	0.014	--
Cadmium	mg/L	0.0001	SM 3113	20-May-04	--	< 0.0001	--
Calcium	mg/L	0.02	SM 3120	20-May-04	8.33	14.4	15.1
Chromium	mg/L	0.001	SM 3120	20-May-04	--	< 0.001	--
Copper	mg/L	0.002	SM 3120	20-May-04	0.003	< 0.002	0.003
Iron	mg/L	0.005	SM 3120	20-May-04	0.361	0.015	0.016
Lead	mg/L	0.0002	SM 3113	20-May-04	< 0.0002	< 0.0002	< 0.0002
Manganese	mg/L	0.001	SM 3120	20-May-04	0.021	0.006	0.014
Mercury	mg/L	0.0001	SM 3112	20-May-04	--	< 0.0001	--
Selenium	mg/L	0.001	SM 3114	20-May-04	--	< 0.001	--
Sodium	mg/L	0.2	SM 3120	20-May-04	3.2	3.7	4.0
Uranium	mg/L	0.0001	EPA 200.8	20-May-04	--	< 0.0001	--
Zinc	mg/L	0.005	SM 3120	20-May-04	< 0.005	< 0.005	< 0.005
Ammonia (N)-Total	mg/L	0.01	EPA 350.2	20-May-04	< 0.01	< 0.01	< 0.01
Total Kjeldahl Nitrogen	mg/L	0.05	EPA 351.2	25-May-04	0.28	0.10	0.10
Phenol	mg/L	0.001	EPA 420.2	20-May-04	< 0.001	--	--
Dissolved Organic Carbon	mg/L	0.5	EPA 415.1	20-May-04	5.6	2.0	2.0
Benzene	µg/L	0.5	EPA 8260	20-May-04	--	< 0.5	--



Greg Clarkin, BSc., C. Chem
Lab Manager - Ottawa District

M.D.L. = Method Detection Limit

Accredited by the Standards Council of Canada and CAEL for specific tests.

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C.O.C.: 58215

CERTIFICATE OF ANALYSIS Final Report

REPORT No. B04-11665

Report To:

Hawkesbury, Town of
670 Main St. West
Hawkesbury Ontario K6A 2J3

Attention: Richard Guertin

Caduceon Environmental Laboratories
40 Camelot Drive
Ottawa Ontario K2G 5X8
Tel: (613)228-1145
Fax (613)228-1148

DATE SUBMITTED: 19-May-04

JOB/PROJECT NO.: Hawkesbury WTP

DATE REPORTED: 13-Jun-04

P.O. NUMBER: -

SAMPLE MATRIX: Drinking Water

WATERWORKS NO. 220002832

Parameter	Units	M.D.L.	Reference Method	Date Analyzed	Client I.D.:		
					Raw	Treated Water	Distribution
					B04-11665-1	B04-11665-2	B04-11665-3
					18-May-2004	18-May-2004	18-May-2004
Carbon Tetrachloride	µg/L	0.2	EPA 8260	20-May-04	--	< 0.2	--
Dichlorobenzene, 1,2-	µg/L	0.1	EPA 8260	20-May-04	--	< 0.1	--
Dichlorobenzene, 1,4-	µg/L	0.2	EPA 8260	20-May-04	--	< 0.2	--
Dichloroethane, 1,2-	µg/L	0.1	EPA 8260	20-May-04	--	< 0.1	--
Dichloroethene, 1,1-	µg/L	0.1	EPA 8260	20-May-04	--	< 0.1	--
Dichloromethane (Methylene Chloride)	µg/L	0.3	EPA 8260	20-May-04	--	< 0.3	--
Monochlorobenzene (Chlorobenzene)	µg/L	0.2	EPA 8260	20-May-04	--	< 0.2	--
Tetrachloroethylene	µg/L	0.2	EPA 8260	20-May-04	--	< 0.2	--
Trichloroethylene	µg/L	0.1	EPA 8260	20-May-04	--	< 0.1	--
Vinyl Chloride	µg/L	0.2	EPA 8260	20-May-04	--	< 0.2	--
Bromodichloromethane	µg/L	0.1	EPA 8260	20-May-04	--	--	3.4
Bromoform	µg/L	0.1	EPA 8260	20-May-04	--	--	< 0.1
Chloroform	µg/L	0.3	EPA 8260	20-May-04	--	--	49.7
Dibromochloromethane	µg/L	0.1	EPA 8260	20-May-04	--	--	0.3
Total Trihalomethanes	µg/L	1.0	EPA 8260	20-May-04	--	--	53.4
Alachlor	µg/L	0.3	EPA 8270	03-Jun-04	--	< 0.3	--
Aldicarb	µg/L	3	EPA 8270	03-Jun-04	--	< 3	--
Aldrin + Dieldrin	µg/L	0.02	Calc.	07-Jun-04	--	< 0.02	--
Atrazine + Metabolites	µg/L	0.5	Calc.	03-Jun-04	--	< 0.5	--
Azinphos-methyl	µg/L	1	EPA 8270	03-Jun-04	--	< 1	--
Bendiocarb	µg/L	3	EPA 8270	03-Jun-04	--	< 3	--
Benzo(a)pyrene	µg/L	0.005	EPA 8270	03-Jun-04	--	< 0.005	--
Bromoxynil	µg/L	0.094	Subcontract	11-Jun-04	--	< 0.094	--
Carbaryl	µg/L	3	EPA 8270	03-Jun-04	--	< 3	--
Carbofuran	µg/L	1	EPA 8270	03-Jun-04	--	< 1	--
Chlordane (Total)	µg/L	0.04	Calc.	07-Jun-04	--	< 0.04	--



Greg Clarkin, BSc., C. Chem
Lab Manager - Ottawa District

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C.O.C.: 58215

CERTIFICATE OF ANALYSIS Final Report

REPORT No. B04-11665

Report To:

Hawkesbury, Town of
670 Main St. West
Hawkesbury Ontario K6A 2J3
Attention: Richard Guertin

Caduceon Environmental Laboratories
40 Camelot Drive
Ottawa Ontario K2G 5X8
Tel: (613)228-1145
Fax (613)228-1148

DATE SUBMITTED: 19-May-04

JOB/PROJECT NO.: Hawkesbury WTP

DATE REPORTED: 13-Jun-04

P.O. NUMBER: -

SAMPLE MATRIX: Drinking Water

WATERWORKS NO. 220002832

Parameter	Units	M.D.L.	Reference Method	Date Analyzed	Client I.D.:		
					Raw	Treated Water	Distribution
					B04-11665-1	B04-11665-2	B04-11665-3
					18-May-2004	18-May-2004	18-May-2004
Chlorpyrifos	µg/L	0.50	EPA 8270	03-Jun-04	--	< 0.50	--
Cyanazine	µg/L	0.50	EPA 8270	03-Jun-04	--	< 0.50	--
DDT + Metabolites	µg/L	0.1	Calc.	07-Jun-04	--	< 0.1	--
Diazinon	µg/L	1	EPA 8270	03-Jun-04	--	< 1	--
Dicamba	µg/L	5.0	EPA 8270	03-Jun-04	--	< 5.0	--
Dichlorophenol, 2,4-	µg/L	0.1	EPA 8270	03-Jun-04	--	< 0.1	--
Dichlorophenoxy acetic acid, 2,4- (2,4-D)	µg/L	5.0	EPA 8270	03-Jun-04	--	< 5.0	--
Diclofop-methyl	µg/L	0.4	EPA 8270	03-Jun-04	--	< 0.4	--
Dimethoate	µg/L	1	EPA 8270	03-Jun-04	--	< 1	--
Dinoseb	µg/L	0.5	EPA 8270	03-Jun-04	--	< 0.5	--
Diquat	µg/L	5	EPA 549.1	21-May-04	--	< 5	--
Diuron	µg/L	5.0	EPA 8270	03-Jun-04	--	< 5.0	--
Glyphosate	µg/L	25	EPA 547	21-May-04	--	< 25	--
Heptachlor + Heptachlor Epoxide	µg/L	0.1	Calc.	07-Jun-04	--	< 0.1	--
Lindane (total)	µg/L	0.1	EPA 8080	26-May-04	--	< 0.1	--
Malathion	µg/L	5.0	EPA 8270	03-Jun-04	--	< 5.0	--
Methoxychlor	µg/L	0.1	EPA 8080	26-May-04	--	< 0.1	--
Metolachlor	µg/L	3	EPA 8270	03-Jun-04	--	< 3	--
Metribuzin	µg/L	3	EPA 8270	03-Jun-04	--	< 3	--
Paraquat	µg/L	1	EPA 549.1	21-May-04	--	< 1	--
Parathion	µg/L	3	EPA 8270	03-Jun-04	--	< 3	--
Pentachlorophenol	µg/L	0.1	EPA 8270	03-Jun-04	--	< 0.1	--
Phorate	µg/L	0.3	EPA 8270	03-Jun-04	--	< 0.3	--
Picloram	µg/L	5.0	EPA 8270	03-Jun-04	--	< 5.0	--
Poly-Chlorinated Biphenyls (PCB's)	µg/L	0.05	EPA 8080	26-May-04	--	< 0.05	--



Greg Clarkin, BSc., C. Chem
Lab Manager - Ottawa District

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C.O.C.: 58215

CERTIFICATE OF ANALYSIS Final Report

REPORT No. B04-11665

Report To:

Hawkesbury, Town of
670 Main St. West
Hawkesbury Ontario K6A 2J3
Attention: Richard Guertin

Caduceon Environmental Laboratories
40 Camelot Drive
Ottawa Ontario K2G 5X8
Tel: (613)228-1145
Fax (613)228-1148

DATE SUBMITTED: 19-May-04
DATE REPORTED: 13-Jun-04
SAMPLE MATRIX: Drinking Water

JOB/PROJECT NO.: Hawkesbury WTP
P.O. NUMBER: -
WATERWORKS NO. 220002832

Parameter	Units	M.D.L.	Reference Method	Date Analyzed	Raw	Treated Water	Distribution
Prometryne	µg/L	0.1	EPA 8270	03-Jun-04	--	< 0.1	--
Simazine	µg/L	0.50	EPA 8270	03-Jun-04	--	< 0.50	--
Temephos	µg/L	13	EPA 8270	03-Jun-04	--	< 13	--
Terbufos	µg/L	0.3	EPA 8270	03-Jun-04	--	< 0.3	--
Tetrachlorophenol, 2,3,4,6-	µg/L	0.14	Subcontract	11-Jun-04	--	< 0.14	--
Triallate	µg/L	10	EPA 8270	03-Jun-04	--	< 10	--
Trichlorophenol 2,4,6-	µg/L	0.1	EPA 8270	03-Jun-04	--	< 0.1	--
Trichlorophenoxy acetic acid, 2,4,5-	µg/L	11	EPA 8270	03-Jun-04	--	< 11	--
Trifluralin	µg/L	0.50	EPA 8270	03-Jun-04	--	< 0.50	--

1 Subcontracted to SGS Lakefield

Greg Clarkin, BSc., C. Chem
Lab Manager - Ottawa District

M.D.L. = Method Detection Limit

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The analytical results reported herein refer to the samples as received. Reproduction of this analytical report in full or in part is prohibited without prior written consent from Caduceon Environmental Laboratories.

APPENDIX « C »

S.O.C.: 70139

REPORT No. B04-20730

Report To:

Hawkesbury, Town of
670 Main St. West
Hawkesbury Ontario K6A 2J3

Attention: Richard Guertin

Caduceon Environmental Laboratories

40 Camelot Drive
Ottawa Ontario K2G 5X8
Tel: 613-228-1145
Fax 613-228-1148

DATE RECEIVED: 24-Aug-04

JOB/PROJECT NO.: Hawkesbury WTP

DATE REPORTED: 17-Sep-04

P.O. NUMBER: -

SAMPLE MATRIX: Drinking Water

WATERWORKS NO. 220002832

Parameter	Units	M.D.L.	Reference Method	Date Analyzed	Client I.D.:			
					Raw	Treated	Distribution	
					Sample I.D.:	B04-20730-1	B04-20730-2	B04-20730-3
					Date Collected:	23-Aug-2004	23-Aug-2004	23-Aug-2004
Conductivity	µmho/cm	1	SM 2510	27-Aug-04	94	130	128	
Fluoride	mg/L	0.1	EPA 300.0	25-Aug-04	--	< 0.1	< 0.1	
Chloride	mg/L	0.5	EPA 300.0	25-Aug-04	4.5	6.3	6.1	
Nitrite (N)	mg/L	0.1	EPA 300.0	25-Aug-04	< 0.1	< 0.1	< 0.1	
Nitrate (N)	mg/L	0.1	EPA 300.0	25-Aug-04	0.3	0.3	0.3	
Sulphate	mg/L	1	EPA 300.0	25-Aug-04	6	19	19	
Aluminum	mg/L	0.005	SM 3120	25-Aug-04	0.164	0.034	0.040	
Antimony	mg/L	0.001	SM 3114	25-Aug-04	0.001	< 0.001	0.001	
Arsenic	mg/L	0.001	SM 3114	25-Aug-04	0.001	0.001	0.001	
Barium	mg/L	0.001	SM 3120	25-Aug-04	0.018	0.013	0.013	
Boron	mg/L	0.005	SM 3120	25-Aug-04	0.011	0.010	0.009	
Cadmium	mg/L	0.0001	SM 3113	25-Aug-04	< 0.0001	< 0.0001	< 0.0001	
Calcium	mg/L	0.02	SM 3120	25-Aug-04	9.90	15.0	15.1	
Chromium	mg/L	0.001	SM 3120	25-Aug-04	< 0.001	< 0.001	< 0.001	
Copper	mg/L	0.002	SM 3120	25-Aug-04	0.002	< 0.002	0.003	
Iron	mg/L	0.005	SM 3120	25-Aug-04	0.254	0.016	0.020	
Lead	mg/L	0.0002	SM 3113	25-Aug-04	0.0002	< 0.0002	0.0002	
Manganese	mg/L	0.001	SM 3120	25-Aug-04	0.015	0.007	0.009	
Mercury	mg/L	0.0001	SM 3112	26-Aug-04	< 0.0001	< 0.0001	< 0.0001	
Selenium	mg/L	0.001	SM 3114	25-Aug-04	< 0.001	< 0.001	0.001	
Uranium	mg/L	0.0001	EPA 200.8	25-Aug-04	< 0.0001	< 0.0001	< 0.0001	
Zinc	mg/L	0.005	SM 3120	25-Aug-04	< 0.005	< 0.005	< 0.005	
Ammonia (N)-Total	mg/L	0.01	EPA 350.2	26-Aug-04	< 0.01	< 0.01	< 0.01	
Total Kjeldahl Nitrogen	mg/L	0.05	EPA 351.2	27-Aug-04	0.21	0.07	0.07	
Dissolved Organic Carbon	mg/L	0.5	EPA 415.1	26-Aug-04	4.9	2.3	2.3	
Phenol	mg/L	0.001	EPA 420.2	26-Aug-04	< 0.001	--	--	
Benzene	µg/L	0.5	EPA 8260	25-Aug-04	--	< 0.5	--	
Carbon Tetrachloride	µg/L	0.2	EPA 8260	25-Aug-04	--	< 0.2	--	

Greg Clarkin, B.Sc., C. Chem
Chartered Chemist
Lab Manager - Ottawa District

M.D.L. = Method Detection Limit

Accredited by the Standards Council of Canada and CAEAL for specific tests.

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S.O.C.: 70139

REPORT No. B04-20730

Report To:

Hawkesbury, Town of
670 Main St. West
Hawkesbury Ontario K6A 2J3

Attention: Richard Guertin

Caduceon Environmental Laboratories

40 Camelot Drive
Ottawa Ontario K2G 5X8
Tel: 613-228-1145
Fax 613-228-1148

DATE RECEIVED: 24-Aug-04

JOB/PROJECT NO.: Hawkesbury WTP

DATE REPORTED: 17-Sep-04

P.O. NUMBER: -

SAMPLE MATRIX: Drinking Water

WATERWORKS NO. 220002832

Parameter	Units	M.D.L.	Reference Method	Date Analyzed	Client I.D.:		
					Raw	Treated	Distribution
Sample I.D.:					B04-20730-1	B04-20730-2	B04-20730-3
Date Collected:					23-Aug-2004	23-Aug-2004	23-Aug-2004
Dichlorobenzene,1,2-	µg/L	0.1	EPA 8260	25-Aug-04	--	< 0.1	--
Dichlorobenzene,1,4-	µg/L	0.2	EPA 8260	25-Aug-04	--	< 0.2	--
Dichloroethane,1,2-	µg/L	0.1	EPA 8260	25-Aug-04	--	< 0.1	--
Dichloroethene, 1,1-	µg/L	0.1	EPA 8260	25-Aug-04	--	< 0.1	--
Dichloromethane (Methylene Chloride)	µg/L	0.3	EPA 8260	25-Aug-04	--	< 0.3	--
Monochlorobenzene (Chlorobenzene)	µg/L	0.2	EPA 8260	25-Aug-04	--	< 0.2	--
Tetrachloroethylene	µg/L	0.2	EPA 8260	25-Aug-04	--	< 0.2	--
Trichloroethylene	µg/L	0.1	EPA 8260	25-Aug-04	--	< 0.1	--
Vinyl Chloride	µg/L	0.2	EPA 8260	25-Aug-04	--	< 0.2	--
Chloroform	µg/L	0.3	EPA 8260	25-Aug-04	--	--	73.8
Bromodichloromethane	µg/L	0.1	EPA 8260	25-Aug-04	--	--	4.7
Dibromochloromethane	µg/L	0.1	EPA 8260	25-Aug-04	--	--	0.2
Bromoform	µg/L	0.1	EPA 8260	25-Aug-04	--	--	< 0.1
Total Trihalomethanes	µg/L	0.3	EPA 8260	25-Aug-04	--	--	78.6
Dichloroethane-d4,1,2-(SS)	%		EPA 8260	25-Aug-04	--	--	102
Toluene-d8 (SS)	%		EPA 8260	25-Aug-04	--	--	105
Bromofluorobenzene,4(SS)	%		EPA 8260	25-Aug-04	--	--	103
Alachlor	µg/L	0.3	EPA 8270	30-Aug-04	--	< 0.3	--
Aldicarb	µg/L	3	EPA 8270	30-Aug-04	--	< 3	--
Aldrin + Dieldrin	µg/L	0.02	Calc.	31-Aug-04	--	< 0.02	--
Atrazine + Metabolites	µg/L	0.5	Calc.	30-Aug-04	--	< 0.5	--
Azinphos-methyl	µg/L	1	EPA 8270	30-Aug-04	--	< 1	--
Bendiocarb	µg/L	3	EPA 8270	30-Aug-04	--	< 3	--
Benzo(a)pyrene	µg/L	0.005	EPA 8270	30-Aug-04	--	< 0.005	--
Bromoxynil	µg/L	0.094	Subcontract	17-Sep-04	--	< 0.094	--
Carbaryl	µg/L	3	EPA 8270	30-Aug-04	--	< 3	--

Gregory Clarkin
Gregory Clarkin, B.Sc., C. Chem
Lab Manager - Ottawa District

M.D.L. = Method Detection Limit

Accredited by the Standards Council of Canada and CAEAL for specific tests.

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C.O.C.: 70139

REPORT No. B04-20730

Report To:

Hawkesbury, Town of
670 Main St. West
Hawkesbury Ontario K6A 2J3

Attention: Richard Guertin

Caduceon Environmental Laboratories

40 Camelot Drive
Ottawa Ontario K2G 5X8
Tel: 613-228-1145
Fax 613-228-1148

DATE RECEIVED: 24-Aug-04

JOB/PROJECT NO.: Hawkesbury WTP

DATE REPORTED: 17-Sep-04

P.O. NUMBER: -

SAMPLE MATRIX: Drinking Water

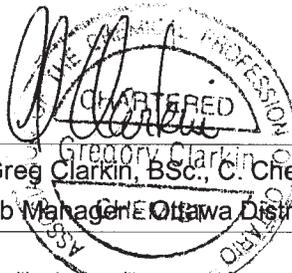
WATERWORKS NO. 220002832

Parameter	Units	M.D.L.	Reference Method	Date Analyzed	Client I.D.:		
					Raw	Treated	Distribution
					B04-20730-1	B04-20730-2	B04-20730-3
					Date Collected:		
					23-Aug-2004	23-Aug-2004	23-Aug-2004
Carbofuran	µg/L	1	EPA 8270	30-Aug-04	--	< 1	--
Chlordane (Total)	µg/L	0.04	Calc.	31-Aug-04	--	< 0.04	--
Chlorpyrifos	µg/L	0.5	EPA 8270	30-Aug-04	--	< 0.5	--
Cyanazine	µg/L	0.5	EPA 8270	30-Aug-04	--	< 0.5	--
DDT + Metabolites	µg/L	0.1	Calc.	31-Aug-04	--	< 0.1	--
Diazinon	µg/L	1	EPA 8270	30-Aug-04	--	< 1	--
Dicamba	µg/L	5	EPA 8270	30-Aug-04	--	< 5	--
Dichlorophenol, 2,4-	µg/L	0.1	EPA 8270	30-Aug-04	--	< 0.1	--
Dichlorophenoxy acetic acid, 2,4- (2,4-D)	µg/L	5	EPA 8270	30-Aug-04	--	< 5	--
Diclofop-methyl	µg/L	0.4	EPA 8270	30-Aug-04	--	< 0.4	--
Dimethoate	µg/L	1	EPA 8270	30-Aug-04	--	< 1	--
Dinoseb	µg/L	0.5	EPA 8270	30-Aug-04	--	< 0.5	--
Diquat	µg/L	5	EPA 549.1	01-Sep-04	--	< 5	--
Diuron	µg/L	5	EPA 8270	30-Aug-04	--	< 5	--
Glyphosate	µg/L	25	EPA 547	01-Sep-04	--	< 25	--
Heptachlor + Heptachlor Epoxide	µg/L	0.1	Calc.	31-Aug-04	--	< 0.1	--
Lindane (total)	µg/L	0.1	EPA 8080	31-Aug-04	--	< 0.1	--
Malathion	µg/L	5	EPA 8270	30-Aug-04	--	< 5	--
Methoxychlor	µg/L	0.1	EPA 8080	31-Aug-04	--	< 0.1	--
Metolachlor	µg/L	3	EPA 8270	30-Aug-04	--	< 3	--
Metribuzin	µg/L	3	EPA 8270	30-Aug-04	--	< 3	--
Paraquat	µg/L	1	EPA 549.1	01-Sep-04	--	< 1	--
Parathion	µg/L	3	EPA 8270	30-Aug-04	--	< 3	--
Pentachlorophenol	µg/L	0.1	EPA 8270	30-Aug-04	--	< 0.1	--
Phorate	µg/L	0.3	EPA 8270	30-Aug-04	--	< 0.3	--
Picloram	µg/L	5	EPA 8270	30-Aug-04	--	< 5	--

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Gregory Clarkin, B.Sc., C. Chem
Lab Manager - Ottawa District

C.O.C.: 70139

REPORT No. B04-20730

Report To:

Hawkesbury, Town of
670 Main St. West
Hawkesbury Ontario K6A 2J3

Attention: Richard Guertin

Caduceon Environmental Laboratories

40 Camelot Drive
Ottawa Ontario K2G 5X8
Tel: 613-228-1145
Fax 613-228-1148

DATE RECEIVED: 24-Aug-04
DATE REPORTED: 17-Sep-04
SAMPLE MATRIX: Drinking Water

JOB/PROJECT NO.: Hawkesbury WTP
P.O. NUMBER: -
WATERWORKS NO. 220002832

Parameter	Units	M.D.L.	Reference Method	Date Analyzed	Client I.D.:			
					Raw	Treated	Distribution	
					B04-20730-1	B04-20730-2	B04-20730-3	
					Date Collected:			
					23-Aug-2004	23-Aug-2004	23-Aug-2004	
Poly-Chlorinated Biphenyls (PCB's)	µg/L	0.05	EPA 8080	31-Aug-04	--	< 0.05	--	
Prometryne	µg/L	0.1	EPA 8270	30-Aug-04	--	< 0.1	--	
Simazine	µg/L	0.5	EPA 8270	30-Aug-04	--	< 0.5	--	
Temephos	µg/L	10	EPA 8270	30-Aug-04	--	< 10	--	
Terbufos	µg/L	0.3	EPA 8270	30-Aug-04	--	< 0.3	--	
Tetrachlorophenol, 2,3,4,6-	µg/L	0.14	Subcontract	17-Sep-04	--	< 0.14	--	
Triallate	µg/L	10	EPA 8270	30-Aug-04	--	< 10	--	
Trichlorophenol 2,4,6-	µg/L	0.1	EPA 8270	30-Aug-04	--	< 0.1	--	
Trichlorophenoxy acetic acid, 2,4,5-	µg/L	10	EPA 8270	30-Aug-04	--	< 10	--	
Trifluralin	µg/L	0.5	EPA 8270	30-Aug-04	--	< 0.5	--	

1 Subcontracted to SGS Lakefield



Greg Clarkin, BSc, C. Chem
Lab Manager - Ottawa District

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APPENDIX « D »

S.O.C.: 80680

REPORT No. B04-29319

Report To:

Hawkesbury, Town of
670 Main St. West
Hawkesbury Ontario K6A 2J3

Caduceon Environmental Laboratories

40 Camelot Drive
Ottawa Ontario K2G 5X8
Tel: 613-228-1145
Fax 613-228-1148

Attention: Richard Guertin

DATE RECEIVED: 24-Nov-04

JOB/PROJECT NO.: Hawkesbury WTP

DATE REPORTED: 20-Dec-04

P.O. NUMBER: -

SAMPLE MATRIX: Drinking Water

WATERWORKS NO. 220002832

Client I.D.:	Raw	Treated	Distribution
Sample I.D.:	B04-29319-1	B04-29319-2	B04-29319-3
Date Collected:	23-Nov-2004	23-Nov-2004	23-Nov-2004

Parameter	Units	M.D.L.	Reference Method	Date Analyzed	Raw	Treated	Distribution
Conductivity	µmho/cm	1	SM 2510	30-Nov-04	107	155	158
Fluoride	mg/L	0.1	EPA 300.0	25-Nov-04	--	< 0.1	0.3
Chloride	mg/L	0.5	EPA 300.0	25-Nov-04	5.0	7.0	8.3
Nitrite (N)	mg/L	0.1	EPA 300.0	25-Nov-04	< 0.1	< 0.1	< 0.1
Nitrate (N)	mg/L	0.1	EPA 300.0	25-Nov-04	0.3	0.3	0.3
Sulphate	mg/L	1	EPA 300.0	25-Nov-04	8	24	24
Aluminum	mg/L	0.01	SM 3120	25-Nov-04	0.18	0.02	0.03
Antimony	mg/L	0.001	SM 3114	25-Nov-04	< 0.001	< 0.001	< 0.001
Arsenic	mg/L	0.001	SM 3114	25-Nov-04	< 0.001	< 0.001	< 0.001
Barium	mg/L	0.001	SM 3120	25-Nov-04	0.018	0.014	0.015
Boron	mg/L	0.005	SM 3120	25-Nov-04	0.010	0.010	0.010
Cadmium	mg/L	0.0001	SM 3113	25-Nov-04	< 0.0001	< 0.0001	< 0.0001
Calcium	mg/L	0.02	SM 3120	25-Nov-04	11.5	18.6	18.2
Chromium	mg/L	0.002	SM 3120	25-Nov-04	< 0.002	< 0.002	< 0.002
Copper	mg/L	0.002	SM 3120	25-Nov-04	0.002	< 0.002	0.003
Iron	mg/L	0.005	SM 3120	25-Nov-04	0.275	0.012	0.033
Lead	mg/L	0.0002	SM 3113	25-Nov-04	< 0.0002	< 0.0002	< 0.0002
Manganese	mg/L	0.001	SM 3120	25-Nov-04	0.015	0.010	0.014
Mercury	mg/L	0.00006	SM 3112	25-Nov-04	< 0.00006	< 0.00006	< 0.00006
Selenium	mg/L	0.001	SM 3114	25-Nov-04	< 0.001	< 0.001	< 0.001
Sodium	mg/L	0.2	SM 3120	25-Nov-04	4.9	5.8	6.1
Uranium	mg/L	0.0001	EPA 200.8	25-Nov-04	0.0001	< 0.0001	< 0.0001
Zinc	mg/L	0.005	SM 3120	25-Nov-04	< 0.005	< 0.005	< 0.005
Ammonia (N)-Total	mg/L	0.01	EPA 350.2	26-Nov-04	0.04	< 0.01	< 0.01
Total Kjeldahl Nitrogen	mg/L	0.05	EPA 351.2	26-Nov-04	0.30	0.09	0.06
Dissolved Organic Carbon	mg/L	0.5	EPA 415.1	29-Nov-04	5.3	2.4	2.5
Phenol	mg/L	0.001	EPA 420.2	25-Nov-04	< 0.001	--	--
Benzene	µg/L	0.5	EPA 8260	24-Nov-04	--	< 0.5	--



Greg Clarkin, BSc., C. Chem
Lab Manager - Ottawa District

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C.O.C.: 80680

REPORT No. B04-29319

Report To:

Hawkesbury, Town of
670 Main St. West
Hawkesbury Ontario K6A 2J3

Attention: Richard Guertin

Caduceon Environmental Laboratories

40 Camelot Drive
Ottawa Ontario K2G 5X8
Tel: 613-228-1145
Fax 613-228-1148

DATE RECEIVED: 24-Nov-04

JOB/PROJECT NO.: Hawkesbury WTP

DATE REPORTED: 20-Dec-04

P.O. NUMBER: -

SAMPLE MATRIX: Drinking Water

WATERWORKS NO. 220002832

Client I.D.:	Raw	Treated	Distribution
Sample I.D.:	B04-29319-1	B04-29319-2	B04-29319-3
Date Collected:	23-Nov-2004	23-Nov-2004	23-Nov-2004

Parameter	Units	M.D.L.	Reference Method	Date Analyzed	Raw	Treated	Distribution
Carbon Tetrachloride	µg/L	0.2	EPA 8260	24-Nov-04	--	< 0.2	--
Dichlorobenzene,1,2-	µg/L	0.1	EPA 8260	24-Nov-04	--	< 0.1	--
Dichlorobenzene,1,4-	µg/L	0.2	EPA 8260	24-Nov-04	--	< 0.2	--
Dichloroethane,1,2-	µg/L	0.1	EPA 8260	24-Nov-04	--	< 0.1	--
Dichloroethene, 1,1-	µg/L	0.1	EPA 8260	24-Nov-04	--	< 0.1	--
Dichloromethane (Methylene Chloride)	µg/L	0.3	EPA 8260	24-Nov-04	--	< 0.3	--
Monochlorobenzene (Chlorobenzene)	µg/L	0.2	EPA 8260	24-Nov-04	--	< 0.2	--
Tetrachloroethylene	µg/L	0.2	EPA 8260	24-Nov-04	--	< 0.2	--
Trichloroethylene	µg/L	0.1	EPA 8260	24-Nov-04	--	< 0.1	--
Vinyl Chloride	µg/L	0.2	EPA 8260	24-Nov-04	--	< 0.2	--
Chloroform	µg/L	0.3	EPA 8260	24-Nov-04	--	--	66.8
Bromodichloromethane	µg/L	0.1	EPA 8260	24-Nov-04	--	--	6.9
Dibromochloromethane	µg/L	0.1	EPA 8260	24-Nov-04	--	--	0.4
Bromoform	µg/L	0.1	EPA 8260	24-Nov-04	--	--	< 0.1
Total Trihalomethanes	µg/L	0.3	EPA 8260	24-Nov-04	--	--	74.2
Dichloroethane-d4,1,2-(SS)	%	10	EPA 8260	24-Nov-04	--	--	105
Toluene-d8 (SS)	%	10	EPA 8260	24-Nov-04	--	--	102
Bromofluorobenzene,4(SS)	%	10	EPA 8260	24-Nov-04	--	--	105
Alachlor	µg/L	0.3	EPA 8270	26-Nov-04	--	< 0.3	--
Aldicarb	µg/L	3	EPA 8270	26-Nov-04	--	< 3	--
Aldrin + Dieldrin	µg/L	0.02	Calc.	29-Nov-04	--	< 0.02	--
Atrazine + Metabolites	µg/L	0.5	Calc.	26-Nov-04	--	< 0.5	--
Azinphos-methyl	µg/L	0.21	Subcontract	09-Dec-04	--	< 0.21 ¹	--
Bendiocarb	µg/L	3	EPA 8270	26-Nov-04	--	< 3	--
Benzo(a)pyrene	µg/L	0.005	EPA 8270	26-Nov-04	--	< 0.005	--
Bromoxynil	µg/L	0.094	Subcontract	13-Dec-04	--	< 0.094 ¹	--
Carbaryl	µg/L	3	EPA 8270	26-Nov-04	--	< 3	--



Greg Clarkin, BSc., C. Chem
Lab Manager - Ottawa District

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C.O.C.: 80680

REPORT No. B04-29319

Report To:

Hawkesbury, Town of
670 Main St. West
Hawkesbury Ontario K6A 2J3
Attention: Richard Guertin

Caduceon Environmental Laboratories
40 Camelot Drive
Ottawa Ontario K2G 5X8
Tel: 613-228-1145
Fax 613-228-1148

DATE RECEIVED: 24-Nov-04
DATE REPORTED: 20-Dec-04
SAMPLE MATRIX: Drinking Water

JOB/PROJECT NO.: Hawkesbury WTP
P.O. NUMBER: -
WATERWORKS NO. 220002832

Client I.D.:	Raw	Treated	Distribution
Sample I.D.:	B04-29319-1	B04-29319-2	B04-29319-3
Date Collected:	23-Nov-2004	23-Nov-2004	23-Nov-2004

Parameter	Units	M.D.L.	Reference Method	Date Analyzed	Raw	Treated	Distribution
Carbofuran	µg/L	1	EPA 8270	26-Nov-04	--	< 1	--
Chlordane (Total)	µg/L	0.04	Calc.	29-Nov-04	--	< 0.04	--
Chlorpyrifos	µg/L	0.5	EPA 8270	26-Nov-04	--	< 0.5	--
Cyanazine	µg/L	0.5	EPA 8270	26-Nov-04	--	< 0.5	--
DDT + Metabolites	µg/L	0.14	Subcontract	09-Dec-04	--	< 0.14	--
Diazinon	µg/L	1	EPA 8270	26-Nov-04	--	< 1	--
Dicamba	µg/L	5	EPA 8270	26-Nov-04	--	< 5	--
Dichlorophenol, 2,4-	µg/L	0.1	EPA 8270	26-Nov-04	--	< 0.1	--
Dichlorophenoxy acetic acid, 2,4- (2,4-D)	µg/L	5	EPA 8270	26-Nov-04	--	< 5	--
Diclofop-methyl	µg/L	0.4	EPA 8270	26-Nov-04	--	< 0.4	--
Dimethoate	µg/L	1	EPA 8270	26-Nov-04	--	< 1	--
Dinoseb	µg/L	0.5	EPA 8270	26-Nov-04	--	< 0.5	--
Diquat	µg/L	5	EPA 549.1	06-Dec-04	--	< 5	--
Diuron	µg/L	5	EPA 8270	26-Nov-04	--	< 5	--
Glyphosate	µg/L	25	EPA 547	06-Dec-04	--	< 25	--
Heptachlor + Heptachlor Epoxide	µg/L	0.1	Calc.	29-Nov-04	--	< 0.1	--
Lindane (total)	µg/L	0.1	EPA 8080	29-Nov-04	--	< 0.1	--
Malathion	µg/L	5	EPA 8270	26-Nov-04	--	< 5	--
Methoxychlor	µg/L	0.1	EPA 8080	29-Nov-04	--	< 0.1	--
Metolachlor	µg/L	3	EPA 8270	26-Nov-04	--	< 3	--
Metribuzin	µg/L	3	EPA 8270	26-Nov-04	--	< 3	--
Paraquat	µg/L	1	EPA 549.1	06-Dec-04	--	< 1	--
Parathion	µg/L	3	EPA 8270	26-Nov-04	--	< 3	--
Pentachlorophenol	µg/L	0.1	EPA 8270	26-Nov-04	--	< 0.1	--
Phorate	µg/L	0.3	EPA 8270	26-Nov-04	--	< 0.3	--
Picloram	µg/L	5	EPA 8270	26-Nov-04	--	< 5	--



Greg Clarkin, BSc., C. Chem
Lab Manager - Ottawa District

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C.O.C.: 80680

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Report To:

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Hawkesbury Ontario K6A 2J3

Attention: Richard Guertin

Caduceon Environmental Laboratories

40 Camelot Drive
Ottawa Ontario K2G 5X8
Tel: 613-228-1145
Fax 613-228-1148

DATE RECEIVED: 24-Nov-04

DATE REPORTED: 20-Dec-04

SAMPLE MATRIX: Drinking Water

JOB/PROJECT NO.: Hawkesbury WTP

P.O. NUMBER: -

WATERWORKS NO. 220002832

Client I.D.:	Raw	Treated	Distribution	
Sample I.D.:	B04-29319-1	B04-29319-2	B04-29319-3	
Date Collected:	23-Nov-2004	23-Nov-2004	23-Nov-2004	

Parameter	Units	M.D.L.	Reference Method	Date Analyzed	Raw	Treated	Distribution	
Poly-Chlorinated Biphenyls (PCB's)	µg/L	0.05	EPA 8080	29-Nov-04	--	< 0.05	--	
Prometryne	µg/L	0.1	EPA 8270	26-Nov-04	--	< 0.1	--	
Simazine	µg/L	0.5	EPA 8270	26-Nov-04	--	< 0.5	--	
Temephos	µg/L	10	EPA 8270	26-Nov-04	--	< 10	--	
Terbufos	µg/L	0.3	EPA 8270	26-Nov-04	--	< 0.3	--	
Tetrachlorophenol, 2,3,4,6-	µg/L	0.1	EPA 8270	26-Nov-04	--	< 0.1	--	
Triallate	µg/L	10	EPA 8270	26-Nov-04	--	< 10	--	
Trichlorophenol 2,4,6-	µg/L	0.1	EPA 8270	26-Nov-04	--	< 0.1	--	
Trichlorophenoxy acetic acid, 2,4,5-	µg/L	10	EPA 8270	26-Nov-04	--	< 10	--	
Trifluralin	µg/L	0.5	EPA 8270	26-Nov-04	--	< 0.5	--	

1. Subcontracted to SGS Lakefield



Greg Clarkin, BSc., C. Chem
Lab Manager - Ottawa District

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APPENDIX « E »

Annual Report

MONTH		CHLORINE				SILICA			LIME		ALUM		FLUOR		
		Monthly (kg)	Dosage (mg/l)	Chateau (kg)	Chateau (mg/l)	Silica (c) (litre)	Alum. (c) (litre)	Dosage SiO ₂ (mg/l)	Lime (c.) (kg)	Dosage (mg/l)	Alum (litre)	Dosage (mg/l)	Fluor(b) (lbs)	Fluor® (kg)	Dosage (mg/l)
JAN	Avg.		2.41					1.17	13.28		56.40	2005		0.93	
	Max		4.55					1.60	18.25		68.82			1.75	
	Min		0.00					0.91	12.81		36.67			0.00	
	Total	800				966	472		4,401.9		37,188	500.0	311.0		
FEV	Avg.		2.70					1.38	12.08		43.24			0.41	
	Max		5.18					1.64	14.38		55.99			1.92	
	Min		1.11					1.10	10.24		29.74			0.00	
	Total	775				1,004	504		3,517.8		24,975	165.0	114.2		
MARS	Avg.		2.84					1.22	12.11		45.25			0.00	
	Max		3.76					1.51	13.81		67.02			0.00	
	Min		1.89					1.06	10.56		31.20			0.00	
	Total	895				960	481		3,806.3		28,189	0.0	0.0		
APRIL	Avg.		2.77					1.25	11.82		66.64			0.00	
	Max		3.79					1.52	13.18		92.46			0.00	
	Min		1.95					1.06	10.56		48.55			0.00	
	Total	810				919	462		3,471.8		29,930	0.0	0.0		
MAY	Avg.		2.57					1.29	10.45		64.88			0.00	
	Max		4.05					2.33	10.80		90.71			0.00	
	Min		0.00					0.82	9.78		35.90			0.00	
	Total	770				970	482		3,185.8		30,064	0.0	0.0		
JUNE	Avg.		3.16					1.09	10.35		37.17			0.00	
	Max		4.03					1.24	10.80		86.66			0.00	
	Min		1.74					0.94	9.31		0.80			0.00	
	Total	1100				953	479		3,602.1		24,861	0.0	0.0		
JULY	Avg.		3.35					0.93	10.59		37.83			0.23	
	Max		7.34					1.16	11.77		48.17			1.03	
	Min		0.90					0.40	9.96		27.37			0.00	
	Total	1162				809	399		3,684.3		25,364	379.1	0.0		
AUGUST	Avg.		3.42					1.04	11.15		101.04			0.25	
	Max		4.65					1.52	11.64		956.26			0.74	
	Min		2.36					0.85	10.60		0.00			0.00	
	Total	1120				854	429		3,665.0		61,182	359.8	0.0		
SEPT.	Avg.		3.16					1.10	12.28		78.16			0.55	
	Max		5.35					1.32	12.76		550.19			0.68	
	Min		1.27					0.88	11.64		0.00			0.38	
	Total	1045				914	454		4,087.7		50,674	834.2	0.0		
OCTO.	Avg.		2.77					0.98	11.66		86.21			0.15	
	Max		4.26					2.59	12.76		709.24			0.38	
	Min		1.71					0.27	11.02		0.00			0.00	
	Total	890				791	393		3,811.1		53,763	225.9	0.0		
NOV.	Avg.		2.82					1.26	11.40		130.54			0.26	
	Max		4.28					2.18	12.02		1037.58			0.63	
	Min		1.44					0.90	9.91		0.00			0.00	
	Total	880				989	0		3,581.8		81,946	367.6	0.0		
DEC.	Avg.		2.72					1.44	12.31		52.30			0.36	
	Max		3.80					2.31	13.10		63.50			1.15	
	Min		1.81					1.12	11.85		25.42			0.00	
	Total	810				1,079	532		3,655.8		30,163	489.7	88.2		
	Avg.		2.89					1.18	11.62		66.64			0.26	
	Max		7.34					2.59	18.25		1037.58			1.92	
	Min		0.00					0.27	9.31		0.00			0.00	
	Total	11057		0.0		11,208	5,088		44,471		478,299	3,321	513		