ARCHIVED

MUNICIPAL WATER QUALITY REPORTS

CHESTERVILLE WATER

2002

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Chesterville Hub
5 Industrial Drive, P.O. Box 460
Chesterville, Ontario K0C 1H0
Tel: (613) 448-3098
Fax: (613) 448-1616
www.ocwa.com

Fax

To MOE MOT

Company

Fax Number 268-6061 933-7930

From Dave Markell

Date Oct 24/02

Number of Pages 4 **(including this page)**

Subject Adverse Water.

Chesterville Well #5
Work's # 210000728
As you will see on the attached Cert of Analysis the raw water @ well 5 contained no E.C. T.C or Background.

Ontario Ministry of the Environment / Ministère de l'Environnement

Notice of Drinking Water Analysis and Remedial Actions for Waterworks as Required under Drinking Water Protection Regulation

In accordance with the Drinking Water Protection Regulation, Laboratories and Water Works Owners must immediately provide oral notification to the MOE Spills Action Centre (SAC) at 1-800-268-6060 or 1-416-325-3000 and the local Medical Officer of Health (MOH) of indicators of adverse drinking water quality and exceedances of standards as outlined in the Regulation and remedial actions taken. Further, within 24 hours of the oral notification, the party shall provide written notification on this completed form by Fax to the Spills Action Centre at 1-800-268-6061 or 1-416-325-3011 and the local Medical Officer of Health. Failure to notify these parties in accordance with the Regulation constitutes an offence under the Act. A copy of this form may be acquired through the Ministry of the Environment (MOE) public web site (www.ene.gov.on.ca) or by contacting any MOE office.

PART 1 – NOTIFICATION BY LABORATORY

Indicators of Adverse Water Quality ☒	Phys/Chem ☐ Exceeds MAC ☐ Exceeds IMAC	Radiological ☐ Exceeds IMAC	CofA/Order ☐ Exceeds Limit

ORAL NOTIFICATION to SPILLS ACTION CENTRE by LABORATORY

Date: OCT 24/02 Time: 3:40 P.M. By: KRYSTYNA PIPIN

Laboratory Name: CADUCEON ENV. LABS	Laboratory Emergency Contact Name KRYSTYNA PIPIN
Address 2378 HOLLY LANE OTTAWA	Position SUPERVISOR
Email address	Phone # 613 526-0123 Fax # 613 526-1244
Waterworks Name CHESTERVILLE	Waterworks Emergency Contact
Works # 210000728	Name DAVE MARKELL
Location CHESTERVILLE	Position OPERATOR
Email Address	Phone # 613 448-3098 Fax # 448-1616
NOTIFICATION OF WATER WORKS OWNER	**NOTIFICATION OF LOCAL MEDICAL OFFICER OF HEALTH**
Person Contacted DAVE MARKELL	Person Contacted IDALIA
Position OPERATOR	Position SPECIAL PROJECTS
Date OCT 24 02 Time 3:35 P.M.	Date OCT 24 02 Time 3:35

Laboratory Written Notification Prepared by: (Lab Results must be attached using Part 3 of form) Name (please print) KRYSTYNA PIPIN

Signature K. Pipin Date OCT 24/02

PART 2 - NOTIFICATION BY WATER WORKS OWNER

Indicators of Adverse Water Quality ☒	Phys/Chem ☐ Exceeds MAC ☐ Exceeds IMAC	Radiological ☐ Exceeds IMAC	CofA/Order ☐ Exceeds Limit

☐ *This notification is for operational problems identified at the waterworks; there is no Laboratory notification associated with this report*

SPILLS ACTION CENTRE ORAL NOTIFICATION BY OWNER	**WATERWORKS EMERGENCY CONTACT**
Date Oct 24/02 Time 3:35	Name Dave Markell
Waterworks Name Chesterville	Position Process Tech.
Works # 210000728	Phone # 613-448-3098 Fax # 613-448-1616
Works Person Providing Oral Notification Dave Markell	
MEDICAL OFFICER OF HEALTH ORAL NOTIFICATION BY OWNER	**REMEDIAL ACTIONS TAKEN BY OWNER:**
Date Oct. 24/02 Time 3:34	Resampling Initiated ☒ Yes ☐ No
Person Contacted Idalia.	Increase Chlorine Dose ☐ Yes ☐ No
Position Special Projects	Flushing Mains ☐ Yes ☐ No
Phone # 1-800-267-7120 Fax # 933-7930	Other Actions Taken ☐ Yes ☐ No
Works Person Providing Oral Notification Dave Markell	Describe:
	Other information attached ☒

Water Works Written Notification Prepared by: Name (please print) Dave Markell

Signature Dave Markell Date Oct. 24/02

For Ministry Use Only: **Occurrence Report #:**

1402-047 (07/00)

Ontario Ministry of the Environment / Ministère de l'Environnement

PART 3:

ADVERSE ANALYTICAL RESULTS - For Indicators Listed in SCHEDULE 6 - Drinking Water Protection Regulation

Microbiological Testing

Laboratory Sample ID No.	Sample Field ID No.	Date/Time Collected (M/D/Y) (a.m. / p.m.)	Sample Type / Location	Membrane Filtration Count/100ml			P-A/100ml Presumptive/ Confirmed (if applicable)	HPC/ 1ml	Date of Analysis (M/D/Y)
				Total Coliforms	Back-ground	E.coli/ Fecal C.			
220011474	—	10/21/02	TREATED WATER	ABSENT	—	ABSENT	—	06	10/22/02

ADVERSE ANALYTICAL RESULTS - For Parameters Listed in SCHEDULE 4 and 5 or in a C of A or Order Drinking Water Protection Regulation

Physical/Chemical/Radiological Testing

Laboratory Sample ID No.	Sample Field ID No.	Date/Time Collected (M/D/Y) (a.m. / p.m.)	Sample Type/ Location	Parameter	Result	Unit	MAC/ IMAC	Date of Analysis (M/D/Y)

Laboratory Results Authorized by: KRYSTYNA PIPIN **Authorization Date:** OCT 24/02

For Ministry Use Only: **Occurrence Report #:**

1402-047 (07/00)

Caduceon Environmental Laboratories

Division of Caduceon Enterprises Inc.

Certificate of Analysis

Client:
Ontario Clean Water Agency
5 Industrial Dr.
Chesterville, ON
K0C 1H0

Attention: **Dave Markell**

Report: **220011474**
Project: Chesterville WTP
Date Sampled: October 21, 2002
Date Received: October 22, 2002
Date Printed: October 24, 2002
Matrix: Drinking Water

Parameter	Background	E. coli	Free Cl2	HPC	TC	Total Cl2
Unit	/100mL	/100mL	mg/L	/mL	/100mL	mg/L
MDL	1	1	0.05	2	1	0.05
Sample ID						
Well #5 Raw	absent	absent			absent	
Well #5 Treated		absent	1.00	OG	absent	1.20
Dist. Public School		absent	0.90	2	absent	1.00
Dist. MacEwen Gas Bar		absent	1.10		absent	1.20
Dist. 5 Industrial Dr.		absent	1.20		absent	1.30

OG - Over Grown

Caduceon Environmental Laboratories
2378 Holly Lane, Ottawa, Ontario, K1V 7P1, Canada
Tel: (613)526-0123, Fax: (613)526-1244

For Michael Ziebell, General Manager

HP OfficeJet K Series K80
Personal Printer/Fax/Copier/Scanner

Log for
OCWA
613 448-1616
Oct 24 2002 4:44pm

Last Transaction

Date	Time	Type	Identification	Duration	Pages	Result
Oct 24	4:43pm	Fax Sent	18002686061	0:57	4	OK

HP OfficeJet K Series K80
Personal Printer/Fax/Copier/Scanner

Log for
OCWA
613 448-1616
Oct 24 2002 4:48pm

Last Transaction

Date	Time	Type	Identification	Duration	Pages	Result
Oct 24	4:45pm	Fax Sent	16139337930	2:55	4	OK

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Chesterville Hub
5 Industrial Drive, P.O. Box 460
Chesterville, Ontario K0C 1H0
Tel: (613) 448-3098
Fax: (613) 448-1616
www.ocwa.com

Fax

To Cindy

Company OCWA

Fax Number 1-613-962-1966

From Dave Markell

Date Oct 25/02

Number of Pages 7 **(including this page)**

Subject Adverse Water

Chesterville Treated.

This one was overgrown with mold too.

HP OfficeJet K Series K80
Personal Printer/Fax/Copier/Scanner

Log for
OCWA
613 448-1616
Oct 25 2002 12:15pm

Last Transaction

Date	Time	Type	Identification	Duration	Pages	Result
Oct 25	12:13pm	Fax Sent	16139621966	2:01	7	OK

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Chesterville Hub
5 Industrial Drive, P.O. Box 460
Chesterville, Ontario K0C 1H0
Tel: (613) 448-3098
Fax: (613) 448-1616
www.ocwa.com

Fax

To MOE Mott

Company

Fax Number 800-268-6061 933-7930

From Dave Markell

Date Oct. 10/02

Number of Pages 4 **(including this page)**

Subject Adverse Water Chesterville.

- Works # 210000728
- Overgrown HPC @ Nestle's Lagoon Lab.
- Resampling Initiated as per Standards.
- Clg resid at site at the time of the sample 0.0 Free 0.0 Total

Ontario Ministry of the Environment / Ministère de l'Environnement

Notice of Drinking Water Analysis and Remedial Actions for Waterworks as Required under Drinking Water Protection Regulation

In accordance with the Drinking Water Protection Regulation, Laboratories and Water Works Owners must immediately provide oral notification to the MOE Spills Action Centre (SAC) at 1-800-268-6060 or 1-416-325-3000 and the local Medical Officer of Health (MOH) of indicators of adverse drinking water quality and exceedances of standards as outlined in the Regulation and remedial actions taken. Further, within 24 hours of the oral notification, the party shall provide written notification on this completed form by Fax to the Spills Action Centre at 1-800-268-6061 or 1-416-325-3011 and the local Medical Officer of Health. Failure to notify these parties in accordance with the Regulation constitutes an offence under the Act. A copy of this form may be acquired through the Ministry of the Environment (MOE) public web site (www.ene.gov.on.ca) or by contacting any MOE office.

PART 1 – NOTIFICATION BY LABORATORY

Indicators of Adverse Water Quality ☑	**Phys/Chem** ☐ **Exceeds MAC** ☐ **Exceeds IMAC**	**Radiological** ☐ **Exceeds IMAC**	**CofA/Order** ☐ **Exceeds Limit**

ORAL NOTIFICATION to SPILLS ACTION CENTRE by LABORATORY

Date: Oct 10/02 Time: 1:57 P.M. By: KRYSTYNA PIPIN

Laboratory Name: CADUCEON ENV. LABS.	Laboratory Emergency Contact Name: KRYSTYNA PIPIN
Address: 2378 HOLLY LANE OTTAWA	Position: SUPERVISOR
Email address:	Phone # 613 526-0123 Fax # 613 526-1244
Waterworks Name: CHESTERVILLE WELL SUPPLY	Waterworks Emergency Contact
Works # 210000728	Name: DAVE MARKELL
Location: LOT 12 CONC. #5 HWY 43 CHESTERVILLE	Position: PROCESS TECHNICIAN
Email Address:	Phone # 613 448-3098 Fax # 613 448-1616
NOTIFICATION OF WATER WORKS OWNER	**NOTIFICATION OF LOCAL MEDICAL OFFICER OF HEALTH**
Person Contacted: DAVE MARKELL	Person Contacted: IDALIA
Position: PROCESS TECHN.	Position: SPECIAL PROJECTS
Date: Oct 10/02 Time: 1:50 P.M.	Date: Oct 10/02 Time: 1:55 P.M.

Laboratory Written Notification Prepared by: (Lab Results must be attached using Part 3 of form) Name (please print): KRYSTYNA

Signature: K. Pipin Date: Oct 10/02

PART 2 - NOTIFICATION BY WATER WORKS OWNER

Indicators of Adverse Water Quality ☒	**Phys/Chem** ☐ **Exceeds MAC** ☐ **Exceeds IMAC**	**Radiological** ☐ **Exceeds IMAC**	**CofA/Order** ☐ **Exceeds Limit**

☐ *This notification is for operational problems identified at the waterworks; there is no Laboratory notification associated with this report*

SPILLS ACTION CENTRE ORAL NOTIFICATION BY OWNER

Date: Oct. 10/02 Time: 2:55

Waterworks Name: Chesterville

Works #: 210000728

Works Person Providing Oral Notification: Dave Markell

MEDICAL OFFICER OF HEALTH ORAL NOTIFICATION BY OWNER

Date: Oct. 10/02 Time: 2:50

Person Contacted: Adalia

Position: special projects

Phone # 900 267-7100 Fax # 933 7930

Works Person Providing Oral Notification: Dave Markell

WATERWORKS EMERGENCY CONTACT

Name: Dave Markell

Position: Process Tech

Phone # 613-448-3098 Fax # 448-1616

REMEDIAL ACTIONS TAKEN BY OWNER:

Resampling Initiated	☒ Yes	☐ No
Increase Chlorine Dose	☐ Yes	☐ No
Flushing Mains	☐ Yes	☐ No
Other Actions Taken	☐ Yes	☐ No

Describe:

Other information attached ☒

Water Works Written Notification Prepared by: Name (please print): Dave Markell

Signature: Dave Markell Date: Oct 10/02

For Ministry Use Only: **Occurrence Report #:**

1402-047 (07/00)

Page _____ of _____

Ontario Ministry of the Environment / Ministère de l'Environnement

PART 3:

ADVERSE ANALYTICAL RESULTS - For Indicators Listed in SCHEDULE 6 - Drinking Water Protection Regulation

Microbiological Testing

Laboratory Sample ID No.	Sample Field ID No.	Date/Time Collected (M/D/Y) (a.m. p.m.)	Sample Type / Location	Membrane Filtration Count/100ml			P-A/100ml Presumptive/ Confirmed (if applicable)	HPC/ 1ml	Date of Analysis (M/D/Y)
				Total Coliforms	Back-ground	E.coli/ Fecal C.			
220010886	CW-03	10/7/02		ABSENT	—	ABSENT	—	OCT	10/08/02

ADVERSE ANALYTICAL RESULTS - For Parameters Listed in SCHEDULE 4 and 5 or in a C of A or Order Drinking Water Protection Regulation

Physical/Chemical/Radiological Testing

Laboratory Sample ID No.	Sample Field ID No.	Date/Time Collected (M/D/Y) (a.m. p.m.)	Sample Type/ Location	Parameter	Result	Unit	MAC/ IMAC	Date of Analysis (M/D/Y)

Laboratory Results Authorized by: KRISTYN IX PIPIN **Authorization Date:** OCT 10/02

For Ministry Use Only: **Occurrence Report #:**

1402-047 (07/00)

Caduceon Environmental Laboratories

Division of Caduceon Enterprises Inc.

Certificate of Analysis

Client:
Ontario Clean Water Agency
5 Industrial Dr.
Chesterville, ON
K0C 1H0

Attention: Dave Markell

Report:	220010886
Project:	Chesterville WTP
Date Sampled:	October 7, 2002
Date Received:	October 8, 2002
Date Printed:	October 10, 2002
Matrix:	Drinking Water

Parameter	Unit	MDL	Sample Identification				
			Well #5 Raw	Well #5 Treated	Nestle Lagoons Lab	St-Mary's School	37 Joseph St.
Total Chlorine	mg/L	0.05		1.40	0.80	1.20	1.10
Free Chlorine	mg/L	0.05		1.30	0.80	1.20	1.10
E. coli	/100mL	1	absent	absent	absent	absent	absent
HPC	/mL	2		absent	OG		
Background bacteria	/100mL	1	absent				
Total Coliforms	/100mL	1	absent	absent	absent	absent	absent

OG - Overgrown

Caduceon Environmental Laboratories
2378 Holly Lane, Ottawa, Ontario, K1V 7P1, Canada
Tel: (613)526-0123, Fax: (613)526-1244

Michael Ziebell, General Manager

HP OfficeJet K Series K80
Personal Printer/Fax/Copier/Scanner

Log for
OCWA
613 448-1616
Oct 10 2002 3:39pm

Last Transaction

Date	Time	Type	Identification	Duration	Pages	Result
Oct 10	3:38pm	Fax Sent	18002686061	0:58	4	OK

HP OfficeJet K Series K80
Personal Printer/Fax/Copier/Scanner

Log for
OCWA
613 448-1616
Oct 10 2002 3:37pm

Last Transaction

Date	Time	Type	Identification	Duration	Pages	Result
Oct 10	3:34pm	Fax Sent	16139337930	2:55	4	OK

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Chesterville Hub
5 Industrial Drive, P.O. Box 460
Chesterville, Ontario K0C 1H0
Tel: (613) 448-3098
Fax: (613) 448-1616
www.ocwa.com

Fax

To MOH MOE

Company

Fax Number 933-7930 268-6061

From Dave Martell

Date

Number of Pages 3 **(including this page)**

Subject Turbidity Exceedances.

Fire pump exercised during dist system flushing.

Ontario Ministry of the Environment / Ministère de l'Environnement

Notice of Drinking Water Analysis and Remedial Actions for Waterworks as Required under Drinking Water Protection Regulation

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PART 1 – NOTIFICATION BY LABORATORY

Indicators of Adverse Water Quality ☐	**Phys/Chem** ☐ **Exceeds MAC** ☐ **Exceeds IMAC**	**Radiological** ☐ **Exceeds IMAC**	**CofA/Order** ☐ **Exceeds Limit**

ORAL NOTIFICATION to SPILLS ACTION CENTRE by LABORATORY

Date: Time: By:

Laboratory Name:	**Laboratory Emergency Contact Name**
Address	Position
Email address	Phone # Fax #
Waterworks Name	**Waterworks Emergency Contact**
Works #	Name
Location	Position
Email Address	Phone # Fax #
NOTIFICATION OF WATER WORKS OWNER	**NOTIFICATION OF LOCAL MEDICAL OFFICER OF HEALTH**
Person Contacted	Person Contacted
Position	Position
Date Time	Date Time

Laboratory Written Notification Prepared by: Name (please print)
(Lab Results must be attached using Part 3 of form)

Signature | Date

PART 2 - NOTIFICATION BY WATER WORKS OWNER

Indicators of Adverse Water Quality ☑	**Phys/Chem** ☐ **Exceeds MAC** ☐ **Exceeds IMAC**	**Radiological** ☐ **Exceeds IMAC**	**CofA/Order** ☐ **Exceeds Limit**

☐ *This notification is for operational problems identified at the waterworks; there is no Laboratory notification associated with this report*

SPILLS ACTION CENTRE ORAL NOTIFICATION BY OWNER	**WATERWORKS EMERGENCY CONTACT**
Date May 24/02 Time 2:25	Name D. Markell
Waterworks Name Chesterville	Position Tech
Works # 210000723	Phone # 613-448-3058 Fax # 448-1616
Works Person Providing Oral Notification Dave Markell	
MEDICAL OFFICER OF HEALTH ORAL NOTIFICATION BY OWNER	**REMEDIAL ACTIONS TAKEN BY OWNER:**
Date May 24/02 Time 2:20	Resampling Initiated ☐ Yes ☐ No
Person Contacted Adalia	Increase Chlorine Dose ☑ Yes ☐ No
Position Environmental (Special Projects)	Flushing Mains ☐ Yes ☒ No
Phone # 800-267-7100 Fax # 933-7930	Other Actions Taken ☐ Yes ☐ No
Works Person Providing Oral Notification	Describe:
	Other information attached ☑

Water Works Written Notification Prepared by: Name (please print)

Signature Dave Markell | Date May 24/02

For Ministry Use Only: **Occurrence Report #:**

Ontario Ministry of the Environment / Ministère de l'Environnement

PART 3:

ADVERSE ANALYTICAL RESULTS - For Indicators Listed in SCHEDULE 6 - Drinking Water Protection Regulation

Microbiological Testing

Laboratory Sample ID No.	Sample Field ID No.	Date/Time Collected (M/D/Y) (a.m. p.m.)	Sample Type / Location	Membrane Filtration Count/100ml			P-A/100ml Presumptive/ Confirmed (if applicable)	HPC/ 1ml	Date of Analysis (M/D/Y)
				Total Coliforms	Back-ground	E.coli/ Fecal C.			

ADVERSE ANALYTICAL RESULTS - For Parameters Listed in SCHEDULE 4 and 5 or in a C of A or Order Drinking Water Protection Regulation

Physical/Chemical/Radiological Testing

Flushing System. Fire Pump started.

Laboratory Sample ID No.	Sample Field ID No.	Date/Time Collected (M/D/Y) (a.m. p.m.)	Sample Type/ Location	Parameter	Result	Unit	MAC/ IMAC	Date of Analysis (M/D/Y)
			Continuous	Turbidity	5.2	NTU	IMAC	May 24/02

Laboratory Results Authorized by: **Authorization Date:**

For Ministry Use Only: **Occurrence Report #:**

TRANSMISSION VERIFICATION REPORT

TIME : 05/24/2002 14:44

DATE,TIME	05/24 14:42
FAX NO. NAME	18002686061
DURATION	00:01:27
PAGE(S)	03
RESULT	OK
MODE	STANDARD ECM

TRANSMISSION VERIFICATION REPORT

TIME : 05/24/2002 14:46

DATE,TIME	05/24 14:44
FAX NO./NAME	16139337930
DURATION	00:01:23
PAGE(S)	03
RESULT	OK
MODE	STANDARD ECM

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Chesterville Hub
5 Industrial Drive, P.O. Box 460
Chesterville, Ontario K0C 1H0
Tel: (613) 448-3098
Fax: (613) 448-1516
www.ocwa.com

Fax

To _____

Company M.O.H. SAC.

Fax Number 613-933-7930 1 800 268 6061

From TONY KELLY

Date MAY 19 2002

Number of Pages 4 (including this page)

Subject TURBIDITY EXCEEDENCE'S ON PUMP STARTS.

Ontario Ministry of the Environment / Ministère de l'Environnement

Notice of Drinking Water Analysis and Remedial Actions for Waterworks as Required under Drinking Water Protection Regulation

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PART 1 – NOTIFICATION BY LABORATORY

Indicators of Adverse Water Quality ☐	Phys/Chem	☐ Exceeds MAC ☐ Exceeds IMAC	Radiological	☐ Exceeds IMAC	
			Coli/Coliform	☐ Exceeds Limit	

ORAL NOTIFICATION to SPILLS ACTION CENTRE by LABORATORY

Date: Time:	By
Laboratory Name:	Laboratory Emergency Contact Name
Address	Position
Email address	Phone # Fax #
Waterworks Name	Waterworks Emergency Contact
Works #	Name
Location	Position
Email Address	Phone # Fax #
NOTIFICATION OF WATER WORKS OWNER	**NOTIFICATION OF LOCAL MEDICAL OFFICER OF HEALTH**
Person Contacted	Person Contacted
Position	Position
Date Time	Date Time

Laboratory Written Notification Prepared by: Name (please print)
(Lab Results must be attached using Part 3 of form)

Signature | Date

PART 2 - NOTIFICATION BY WATER WORKS OWNER

Indicators of Adverse Water Quality ☑	Phys/Chem	☐ Exceeds MAC ☐ Exceeds IMAC	Radiological	☐ Exceeds IMAC	
			Coli/Coliform	☐ Exceeds Limit	

☑ *This notification is for operational problems identified at the waterworks; there is no Laboratory notification associated with this occasion*

SPILLS ACTION CENTRE ORAL NOTIFICATION BY OWNER	**WATERWORKS EMERGENCY CONTACT**
Date MAY 19/02 Time 1200	Name [redacted] TONY KELLY
Waterworks Name [redacted] Water CHESTERVILLE	Position Mechanic/Operator
Works # [redacted] KIRSTON	Phone # (613) 448-3088 Fax # (613) 448-1616
Works Person Providing Oral Notification [redacted] TONY KELLY	
MEDICAL OFFICER OF HEALTH ORAL NOTIFICATION BY OWNER	**REMEDIAL ACTIONS TAKEN BY OWNER**
Date MAY 19/02 Time 12:15	Resampling Initiated ☐ Yes ☐ No
Person Contacted MELISSA	Increase Chlorine Dose ☐ Yes ☐ No
Position SSR	Flushing Mains ☐ Yes ☐ No
Phone # 1800 267-7120 Fax # 613-933-7930	Other Actions Taken ☐ Yes ☐ No
Works Person Providing Oral Notification [redacted] TONY KELLY	Describe: Momentary turbidity spike during pump startup. Attributed to oxidized iron and entrained air.
	Other information attached ☐

Water Works Written Notification Prepared by: Name (please print) [redacted] TONY KELLY

Signature T. Kelly Date May 19/02

For Ministry Use Only: Occurrence Report #:

1402-047 (07/00)

O.C.W.A. CHESTERVILLE

Pump Start-up Turbidity Spikes

	Date	Time	Duration over 0	Max.
Moose Creek Reservoir	May 18	04:34	4	4.3 NTU
	May 19	09:34	5	4.9 NTU
Chesterville Well #5	May 17	1802	1	1.2 NTU.

TRANSMISSION VERIFICATION REPORT

TIME : 05/19/2002 12:26
NAME : ONT.CLEAN WATER
FAX : 613-925 0555
TEL : 613-925-0915

DATE,TIME	05/19 12:24
FAX NO./NAME	16139337930
DURATION	00:02:13
PAGE(S)	04
RESULT	OK
MODE	STANDARD

TRANSMISSION VERIFICATION REPORT

TIME : 05/19/2002 12:29
NAME : ONT.CLEAN WATER
FAX : 613-925-0555
TEL : 613-925-5115

DATE,TIME	05/19 12:27
FAX NO./NAME	18002636061
DURATION	00:02:12
PAGE(S)	04
RESULT	OK
MODE	STANDARD ECM

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Chesterville Hub
5 Industrial Drive, P.O. Box 460
Chesterville, Ontario K0C 1H0
Tel: (613) 448-3098
Fax: (613) 448-1616
www.ocwa.com

Fax

To IRENE

Company M O H

Fax Number 1-613- ~~~~ 933-7930

From Dave

Date FEB 21/02

Number of Pages 5 **(including this page)**

Subject Please find attached

lab sheets from Moose Creek, Finch, Chesterville and Winchester Wells # 1, 5 & 6.
These are as a required follow-up to notifications of adverse water (Sodium over 20 ms/L) FEB 7/02.

any questions please call Dave

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Chesterville Hub
5 Industrial Drive,
Chesterville, Ontario K0C 1H0
Tel: (613) 448-3098
Fax: (613) 448-1616
bhenderson@ocwa.com

Fax

To	Jeff Columbus
Company	Ministry of Environment
Fax Number	(613) 933-6402
From	Blair Henderson
Date	February 21, 2002
Number of Pages	1 **(including this page)**
Subject	**Winchester Water and Chesterville Water - Sodium Exceedance**

As a follow up to notification of sodium exceedance dated February 7, 2002, as per ODWR, all sites have been resampled and the results are as follows.

Winchester Well # 1 - 122.0 mg/Litre
Winchester Well # 5 - 45.0 mg/Litre
Winchester Well # 6 - 20.0 mg/Litre
Chesterville Well # 5 - 26.0 mg/Litre

These results have been forwarded to the Ministry of Health.

These results are consistent with historic sodium results.

ACCUTEST LABORATORIES LTD.

REPORT OF ANALYSIS

Client: CHESTERVILLE WELL SUPPLY

ATT: Mr. Blair Henderson

Report Number: 2201832
Date: 2002-02-20
Date Submitted: 2002-02-14
Project: Chesterville Wells Resample
P.O. Number:
Matrix: Supply Water

		LAB ID:	169943				
		Sample Date:	2002-02-13				
		Sample ID:	CW-01				
PARAMETER	**UNITS**	**MDL**	TREATEDWATER				
Na	mg/L	2	26				

MDL = Method Detection Limit INC = Incomplete
Comment:

APPROVAL:

8-146 Colonnade Road, Ottawa, ON, K2E 7Y1

608 Norris Court, Kingston, ON, K7P 2R9

TRANSMISSION VERIFICATION REPORT

TIME : 02/21/2002 13:47

DATE,TIME	02/21 13:45
FAX NO./NAME	16139337930
DURATION	00:02:05
PAGE(S)	05
RESULT	OK
MODE	STANDARD

Accutest Laboratories Ltd. 146 Colonnade Rd., Unit 8, Nepean, Ontario, K2E 7Y1 www.accutestlabs.com

ACCUTEST FAX

Date: **February 7, 2002**

Number of pages including cover sheet: 15

To:

Blair Henderson
OCWA Chesterville

Phone: 613-448-3098
Fax phone: 613-448-1616
CC:

From:

Kristina Hay
QA/QC Coordinator

Phone: 613-727-5692
Fax phone: 613-727-5222
e-mail: khay@accutestlabs.com

REMARKS ☐ Urgent ☐ For your review ☐ Reply ASAP ☐ Please comment
Originals to follow: ☐ YES ☐ NO **VIA:** ☐ Mail ☐ Courier

Your Reference: Na ODWS Exceedances **Our Reference:**

Mr. Henderson,

This is a notice of adverse Na results for the Winchester, Finch, Moose Creek and Chesterville Well Supplies I have attached a preliminary copy of the reports as well as Part 1 and 3 of the MOE Notice of Drinking Water Analysis form.

Please contact me if you have any questions.

Best regards,

Kristina Hay

Kristina Hay

ACCUTEST LABORATORIES LTD.

Report of Analysis

Client: CHESTERVILLE WELL SUPPLY
5 Industrial Drive
Chesterville, ON
K0C 1H0

Attention: Mr. Blair Henderson

Report Number: 2201008
Date Reported:
Date Submitted: 2002-01-29
Date Collected 2002-01-28
Project: Chesterville Wells
Quarterly Chemicals

P.O. Number:
Matrix Supply Water

PARAMETER	UNITS	MDL	167758 CW-05
Alkalinity as CaCO3	mg/L	5	200
Ca	mg/L	1	63
Cl	mg/L	1	39
Colour	TCU	2	<2
Conductivity	uS/cm	5	578
DOC	mg/L	0.5	<0.5
F	mg/L	0.10	0.15
Fe	mg/L	0.01	<0.01
Hardness as CaCO3	mg/L	1	256
Mg	mg/L	1	24
N-NH3	mg/L	0.02	<0.02
N-NH3 (unionized)	mg/L	0.02	<0.02
Na	mg/L	2	23
pH			7.93
SO4	mg/L	1	53
Total Kjeldahl Nitrogen	mg/L	0.05	<0.05

MDL = METHOD DETECTION LIMIT
Comment:

APPROVAL:

Ontario Ministry of the Environment / Ministère de l'Environnement

Notice of Drinking Water Analysis and Remedial Actions for Waterworks as Required under Drinking Water Protection Regulation

In accordance with the Drinking Water Protection Regulation, Laboratories and Water Works Owners must immediately provide oral notification to the MOE Spills Action Centre (SAC) at 1-800-268-6060 or 1-416-325-3000 and the local Medical Officer of Health (MOH) of indicators of adverse drinking water quality and exceedances of standards as outlined in the Regulation and remedial actions taken. Further, within 24 hours of the oral notification, the party shall provide written notification on this completed form by Fax to the Spills Action Centre at 1-800-268-6061 or 1-416-325-3011 and the local Medical Officer of Health. Failure to notify these parties in accordance with the Regulation constitutes an offence under the Act. A copy of this form may be acquired through the Ministry of the Environment (MOE) public web site (www.ene.gov.on.ca) or by contacting any MOE office.

PART 1 – NOTIFICATION BY LABORATORY

Indicators of Adverse Water Quality ☑	Phys/Chem ☐ Exceeds MAC ☐ Exceeds IMAC	Radiological ☐ Exceeds IMAC	CofA/Order ☐ Exceeds Limit

ORAL NOTIFICATION to SPILLS ACTION CENTRE by LABORATORY

Date: Feb 7, 2002 Time: 420 pm By: Kristina Hay

Laboratory Name: Accutest Laboratories Ltd.	Laboratory Emergency Contact Name: Peter Haulena
Address: 146 Colonnade Rd., Unit 8, Nepean, ON K2E 7Y1	Position: Analytical Services Manager
Email address: info@accutestlabs.com	Phone #: (613) 727-5692 Fax #: (613) 727-5222
Waterworks Name: Chesterville Well Supply	Waterworks Emergency Contact
Works #: 210000728	Name: Blair Henderson
Location	Position: Operator
Email Address	Phone #: (613)448-3098 Fax #: (613)448-1616
NOTIFICATION OF WATER WORKS OWNER	**NOTIFICATION OF LOCAL MEDICAL OFFICER OF HEALTH**
Person Contacted: Blair Henderson	Person Contacted: Irene Marchand.
Position: Operator.	Position: Hdnrn.
Date: Feb 7 2002. Time: 315 pm.	Date: Feb 7, 2002 Time: 406 pm.

Laboratory Written Notification Prepared by: (Lab Results must be attached using Part 3 of form) Name (please print): Kristina Hay

Signature: Kristina Hay. Date: Feb 7, 2002.

PART 2 - NOTIFICATION BY WATER WORKS OWNER

Indicators of Adverse Water Quality ☑	Phys/Chem ☐ Exceeds MAC ☐ Exceeds IMAC	Radiological ☐ Exceeds IMAC	CofA/Order ☐ Exceeds Limit

☐ *This notification is for operational problems identified at the waterworks; there is no Laboratory notification associated with this report*

SPILLS ACTION CENTRE ORAL NOTIFICATION BY OWNER	**WATERWORKS EMERGENCY CONTACT**
Date: FEB 7/02 Time: 16:16	Name: Blair Henderson
Waterworks Name: Chesterville Well	Position: OPS Manager
Works #: 210000728	Phone #: 613-448-3098 Fax #: 613-448-1616
Works Person Providing Oral Notification: Blair Henderson	
MEDICAL OFFICER OF HEALTH ORAL NOTIFICATION BY OWNER	**REMEDIAL ACTIONS TAKEN BY OWNER:**
Date: FEB 7/02 Time: 16:25	Resampling Initiated ☑ Yes ☐ No
Person Contacted: Claudette	Increase Chlorine Dose ☐ Yes ☑ No
Position: Receptionist	Flushing Mains ☐ Yes ☑ No
Phone #: 613-933-1375 Fax #: 613-933-7930	Other Actions Taken ☐ Yes ☑ No
Works Person Providing Oral Notification: Dave Markell	Describe:
	Other information attached ☑

Water Works Written Notification Prepared by: Name (please print): Dave Markell

Signature: Dave Markell Date: Feb 7/02

For Ministry Use Only: Occurrence Report #:

(402.047 (07.00)

Ontario Ministry of the Environment / Ministère de l'Environnement

PART 3:

ADVERSE ANALYTICAL RESULTS - For Indicators Listed in SCHEDULE 6 - Drinking Water Protection Regulation

Microbiological Testing

Laboratory Sample ID No.	Sample Field ID No.	Date/Time Collected (M/D/Y) (a.m. p.m.)	Sample Type / Location	Membrane Filtration Count/100ml			P-A/100ml Presumptive/ Confirmed (if applicable)	HPC/ 1ml	Date of Analysis (M/D/Y)
				Total Coliforms	Back-ground	E.coli/ Fecal C.			

ADVERSE ANALYTICAL RESULTS - For Parameters Listed in SCHEDULE 4 and 5 or in a C of A or Order Drinking Water Protection Regulation

Physical/Chemical/Radiological Testing

Laboratory Sample ID No.	Sample Field ID No.	Date/Time Collected (M/D/Y) (a.m. p.m.)	Sample Type/ Location	Parameter	Result	Unit	MAC/ IMAC (per Sched 6)	Date of Analysis (M/D/Y)
167758		01/28/02 1300	CW-05	Na	23	mg/L	20	02/07/02

Laboratory Results Authorized by: Kristina Hay. Authorization Date: Feb 7, 2002

For Ministry Use Only: Occurrence Report #:

1402-047 (07/00)

TRANSMISSION VERIFICATION REPORT

TIME : 02/07/2002 17:30

DATE,TIME	02/07 17:25
FAX NO./NAME	18002686061
DURATION	00:04:48
PAGE(S)	09
RESULT	OK
MODE	STANDARD ECM

TRANSMISSION VERIFICATION REPORT

TIME : 02/07/2002 17:24

DATE,TIME	02/07 17:21
FAX NO./NAME	16139337930
DURATION	00:02:27
PAGE(S)	04
RESULT	OK
MODE	STANDARD

QUARTERLY REPORT ON DRINKING WATER QUALITY

January - March 2002, Chesterville Water Plant - Serving the Village of Chesterville

Chesterville Drinking Water Quality

Ontario Drinking Water Protection Regulations

The Ontario Clean Water Agency, as the contract operator of the Chesterville Water Treatment Facility on behalf of the Township of North Dundas, is pleased to present the 2002 First Quarter Report on drinking water quality. This report has been prepared in response to legislative changes brought about by "Operation Clean Water", an initiative of Ontario's Ministry of the Environment to ensure high quality drinking water for the residents of Ontario. The new regulations put into law what was formerly the Ontario Drinking Water Objectives (ODWO), and sets requirements for public waterworks with regard to sampling and testing, levels of treatment, licensing of staff, and notification of authorities and the public about water quality.

Further information on the Ontario Drinking Water Regulations can be found on the Ministry of the Environment web site at www.ene.gov.on.ca

Where to contact us for information

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Web site at www.ocwa.com

Client Services Representative: John Kingsbury
Phone : (613) 774-3663
E-mail Address: jkingsbury@ocwa.com

Operations Manager: Blair Henderson
Phone: (613) 448-3098
E-mail Address: bhenderson@ocwa.com

You may also contact the Township of North Dundas directly by contacting Howard Smith, C.A.O., Tel. (613) 774-2105 or e-mail address: ndadmin@sympatico.ca.
Free copies of this report are available at the Township office in Winchester or their website @ www.northdundas.com

TOWNSHIP OF
North Dundas

INSIDE THIS REPORT

QUARTERLY REPORT ON DRINKING WATER QUALITY

January - March 2002, Chesterville Water Plant - Serving the Village of Chesterville

Introduction

We are proud to report that for the period January to March 2002, your water conformed to the Ontario Drinking Water Standards as set out in Ontario Regulation 459/00. The Ontario Clean Water Agency (OCWA) is dedicated to maximizing public health and safety through efficient and reliable operation of your water facility and distribution system.

Plant Description and Treatment Processes

Facility Name:	Chesterville WTP
Total Design Capacity	2,781 cubic meters/day
Raw Water Source	Groundwater
Disinfection Method	Sodium Hypochlorite
Municipal Location	Municipal Office, 547 St. Lawrence St., Winchester
Service Area	Village of Chesterville
Service Population	1,458

Operational Description:

Raw Water Source: Three drilled wells, one duty and two standby. One well located on Queen Street West (Well # 1), two wells (one duty and one standby) located north of County Road 43, Lot 12, Concession 5, Winchester Township (Well # 5).

Low Lift Pumps: Well # 5 low lift pump directs the water to a 650 cubic meter underground reservoir through a low pressure feeder line. Sodium Hypochlorite is injected into the feeder line prior to the underground reservoir.

High Lift Pumps: Two high lift pumps, one duty, one standby, move the treated water from the reservoir into the distribution system and elevated water tower with a storage capacity of 568 cubic meters. Two emergency fire pumps are available when water demand exceeds normal operating capacity.

Distribution System: There are approximately 1,458 persons supplied with water from the Chesterville Water Treatment System.

QUARTERLY REPORT ON DRINKING WATER QUALITY

January - March 2002, Chesterville Water Plant - Serving the Village of Chesterville

Quality Control & Compliance With Provincial Regulations

This plant provides multiple barriers against bacteriological contamination. Bacteriological testing is carried out on raw water, treated water and distribution samples on a regular frequency. On-line analysers for chlorine residuals and turbidity ensure daily monitoring of water leaving the plant. Chlorine levels in the distribution system are also checked on a regular basis. More specialized testing occurs monthly and quarterly and includes Volatile Organics, Inorganics, Pesticides and PCB's.

OCWA uses internal compliance auditing techniques by teams from within the organization. OCWA operates the Chesterville Water Treatment Facility in accordance with provincial regulations. Here is how we do it:

- Use of Accredited Labs. Analytical tests to monitor your water quality are conducted by a laboratory audited by the Canadian Association for Environmental Analytical Laboratories (CAEAL) and accredited by the Standards Council of Canada (SCC). Accreditation ensures that the laboratory has acceptable laboratory protocols and test methods in place. It also requires the laboratory to provide evidence and assurances of the proficiency of the analysts performing the test methods.

- Operation by Licensed Operators. Your water treatment plant is operated and maintained by the Ontario Clean Water Agency's competent and licensed staff. The mandatory licensing program for operators of drinking water facilities is regulated under the *Ontario Water Resources Act (OWRA)* Regulation 435/93. Licensing means that an individual meets the education and experience requirements and has successfully passed the certificate exam.

- Sampling and Analytical requirements. OCWA follows a sampling and analysis schedule required by *OWRA* Regulation 459/00, the Ontario Drinking Water Standards. More information on sampling and analysis including results are available in this report and from your municipal office.

- Adherence to Ministry Guidelines and Procedures. To ensure the protection of the health and operational excellence, the OCWA adheres to the guidelines and procedures developed by the Ministry of the Environment and the Ministry of Health.

Did We Exceed the Standards?

During the First Quarter, Sodium was found to exceed the Ontario Drinking Water Standards concentration of 20 mg/L as set out in Ontario Regulation 459/00. The sodium concentrations of the treated water at Chesterville Well Water System in the first quarter were 23 mg/L and 26 mg/L. The local Medical Officer of Health must be notified when the sodium concentration exceeds 20 mg/L so that this information may be communicated to the local physicians for their use with patients on sodium restricted diets. The aesthetic objective for sodium in drinking water is 200 mg/L at which it can be detected by a salty taste.

As a result we actively undertook the following remedial actions:
Immediately notified the Ministry of Environment and the Ministry of Health as per the Ontario Drinking Water Standards. The result of the first sample was 23 mg/L and as per Reg. 459 re-sampling was initiated and the results were 26 mg/L.

Definitions & Terms

m^3 - Cubic Meter, $1m^3 = 1000$ litres
TCU - True Colour Units
$CaCO_3$ - Calcium Carbonate
mg - milligram
mg/L - milligrams per litre
ug/L - micrograms per litre
ng/L - nanograms per litre
NTU - Nephelometric Turbidity Units
MAC - Maximum Acceptable Concentration
IMAC - Interim Maximum Acceptable Concentration
Coliform Bacteria - a group of commonly occurring rod shaped bacteria. Their presence in a water sample is indicative of inadequate filtration and/or disinfection.
Fecal Coliform Bacteria - refers to a subgroup of coliform bacteria present in the digestive system of warm blooded animals and humans.
Heterotrophic Plate Count - a method of measuring bacterial content in water samples. Also known as Standard Plate Count.
Organic Parameter - a group of chemical compounds containing carbon.
Inorganic Parameter - a group of chemical compounds not containing carbon.
Raw Water - Surface or ground water available as a source of drinking water that has not received any treatment.
AO - Aesthetic Objectives - aspects of drinking water quality (namely taste, odour, colour and clarity) that are perceivable by the senses.
OG - Operational Guidelines are established for parameters which need to be controlled to ensure efficient treatment and distribution of the water.

Required Testing

QUARTERLY REPORT ON DRINKING WATER QUALITY

January - March 2002, Chesterville Water Plant - Serving the Village of Chesterville

The Ontario Drinking Water Regulations and Certificates of Approval (C of A) set sampling requirements for the plant. All other sampling conforms to the Drinking Water Protection Regulation schedule for sampling and analysis. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases can pick up substances resulting from the presence of animals or from human activity. Your water is extensively tested for the presence of dozens of compounds. The results of all analytical tests are available at your municipal office. The following table lists all compounds analyzed.

Chesterville Water Quality Test Results

Microbiological Parameters	MAC or IMAC	# of Samples	# of Detectable Results	Sampling Dates (m/d)	Range	Exceedence?	Typical Source of Contaminant
Total Coliform (counts/100ml)	0	52	0	01/01-03/31	n/a	no	Indicate possible presence of coliform
Escherichia Coliform (counts/100 ml)	0	52	0	01/01-03/31	n/a	no	Definite indicator of fecal contamination
Heterotrophic Plate Count (count/100 ml)	500	26	5	01/01-03/31	2-26	no	Indicator of deteriorating water quality if greater than 500
Parameters related to Microbiological Quality	**MAC or IMAC**	**# of Samples**	**# of Detectable Results**	**Sampling Dates (m/d)**	**Range**	**Exceedence?**	**Typical Source of Contaminant**
Turbidity (NTU)	1	Continuous	Continuous	01/01-03/31	0.03-0.37	no	Turbidity is a measure of particles in water
Free Chlorine – Plant Effluent (mg/l)	-	Continuous	continuous	01/01-03/31	0.70-1.32	no	Chlorine added for Disinfection
Free Chlorine-Distribution (mg/l min 0.05 & max. 4.0)	-	Grab Sample weekly	Weekly	01/01-03/31	0.7-1.20	no	Objective is 0.20 mg/l in the Distribution System (min. 0.05 mg/l required)
Inorganic Parameters (mg/l)	**MAC or IMAC**	**# of Samples**	**# of Detectable Results**	**Sampling Dates (m/d/y)**	**Range**	**Exceedence?**	**Typical Source of Contaminant**
Lead - Distribution	0.01	1	1	01/21/02	<0.001	no	Leached from lead solder or brass plumbing fixtures
Nitrate	10	1	1	01/21/02	<0.1	no	Natural component of water
Nitrite	1	1	1	01/21/02	<0.10	no	
Arsenic	IMAC= 0.025	1	1	09/18/00	<0.001	no	
Barium	1	1	1	09/18/00	0.18	no	
Boron	IMAC= 5.0	1	1	09/18/00	0.01	no	
Cadmium	0.005	1	1	09/18/00	<0.0001	no	
Chromium (Total)	0.05	1	1	09/18/00	<0.01	no	
Copper	1	1	1	09/18/00	0.004	no	

QUARTERLY REPORT ON DRINKING WATER QUALITY

January - March 2002, Chesterville Water Plant - Serving the Village of Chesterville

Iron	0.3	1	1	01/28/02	<0.01	no	
Lead	0.01	1	1	09/18/00	<0.001	no	
Manganese	0.05	1	1	09/18/00	<0.01	no	
Mercury	0.001	1	1	09/18/00	<0.0001	no	
Selenium	0.01	1	1	09/18/00	<0.001	no	
Uranium	0.1	1	1	09/18/00	0.001	no	
Sodium	200	1	1	01/28/02 -02/13/02	23-26	no	
Fluoride	2.4	1	1	01/28/02	0.15	no	

Volatile Organics (ug/l)	MAC or IMAC	# of Samples	# of Detectable Results	Sampling Dates (m/d)	Range	Exceedence?	Typical Source of Contaminant
Trihalomethanes - Plant	100	1	1	01/21	9.7	no	
Trihalomethanes - Dist.	100	1	1	01/21	4.7	no	
Benzene	5	1	1	01/21	<0.5	no	
Carbon Tetrachloride	5	1	1	01/21	<0.9	no	
Dichloromethane	50	1	1	01/21	<4	no	
1,2 - Dichlorobenzene	200	1	1	01/21	<0.4	no	
1, 4 - Dichlorobenzene	5	1	1	01/21	<0.4	no	
1,2 - Dichloroethane	IMAC=5	1	1	01/21	<0.7	no	
1,1 - Dichloroethylene	14	1	1	01/21	<0.5	no	
Ethylbenzene	24	1	1	01/21	<0.5	no	
Monochlorobenzene	80	1	1	01/21	<0.2	no	
Tetrachloroethylene	30	1	1	01/21	<0.3	no	
Toluene	24	1	1	01/21	<0.5	no	

Volatile Organics (ug/l)	MAC or IMAC	# of Samples	# of Detectable Results	Sampling Dates (m/d)	Range	Exceedence?	Typical Source of Contaminant
Trichloroethlyene	50	1	1	01/21	<0.3	no	
Vinyl chloride	2	1	1	01/21	<0.5	no	
Xylene	300	1	1	01/21	<2.0	no	
Bromodichloromethane	n/a	1	1	01/21	2.6	no	
Bromoform	n/a	1	1	01/21	<0.4	no	
Chloroform	n/a	1	1	01/21	4.5	no	
Dibromochloromethane	n/a	1	1	01/21	2.6	no	

Pesticides & PCB (ug/L)	MAC or IMAC	# of Samples	# of Detectable Results	Sampling Dates (m/d)	Range	Exceedence?	Typical Source of Contaminant
Alachlor	IMAC=5	1	1	01/21	<0.5	no	
Aldicarb	9	1	1	01/21	<5.0	no	
Aldrin+Dieldrin	0.7	1	1	01/21	<0.7	no	
Atrazine	IMAC=5	1	1	01/21	<1.0	no	
Azinphos-methyl	20	1	1	01/21	<2.0	no	
Bendiocarb	40	1	1	01/21	<2.0	no	
Bromoxynil	IMAC=5	1	1	01/21	<0.5	no	
Carbaryl	90	1	1	01/21	<5.0	no	
Carbofuran	90	1	1	01/21	<5.0	no	
Chlordane	7	1	1	01/21	<0.7	no	
Chorpyrifos	90	1	1	01/21	<1.0	no	
Cyanazine	IMAC=10	1	1	01/21	<1.0	no	
Diaznon	20	1	1	01/21	<1.0	no	
Dicamba	120	1	1	01/21	<1.0	no	
2,4 Dichlorophenol	900	1	1	01/21	<0.5	no	
DDT + Metapolites	30	1	1	01/21	<3	no	
2,4 - Dichlorophenexy acid (2,4 -D)	IMAC=100	1	1	01/21	<1.0	no	
Diclofop-methyl	9	1	1	01/21	<0.9	no	

QUARTERLY REPORT ON DRINKING WATER QUALITY

January - March 2002, Chesterville Water Plant - Serving the Village of Chesterville

Dimethoate	IMAC=20	1	1	01/21	<2.5	no	
Dinoseb	10	1	1	01/21	<1.0	no	
Diquat	70	1	1	01/21	<7	no	
Diuron	150	1	1	01/21	<10	no	
Glyphosate	IMAC=280	1	1	01/21	<10	no	
Heprachlor + Heptachlor epoxide	3	1	1	01/21	<0.3	no	
Lindane	4	1	1	01/21	<0.4	no	
Malathion	190	1	1	01/21	<5.0	no	
Methoxychlor	900	1	1	01/21	<90	no	
Metolachlor	IMAC=50	1	1	01/21	<0.5	no	
Metribuzin	80	1	1	01/21	<5.0	no	
Paraquat	IMAC=10	1	1	01/21	<1.0	no	
Parathion	50	1	1	01/21	<1.0	no	
Pentachlorophenol	60	1	1	01/21	<0.5	no	
Phorate	IMAC=2	1	1	01/21	<0.5	no	
Picloram	IMAC=190	1	1	01/21	<5.0	no	
Polychlorinated Biphenyls	IMAC=3	1	1	01/21	<0.3	no	
Prometryne	IMAC=1	1	1	01/21	<0.25	no	
Simazine	IMAC=10	1	1	01/21	<1.0	no	
Temephos	IMAC=280	1	1	01/21	<10	no	
Terbufos	IMAC=1	1	1	01/21	<0.7	no	
2,3,4,6 Tetrachlorophenol	100	1	1	01/21	<0.5	no	
Triallate	230	1	1	01/21	<1.0	no	
2,4,6-Trichlorophenol	5	1	1	01/21	<0.5	no	
2,4,5 - trichlorophenoxy acedic acid	IMAC=280	1	1	01/21	<1.0	no	
Trifluralin	45	1	1	01/21	<1.0	no	

Certificate of Approval Additional Parameters Non-Health Related (mg/L)	AO or OG	# of Samples	# of Detectable Results	Sampling Dates (m/d/y)	Range	Exceedence?	Typical Source of Contaminant
Colour	5	1	1	01/28/02	<2	no	
pH	6.8-8.5	1	1	01/28/02	7.93	no	
Alkalinity	30-500	1	1	01/28/02	200	no	
Total Hardness	80-100	1	1	01/28/02	256	yes	Limits are set as an operational guideline
Sulphate	500	1	1	01/28/02	53	no	
Conductivity	---	1	1	01/28/02	578	no	
Chloride	250	1	1	01/28/02	39	no	
Free Ammonia	---	1	1	01/28/02	<0.02	no	
Total Kjeldahl Nitrogen	---	1	1	01/28/02	<0.05	no	
Dissolved Organic Carbon	5	1	1	01/28/02	<0.5	no	
Calcium	---	1	1	01/28/02	63	no	
Magnesium	---	1	1	01/28/02	24	no	
Ammonia Unionized	---	1	1	01/28/02	<0.02	no	

Comment: Hardness (inorganic)

The operational guideline for hardness in drinking water is set at between 80 and 100 mg/L as calcium carbonate. This value is set to aid in water source selection where a choice exists. Hardness is caused by dissolved calcium and magnesium, and is expressed as the equivalent quantity of calcium carbonate. On heating, hard water has a tendency to form scale deposits and can form excessive scum with regular soaps. However, certain detergents are largely unaffected by hardness. Conversely, soft water may result in accelerated corrosion of water pipes. Hardness levels between 80 and 100 mg/L as calcium carbonate ($CaCO_3$) are considered to provide an acceptable balance between corrosion and incrustation. Water supplies with a hardness greater than 200 mg/L are considered poor but tolerable. Hardness in excess of 500 mg/L in drinking water is unacceptable for most domestic purposes.

Questions & Answers

Q. What is an Accredited Laboratory?

A. Accredited labs must have undergone an on-site assessment and performance review of their methods by the Canadian Association of Environmental and Analytical Laboratories. The Standards Council of Canada grants accreditation to the lab based on the recommendation of the CAEAL. The accreditation requirements are repeated every two years.

Q. What had to be done to meet the new regulations?

A. The Chesterville Water Treatment Plant was following the Ontario Drinking Water Objectives (ODWO) before they became law, so little change was required to meet the new regulations. Our chlorine residual in the water leaving the plant was raised slightly to achieve the (0.20 mg/L free chlorine) required level in the distribution system, and some changes were required in the way results are reported. This report to the public is also the result of the new regulations.

Q. What parameters did you test for?

A. Microbiological parameters, volatile organics, inorganics, PCB's and pesticides have been tested. The results are included in this report.

Q. Sometimes my water looks rusty or coloured. Why is that, and what should I do about it?

A. This is quite often caused when the tanks in older water heaters start to decay. If the colour is seen only in your hot water, this may be the problem. If the colour is also noticed in your cold water it could be coming from the water main. Various maintenance procedures in the distribution system - such as fire hydrant and valve maintenance, or main break repairs - require flushing of the water mains. Flushing can cause small particles of sediment to break off adding colour to the water. Please note that there is no health risk associated with this problem. This is usually only temporary, and opening your taps for a while to flush out your service line (the pipe from the water main to your house) should take care of the problem. Let the water run until the colour disappears.

Caduceon Enterprises Inc.

Environmental Laboratory

Certificate of Analysis

Client:
[redacted]tario Clean Water Agency
[redacted]ndustrial Dr.
Chesterville, ON
K0C 1H0

Attention: **Dave Markell**

Report: **220000055**
Project: Chesterville WTP
Date Sampled: January 2, 2002
Date Received: January 3, 2002
Date Printed: January 07, 2002
Matrix: Drinking Water

Parameter	E. coli	Free Cl2	HPC	TC	Total Cl2
Unit	/100mL	mg/L	/mL	/100mL	mg/L
MDL	1	0.05	2	1	0.05
Sample ID					
Well #5 Raw	absent		absent	absent	
Well #5 Treated	absent	1.00	absent	absent	1.00
Dist. Curran Auto	absent	1.00	absent	absent	1.00
Dist. McEwen Fuels	absent	1.00		absent	1.00
[redacted]ist. McEwen Conveniance	absent	1.00		absent	1.10

Caduceon Enterprises Inc. Environmental Laboratory
2378 Holly Lane, Ottawa, Ontario, K1V 7P1, Canada
Tel: (613)526-0123, Fax: (613)526-1244

Michael Ziebell, General Manager

Caduceon Enterprises Inc.

Environmental Laboratory

Certificate of Analysis

Client:
[illegible]tario Clean Water Agency
[illegible]ndustrial Dr.
Chesterville, ON
K0C 1H0

Attention: **Dave Markell**

Report: **220000174**
Project: Chesterville WTP
Date Sampled: January 7, 2002
Date Received: January 8, 2002
Date Printed: January 10, 2002
Matrix: Drinking Water

Parameter	E. coli	Free Cl2	HPC	TC	Total Cl2
Unit	/100mL	mg/L	/mL	/100mL	mg/L
MDL	1	0.05	2	1	0.05
Sample ID					
Well #5 Raw	absent		absent	absent	
Well #5 Treated	absent	1.30	absent	absent	1.30
Dist. Public School	absent	1.10	absent	absent	1.10
Dist. St. Mary's School	absent	1.20		absent	1.20
[illegible]ist. Becker's	absent	0.90		absent	1.00

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Tel: (613)526-0123, Fax: (613)526-1244

Michael Ziebell, General Manager

Caduceon Enterprises Inc.
Environmental Laboratory

Certificate of Analysis

Client:
[redacted]tario Clean Water Agency
[redacted]Industrial Dr.
Chesterville, ON
K0C 1H0

Attention: **Dave Markell**

Report: **220000385**
Project: Chesterville WTP
Date Sampled: January 14, 2002
Date Received: January 15, 2002
Date Printed: January 17, 2002
Matrix: Drinking Water

Parameter	E. coli	Free Cl2	HPC	TC	Total Cl2
Unit	/100mL	mg/L	/mL	/100mL	mg/L
MDL	1	0.05	2	1	0.05
Sample ID					
Well #5 Raw	absent		absent	absent	
Well #5 Treated	absent	1.20	absent	absent	1.20
Dist. 9 Industrial	absent		absent	absent	
Dist. Esso	absent	1.00		absent	1.00
[redacted]ist. 5 Industrial Dr.	absent	1.10		absent	1.10

Caduceon Enterprises Inc. Environmental Laboratory
2378 Holly Lane, Ottawa, Ontario, K1V 7P1, Canada
Tel: (613)526-0123, Fax: (613)526-1244

Dave Peeler, Lab Supervisor

Caduceon Enterprises Inc.
Environmental Laboratory

Certificate of Analysis

Client:
[illegible]tario Clean Water Agency
[illegible]ndustrial Dr.
Chesterville, ON
K0C 1H0

Attention: **Dave Markell**

Report: **220000611**
Project: Chesterville WTP
Date Sampled: January 21, 2002
Date Received: January 22, 2002
Date Printed: January 25, 2002
Matrix: Drinking Water

Parameter	E. coli	Free Cl2	HPC	TC	Total Cl2
Unit	/100mL	mg/L	/mL	/100mL	mg/L
MDL	1	0.05	2	1	0.05
Sample ID					
Well #5 Raw	absent		absent	absent	
Well #5 Treated	absent	1.20	absent	absent	1.20
Dist. 232 Queen St. West	absent	1.00	absent	absent	1.00
Dist. SPS #1	absent	1.00		absent	1.00
[illegible]ist. 5 Industrial Dr.	absent	1.10		absent	1.10

Caduceon Enterprises Inc. Environmental Laboratory
2378 Holly Lane, Ottawa, Ontario, K1V 7P1, Canada
Tel: (613)526-0123, Fax: (613)526-1244

Dave Peeler, Lab Supervisor

Caduceon Enterprises Inc.
Environmental Laboratory

Certificate of Analysis

Client:
[redacted]tario Clean Water Agency
[redacted]ndustrial Dr.
Chesterville, ON
K0C 1H0

Attention: **Dave Markell**

Report: **220000784**
Project: Chesterville WTP
Date Sampled: January 28, 2002
Date Received: January 29, 2002
Date Printed: January 31, 2002
Matrix: Drinking Water

Parameter	E. coli	Free Cl2	HPC	TC	Total Cl2
Unit	/100mL	mg/L	/mL	/100mL	mg/L
MDL	1	0.05	2	1	0.05
Sample ID					
Well #5 Raw	absent		absent	absent	
Well #5 Treated	absent	0.90	absent	absent	1.00
Dist. Ontario Works Office	absent	0.90	2	absent	0.90
Dist. St. Mary's School	absent	0.90		absent	0.90
[redacted]ist. Public School	absent	0.90		absent	0.90

Caduceon Enterprises Inc. Environmental Laboratory
2378 Holly Lane, Ottawa, Ontario, K1V 7P1, Canada
Tel: (613)526-0123, Fax: (613)526-1244

Michael Ziebell, General Manager

ACCUTEST LABORATORIES LTD.

REPORT OF ANALYSIS

Client: CHESTERVILLE WELL SUPPLY

ATT: Mr. Blair Henderson

Report Number: 2200724
Date: 2002-01-25
Date Submitted: 2002-01-22

Project: Chesterville Wells Quarterly Chemicals

P.O. Number:

Matrix: Supply Water

			LAB ID:				
			Sample Date:				
			Sample ID:				
PARAMETER	**UNITS**	**MDL**					
BTEX / 624 / PURGEABLE HYDROCARBONS							
Benzene	ug/L	0.5	<0.5				
Toluene	ug/L	0.5	<0.5				
Ethylbenzene	ug/L	0.5	<0.5				
m/p-xylene	ug/L	1.0	<1.0				
o-xylene	ug/L	0.5	<0.5				
Bromodichloromethane	ug/L	0.3	2.6				
Bromoform	ug/L	0.4	<0.4				
Carbon Tetrachloride	ug/L	0.9	<0.9				
Chlorobenzene	ug/L	0.2	<0.2				
Chloroform	ug/L	0.5	4.5				
Dibromochloromethane	ug/L	0.3	2.6				
1,2-dichlorobenzene	ug/L	0.4	<0.4				
1,4-dichlorobenzene	ug/L	0.4	<0.4				
1,2-dichloroethane	ug/L	0.7	<0.7				
1,1-dichloroethylene	ug/L	0.5	<0.5				
Dichloromethane	ug/L	4.0	<4.0				
Tetrachloroethylene	ug/L	0.3	<0.3				
Trichloroethylene	ug/L	0.3	<0.3				
Vinyl Chloride	ug/L	0.5	<0.5				
TOTALS							
Trihalomethanes (total)	ug/L	2.0	9.7				
Xylene; total	ug/L	2.0	<2.0				
BTEX / 624 Surrogate Recoveries							
Toluene-d8	%		84				
1,2-dichloroethane-d4	%		106				
4-bromofluorobenzene	%		103				

MDL = Method Detection Limit INC = Incomplete

Comment:

APPROVAL:

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608 Norris Court, Kingston, ON, K7P 2R9

ACCUTEST LABORATORIES LTD.

REPORT OF ANALYSIS

Client: CHESTERVILLE WELL SUPPLY

ATT: Mr. Blair Henderson

Report Number: 2200723
Date: 2002-01-25
Date Submitted: 2002-01-22

Project: Chesterville System

P.O. Number:
Matrix: Supply Water

		LAB ID:	167011				
		Sample Date:	2002-01-21				
		Sample ID:	CW-System SPS#1				
PARAMETER	**UNITS**	**MDL**					
BTEX / 624 / PURGEABLE HYDROCARBONS							
Bromodichloromethane	ug/L	0.3	1.6				
Bromoform	ug/L	0.4	<0.4				
Chloroform	ug/L	0.5	2.1				
Dibromochloromethane	ug/L	0.3	1.0				
TOTALS							
Trihalomethanes (total)	ug/L	2.0	4.7 ✓				
BTEX / 624 Surrogate Recoveries							
Toluene-d8	%		100				

MDL = Method Detection Limit INC = Incomplete
Comment:

APPROVAL:

8-146 Colonnade Road, Ottawa, ON, K2E 7Y1

608 Norris Court, Kingston, ON, K7P 2R9

ACCUTEST LABORATORIES LTD.

REPORT OF ANALYSIS

Client: Chesterville Well Supply

ATT: Mr. Blair Henderson

Report Number: 2200724
Date: 2002-03-12
Date Submitted: 2002-01-22

Project: Chesterville Wells Quarterly Chemicals
Sample Matrix: Supply Water

		LAB ID:	167012			
		Sample Date:	2002-01-21			
		Sample ID:	CW-01			
PARAMETER	**UNITS**	**MDL**				
PESTICIDES & PCB's						
Alachlor	mg/L	0.0005	<0.0005			
Aldicarb	mg/L	0.0050	<0.0050			
Aldrin + Dieldrin	mg/L	0.00007	<0.00007			
Atrazine	mg/L	0.001	<0.001			
Azinphos-methyl	mg/L	0.002	<0.002			
Bendiocarb	mg/L	0.0020	<0.0020			
Bromoxynil	mg/L	0.0005	<0.0005			
Carbaryl	mg/L	0.0050	<0.0050			
Carbofuran	mg/L	0.0050	<0.0050			
Chlordane (Total)	mg/L	0.0007	<0.0007			
Chloropyrifos	mg/L	0.0010	<0.0010			
Cyanazine	mg/L	0.0010	<0.0010			
Diazinon	mg/L	0.0010	<0.0010			
Dicamba	mg/L	0.0010	<0.0010			
Diquat	mg/L	0.0070	<0.0070			
2,4-Dichlorophenol	mg/L	0.0005	<0.0005			
DDT	mg/L	0.0030	<0.0030			
2,4-D	mg/L	0.0010	<0.0010			
Diclofop-methyl	mg/L	0.0009	<0.0009			
Dimethoate	mg/L	0.0025	<0.0025			
Dinoseb	mg/L	0.0010	<0.0010			
Diuron	mg/L	0.010	<0.010			
Glyphosate	mg/L	0.010	<0.010			
Heptachlor + Hept. Epoxide	mg/L	0.0003	<0.0003			
Lindane (Total)	mg/L	0.0004	<0.0004			
Malathion	mg/L	0.0050	<0.0050			
Methoxychlor	mg/L	0.0900	<0.0900			
Metolachlor	mg/L	0.0005	<0.0005			

ND = Not Detected (< MDL) MDL = Method Detection Limit

Comment:

APPROVAL: _____

146 Colonnade Road, Unit 8, Nepean, Ontario K2E 7Y1 Tel:(613)727-5692 Fax:(613)727-5222

ACCUTEST LABORATORIES LTD.

REPORT OF ANALYSIS

Client: Chesterville Well Supply

ATT: Mr. Blair Henderson

Report Number: 2200724
Date: 2002-03-12
Date Submitted: 2002-01-22

Project: Chesterville Wells Quarterly Chemicals
Sample Matrix: Supply Water

		LAB ID:	167012			
		Sample Date:	2002-01-21			
		Sample ID:	CW-01			
PARAMETER	**UNITS**	**MDL**				
Metribuzin	mg/L	0.005	<0.005			
Paraquat	mg/L	0.0010	<0.0010			
Parathion	mg/L	0.0010	<0.0010			
Pentachlorophenol	mg/L	0.0005	<0.0005			
Phorate	mg/L	0.0005	<0.0005			
Picloram	mg/L	0.0050	<0.0050			
PCB's (total)	mg/L	0.0003	<0.0003			
Prometryne	mg/L	0.00025	<0.00025			
Simazine	mg/L	0.0010	<0.0010			
[illegible]mephos	mg/L	0.010	<0.010			
[illegible]bufos	mg/L	0.0007	<0.0007			
2,3,4,6-Tetrachlorophenol	mg/L	0.0005	<0.0005			
Triallate	mg/L	0.0010	<0.0010			
2,4,6-Trichlorophenol	mg/L	0.0005	<0.0005			
Trifluralin	mg/L	0.0010	<0.0010			
2,4,5-T	mg/L	0.0010	<0.0010			

ND = Not Detected (< MDL) MDL = Method Detection Limit

Comment:

APPROVAL: _____

146 Colonnade Road, Unit 8, Nepean, Ontario K2E 7Y1 Tel:(613)727-5692 Fax:(613)727-5222

ACCUTEST LABORATORIES LTD.

REPORT OF ANALYSIS

Client: CHESTERVILLE WELL SUPPLY

ATT: Mr. Blair Henderson

Report Number: 2200724
Date: 2002-01-29
Date Submitted: 2002-01-22

Project: Chesterville Wells - Quarterly

P.O. Number:
Matrix: Supply Water

		LAB ID:	167012				
		Sample Date:	2002-01-21				
		Sample ID:	CW-01				
PARAMETER	**UNITS**	**MDL**	TREATEDWATER				
N-NO2	mg/L	0.10	<0.10				
N-NO3	mg/L	0.10	<0.10				

MDL = Method Detection Limit INC = Incomplete
Comment:

APPROVAL: _____

8-146 Colonnade Road, Ottawa, ON, K2E 7Y1

608 Norris Court, Kingston, ON, K7P 2R9

ACCUTEST LABORATORIES LTD.

REPORT OF ANALYSIS

Client: CHESTERVILLE WELL SUPPLY

ATT: Mr. Blair Henderson

Report Number: 2200723
Date: 2002-01-29
Date Submitted: 2002-01-22
Project: Chesterville System
P.O. Number:
Matrix: Supply Water

		LAB ID:	167011				
		Sample Date:	2002-01-21				
		Sample ID:	CW-System SPS#1				
PARAMETER	**UNITS**	**MDL**	TREATEDWATER				
Pb	mg/L	0.001	<0.001				

MDL = Method Detection Limit INC = Incomplete
Comment:

APPROVAL: _____

8-146 Colonnade Road, Ottawa, ON, K2E 7Y1

608 Norris Court, Kingston, ON, K7P 2R9

ACCUTEST LABORATORIES LTD.

REPORT OF ANALYSIS

Client: CHESTERVILLE WELL SUPPLY

ATT: Mr. Blair Henderson

Report Number: 2201008
Date: 2002-02-08
Date Submitted: 2002-01-29

Project: Chesterville Wells Quarterly

P.O. Number:
Matrix: Supply Water

		LAB ID:	167758				
		Sample Date:	2002-01-28				
		Sample ID:	CW-05				
PARAMETER	**UNITS**	**MDL**	TREATEDWATER				
Alkalinity as CaCO3	mg/L	5	200				
Ca	mg/L	1	63				
Cl	mg/L	1	39				
Conductivity	uS/cm	5	578				
Colour	TCU	2	<2				
DOC	mg/L	0.5	<0.5				
F	mg/L	0.10	0.15				
Fe	mg/L	0.01	<0.01				
Hardness as CaCO3	mg/L	1	256				
Mg	mg/L	1	24				
N-NH3	mg/L	0.02	<0.02				
N-NH3 (unionized)	mg/L	0.02	<0.02				
pH			7.93				
Na	mg/L	2	23				
SO4	mg/L	1	53				
Total Kjeldahl Nitrogen	mg/L	0.05	<0.05				

MDL = Method Detection Limit INC = Incomplete
Comment:

APPROVAL:

8-146 Colonnade Road, Ottawa, ON, K2E 7Y1

608 Norris Court, Kingston, ON, K7P 2R9

Caduceon Enterprises Inc.
Environmental Laboratory

Certificate of Analysis

Client:
[redacted]ario Clean Water Agency
[redacted]Industrial Dr.
Chesterville, ON
K0C 1H0

Attention: **Dave Markell**

Report: **220000963**
Project: Chesterville WTP
Date Sampled: February 4, 2002
Date Received: February 5, 2002
Date Printed: February 07, 2002
Matrix: Drinking Water

Parameter	E. coli	Free Cl2	HPC	TC	Total Cl2
Unit	/100mL	mg/L	/mL	/100mL	mg/L
MDL	1	0.05	2	1	0.05
Sample ID					
Well #5 Raw	absent		absent	absent	
Well #5 Treated	absent	1.20	absent	absent	1.20
Dist. Daycare Centre	absent	1.00	absent	absent	1.00
Dist. Nestle's Lagoon	absent	1.10		absent	1.10
[redacted]ist. Arena	absent	1.10		absent	1.10

Caduceon Enterprises Inc. Environmental Laboratory
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Tel: (613)526-0123, Fax: (613)526-1244

Michael Ziebell, General Manager

Caduceon Enterprises Inc.
Environmental Laboratory

Certificate of Analysis

Client:
[illegible]tario Clean Water Agency
[illegible] Industrial Dr.
Chesterville, ON
K0C 1H0

Attention: **Dave Markell**

Report: **220001202**
Project: Chesterville WTP
Date Sampled: February 11, 2002
Date Received: February 12, 2002
Date Printed: February 14, 2002
Matrix: Drinking Water

Parameter	E. coli	Free Cl2	HPC	TC	Total Cl2
Unit	/100mL	mg/L	/mL	/100mL	mg/L
MDL	1	0.05	2	1	0.05
Sample ID					
Well #5 Raw	absent		absent	absent	
Well #5 Treated	absent	1.20	absent	absent	1.20
Dist. MacEwens Fuels	absent	1.00	absent	absent	1.00
Dist. Public School	absent	1.10		absent	1.10
[illegible]ist. Liquor Store	absent	1.20		absent	1.20

Caduceon Enterprises Inc. Environmental Laboratory
2378 Holly Lane, Ottawa, Ontario, K1V 7P1, Canada
Tel: (613)526-0123, Fax: (613)526-1244

Dave Peeler, Lab Supervisor

Caduceon Environmental Laboratories

Division of Caduceon Enterprises Inc.

Certificate of Analysis

Client:
[illegible]tario Clean Water Agency
[illegible]ndustrial Dr.
Chesterville, ON
K0C 1H0

Attention: **Dave Markell**

Report: **220001418**
Project: Chesterville WTP
Date Sampled: February 18, 2002
Date Received: February 19, 2002
Date Printed: February 21, 2002
Matrix: Drinking Water

Parameter	E. coli	Free Cl2	HPC	TC	Total Cl2
Unit	/100mL	mg/L	/mL	/100mL	mg/L
MDL	1	0.05	2	1	0.05
Sample ID					
Well #5 Raw	absent		absent	absent	
Well #5 Treated	absent	1.10	absent	absent	1.30
Dist. Esso	absent	1.20	absent	absent	1.30
Dist. St. Mary's School	absent	1.20		absent	1.20
[illegible]ist. MacEwan Gas Bar	absent	1.10		absent	1.10

Caduceon Environmental Laboratories
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Michael Ziebell, General Manager

Caduceon Environmental Laboratories

Division of Caduceon Enterprises Inc.

Certificate of Analysis

Client:

[redacted]tario Clean Water Agency
[redacted]ndustrial Dr.
Chesterville, ON
K0C 1H0

Attention: **Dave Markell**

Report: **220001623**
Project: Chesterville WTP
Date Sampled: February 25, 2002
Date Received: February 26, 2002
Date Printed: February 28, 2002
Matrix: Drinking Water

Parameter	E. coli	Free Cl2	HPC	TC	Total Cl2
Unit	/100mL	mg/L	/mL	/100mL	mg/L
MDL	1	0.05	2	1	0.05
Sample ID					
Well #5 Raw	absent		absent	absent	
Well #5 Treated	absent	1.04	absent	absent	1.21
Dist. Becker's	absent	1.00	absent	absent	1.10
Dist. St. Mary's	absent	0.93		absent	1.10
[redacted]ist. 54 Main Street	absent	1.10		absent	1.20

Caduceon Environmental Laboratories
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Tel: (613)526-0123, Fax: (613)526-1244

Michael Ziebell, General Manager

ACCUTEST LABORATORIES LTD.

REPORT OF ANALYSIS

Client: CHESTERVILLE WELL SUPPLY

ATT: Mr. Blair Henderson

Report Number: 2201832
Date: 2002-02-20
Date Submitted: 2002-02-14

Project: Chesterville Wells Resample

P.O. Number:
Matrix: Supply Water

		LAB ID:	169943				
		Sample Date:	2002-02-13				
		Sample ID:	CW-01				
PARAMETER	**UNITS**	**MDL**	TREATEDWATER				
Na	mg/L	2	26				

MDL = Method Detection Limit INC = Incomplete
Comment:

APPROVAL:

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608 Norris Court, Kingston, ON, K7P 2R9

Caduceon Environmental Laboratories

Division of Caduceon Enterprises Inc.

Certificate of Analysis

Client:
Ontario Clean Water Agency
5 Industrial Dr.
Chesterville, ON
K0C 1H0

Attention: **Dave Markell**

Report: **220001904**
Project: Chesterville WTP
Date Sampled: March 4, 2002
Date Received: March 5, 2002
Date Printed: March 07, 2002
Matrix: Drinking Water

Parameter	E. coli	Free Cl2	HPC	TC	Total Cl2
Unit	/100mL	mg/L	/mL	/100mL	mg/L
MDL	1	0.05	2	1	0.05
Sample ID					
Well #5 Raw	absent		absent	absent	
Well #5 Treated	absent	1.10	2	absent	1.10
Dist. 99 River Rd.	absent	0.70	26	absent	0.70
Dist. Co-op	absent	1.00		absent	1.00
Dist. 5 Industrial Dr.	absent	1.20		absent	1.20

Caduceon Environmental Laboratories
2378 Holly Lane, Ottawa, Ontario, K1V 7P1, Canada
Tel: (613)526-0123, Fax: (613)526-1244

Michael Ziebell, General Manager

Caduceon Environmental Laboratories

Division of Caduceon Enterprises Inc.

Certificate of Analysis

Client:

ntario Clean Water Agency
Industrial Dr.
Chesterville, ON
K0C 1H0

Attention: **Dave Markell**

Report: **220002207**
Project: Chesterville WTP
Date Sampled: March 11, 2002
Date Received: March 12, 2002
Date Printed: March 14, 2002
Matrix: Drinking Water

Parameter	E. coli	Free Cl2	HPC	TC	Total Cl2
Unit	/100mL	mg/L	/mL	/100mL	mg/L
MDL	1	0.05	2	1	0.05
Sample ID					
Well #5 Raw	absent		absent	absent	
Well #5 Treated	absent	1.00	absent	absent	1.00
Dist. MacEwen Fuel	absent	0.90	2	absent	0.90
Dist. Nestle's Lagoons	absent	0.70		absent	0.80
Dist. Community Centre	absent	0.80		absent	0.80

Caduceon Environmental Laboratories
2378 Holly Lane, Ottawa, Ontario, K1V 7P1, Canada
Tel: (613)526-0123, Fax: (613)526-1244

K. Pigeon
Michael Ziebell, General Manager

Caduceon Environmental Laboratories

Division of Caduceon Enterprises Inc.

Certificate of Analysis

Client:
[O]ntario Clean Water Agency
[3] Industrial Dr.
Chesterville, ON
K0C 1H0

Attention: **Dave Markell**

Report: **220002448**
Project: Chesterville WTP
Date Sampled: March 18, 2002
Date Received: March 19, 2002
Date Printed: March 21, 2002
Matrix: Drinking Water

Parameter	E. coli	Free Cl2	HPC	TC	Total Cl2
Unit	/100mL	mg/L	/mL	/100mL	mg/L
MDL	1	0.05	2	1	0.05
Sample ID					
Well #5 Raw	absent		absent	absent	
Well #5 Treated	absent	1.15	2	absent	1.16
Dist. Esso Garage	absent	1.17	absent	absent	1.20
Dist. Public School	absent	1.04		absent	1.20
Dist. St. Mary's School	absent	1.18		absent	1.20

Caduceon Environmental Laboratories
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Tel: (613)526-0123, Fax: (613)526-1244

Michael Ziebell, General Manager

Caduceon Environmental Laboratories

Division of Caduceon Enterprises Inc.

Certificate of Analysis

Client:

[O]ntario Clean Water Agency
[8] Industrial Dr.
Chesterville, ON
K0C 1H0

Attention: **Dave Markell**

Report: **220002710**
Project: Chesterville WTP
Date Sampled: March 25, 2002
Date Received: March 26, 2002
Date Printed: April 01, 2002
Matrix: Drinking Water

Parameter	E. coli	Free Cl2	HPC	TC	Total Cl2
Unit	/100mL	mg/L	/mL	/100mL	mg/L
MDL	1	0.05	2	1	0.05
Sample ID					
Well #5 Raw	absent		absent	absent	
Well #5 Treated	absent	1.20	absent	absent	1.30
Dist. Public School	absent	1.00	absent	absent	1.00
Dist. Co-op	absent	0.80		absent	0.80
Dist. Liquor Store	absent	1.00		absent	1.10

Caduceon Environmental Laboratories
2378 Holly Lane, Ottawa, Ontario, K1V 7P1, Canada
Tel: (613)526-0123, Fax: (613)526-1244

for Michael Ziebell, General Manager

QUARTERLY REPORT ON DRINKING WATER QUALITY

April - June 2002, Chesterville Water Plant - Serving the Village of Chesterville

Chesterville Drinking Water Quality

Ontario Drinking Water Protection Regulations

The Ontario Clean Water Agency, as the contract operator of the Chesterville Water Treatment Facility on behalf of the Township of North Dundas, is pleased to present the 2002 Second Quarter Report on drinking water quality. This report has been prepared in response to legislative changes brought about by "Operation Clean Water", an initiative of Ontario's Ministry of the Environment to ensure high quality drinking water for the residents of Ontario. The new regulations put into law what was formerly the Ontario Drinking Water Objectives (ODWO), and sets requirements for public waterworks with regard to sampling and testing, levels of treatment, licensing of staff, and notification of authorities and the public about water quality.

Further information on the Ontario Drinking Water Regulations can be found on the Ministry of the Environment web site at www.ene.gov.on.ca

Where to contact us for information

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Web site at www.ocwa.com

Client Services Representative: John Kingsbury
Phone : (613) 774-3663
E-mail Address: jkingsbury@ocwa.com

Operations Manager: Blair Henderson
Phone: (613) 448-3098
E-mail Address: bhenderson@ocwa.com

You may also contact the Township of North Dundas directly by contacting Howard Smith, C.A.O., Tel. (613) 774-2105 or e-mail address: ndadmin@sympatico.ca.
Free copies of this report are available at the Township office in Winchester or their website @ www.northdundas.com

TOWNSHIP OF
North Dundas

INSIDE THIS REPORT

QUARTERLY REPORT ON DRINKING WATER QUALITY

April - June 2002, Chesterville Water Plant - Serving the Village of Chesterville

Introduction

We are proud to report that for the period April to June 2002, your water conformed to the Ontario Drinking Water Standards as set out in Ontario Regulation 459/00. The Ontario Clean Water Agency (OCWA) is dedicated to maximizing public health and safety through efficient and reliable operation of your water facility and distribution system.

Plant Description and Treatment Processes

Facility Name:	Chesterville WTP
Total Design Capacity	2,781 cubic meters/day
Raw Water Source	Groundwater
Disinfection Method	Sodium Hypochlorite
Municipal Location	Municipal Office, 636 St. Lawrence St., Winchester
Service Area	Village of Chesterville
Service Population	1,458

Operational Description:

Raw Water Source: Three drilled wells, one duty and two standby. One well located on Queen Street West (Well # 1), two wells (one duty and one standby) located north of County Road 43, Lot 12, Concession 5, Winchester Township (Well # 5).

Low Lift Pumps: Well # 5 low lift pump directs the water to a 650 cubic meter underground reservoir through a low pressure feeder line. Sodium Hypochlorite is injected into the feeder line prior to the underground reservoir.

High Lift Pumps: Two high lift pumps, one duty, one standby, move the treated water from the reservoir into the distribution system and elevated water tower with a storage capacity of 568 cubic meters. Two emergency fire pumps are available when water demand exceeds normal operating capacity.

Distribution System: There are approximately 1,458 persons supplied with water from the Chesterville Water Treatment System.

QUARTERLY REPORT ON DRINKING WATER QUALITY

April - June 2002, Chesterville Water Plant - Serving the Village of Chesterville

Quality Control & Compliance With Provincial Regulations

This plant provides multiple barriers against bacteriological contamination. Bacteriological testing is carried out on raw water, treated water and distribution samples on a regular frequency. On-line analysers for chlorine residuals and turbidity ensure daily monitoring of water leaving the plant. Chlorine levels in the distribution system are also checked on a regular basis. More specialized testing occurs monthly and quarterly and includes Volatile Organics, Inorganics, Pesticides and PCB's.

OCWA uses internal compliance auditing techniques by teams from within the organization. OCWA operates the Chesterville Water Treatment Facility in accordance with provincial regulations. Here is how we do it:

- Use of Accredited Labs. Analytical tests to monitor your water quality are conducted by a laboratory audited by the Canadian Association for Environmental Analytical Laboratories (CAEAL) and accredited by the Standards Council of Canada (SCC). Accreditation ensures that the laboratory has acceptable laboratory protocols and test methods in place. It also requires the laboratory to provide evidence and assurances of the proficiency of the analysts performing the test methods.

- Operation by Licensed Operators. Your water treatment plant is operated and maintained by the Ontario Clean Water Agency's competent and licensed staff. The mandatory licensing program for operators of drinking water facilities is regulated under the *Ontario Water Resources Act (OWRA)* Regulation 435/93. Licensing means that an individual meets the education and experience requirements and has successfully passed the certificate exam.

- Sampling and Analytical requirements. OCWA follows a sampling and analysis schedule required by *OWRA* Regulation 459/00, the Ontario Drinking Water Standards. More information on sampling and analysis including results are available in this report and from your municipal office.

- Adherence to Ministry Guidelines and Procedures. To ensure the protection of the health and operational excellence, the OCWA adheres to the guidelines and procedures developed by the Ministry of the Environment and the Ministry of Health.

Did We Exceed the Standards?

With respect to Operational Parameters, turbidity exceedences were reported as per Regulation 459/00 on 2 separate occasions. On May 19, 2002 a turbidity exceedance spike of 1.2 NTU was reported. This has been attributed to iron buildup in the turbidimeter feed line. During routine fire hydrant flushing on May 24, 2002, the fire flow pumps were exercised. A subsequent turbidity exeedance of 5.2 NTU was reported. On both occasions, free chlorine residuals were over 1.0 mg/l.

QUARTERLY REPORT ON DRINKING WATER QUALITY

April - June 2002, Chesterville Water Plant - Serving the Village of Chesterville

Definitions & Terms

m^3 - Cubic Meter, $1m^3 = 1000$ litres
TCU - True Colour Units
$CaCO_3$ - Calcium Carbonate
mg - milligram
mg/L - milligrams per litre
ug/L - micrograms per litre
ng/L - nanograms per litre
NTU - Nephelometric Turbidity Units
MAC - Maximum Acceptable Concentration
IMAC - Interim Maximum Acceptable Concentration
Coliform Bacteria - a group of commonly occurring rod shaped bacteria. Their presence in a water sample is indicative of inadequate filtration and/or disinfection.
Fecal Coliform Bacteria - refers to a subgroup of coliform bacteria present in the digestive system of warm blooded animals and humans.
Heterotrophic Plate Count - a method of measuring bacterial content in water samples. Also known as Standard Plate Count.
Organic Parameter - a group of chemical compounds containing carbon.
Inorganic Parameter - a group of chemical compounds not containing carbon.
Raw Water - Surface or ground water available as a source of drinking water that has not received any treatment.
AO - Aesthetic Objectives - aspects of drinking water quality (namely taste, odour, colour and clarity) that are perceivable by the senses.
OG - Operational Guidelines are established for parameters which need to be controlled to ensure efficient treatment and distribution of the water.

Required Testing

The Ontario Drinking Water Regulations and Certificates of Approval (C of A) set sampling requirements for the plant. All other sampling conforms to the Drinking Water Protection Regulation schedule for sampling and analysis. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases can pick up substances resulting from the presence of animals or from human activity. Your water is extensively tested for the presence of dozens of compounds. The results of all analytical tests are available at your municipal office. The following table lists all compounds analyzed.

QUARTERLY REPORT ON DRINKING WATER QUALITY

April - June 2002, Chesterville Water Plant - Serving the Village of Chesterville

Chesterville Water Quality Test Results

Microbiological Parameters	MAC or IMAC	# of Samples	# of Detectable Results	Sampling Dates (m/d)	Range	Exceedence?	Typical Source of Contaminant
Total Coliform (counts/100ml)	0	52	0	04/01-06/30	n/a	no	Indicate possible presence of coliform
Escherichia Coliform (counts/100 ml)	0	52	0	04/01-06/30	n/a	no	Definite indicator of fecal contamination
Heterotrophic Plate Count (count/100 ml)	500	26	5	04/01-06/30	<2-4	no	Indicator of deteriorating water quality if greater than 500
Parameters related to Microbiological Quality	**MAC or IMAC**	**# of Samples**	**# of Detectable Results**	**Sampling Dates (m/d)**	**Range**	**Exceedence?**	**Typical Source of Contaminant**
Turbidity (NTU)	1	Continuous	Continuous	04/01-06/30	0.02-5.20	yes	Turbidity is a measure of particles in water
Free Chlorine – Plant Effluent (mg/l)	-	Continuous	continuous	04/01-06/30	0.77-1.41	no	Chlorine added for Disinfection
Free Chlorine-Distribution (mg/l min 0.05 & max. 4.0)	-	Grab Sample weekly	Weekly	04/01-06/30	0.6-1.20	no	Objective is 0.20 mg/l in the Distribution System (min. 0.05 mg/l required)
Inorganic Parameters (mg/l)	**MAC or IMAC**	**# of Samples**	**# of Detectable Results**	**Sampling Dates (m/d/y)**	**Range**	**Exceedence?**	**Typical Source of Contaminant**
Lead - Distribution	0.01	1	1	01/21/02	<0.001	no	Leached from lead solder or brass plumbing fixtures
Nitrate	10	1	1	04/11/02	<0.1	no	Natural component of water
Nitrite	1	1	1	04/11/02	<0.1	no	
Arsenic	IMAC= 0.025	1	1	09/18/00	<0.001	no	
Barium	1	1	1	09/18/00	0.18	no	
Boron	IMAC= 5.0	1	1	09/18/00	0.01	no	
Cadmium	0.005	1	1	09/18/00	<0.0001	no	
Chromium (Total)	0.05	1	1	09/18/00	<0.01	no	
Copper	1	1	1	09/18/00	0.004	no	
Iron	0.3	1	1	01/28/02	<0.01	no	
Lead	0.01	1	1	09/18/00	<0.001	no	
Manganese	0.05	1	1	09/18/00	<0.01	no	
Mercury	0.001	1	1	09/18/00	<0.0001	no	
Selenium	0.01	1	1	09/18/00	<0.001	no	
Uranium	0.1	1	1	09/18/00	0.001	no	
Sodium	200	1	1	01/28/02 -02/13/02	23-26	no	
Fluoride	2.4	1	1	01/28/02	0.15	no	
Volatile Organics (ug/l)	**MAC or IMAC**	**# of Samples**	**# of Detectable Results**	**Sampling Dates (m/d/y)**	**Range**	**Exceedence?**	**Typical Source of Contaminant**
Trihalomethanes - Plant	100	1	1	04/11/02	4.5	no	
Trihalomethanes - Dist.	100	1	1	04/11/02	3.2	no	
Benzene	5	1	1	04/11/02	<0.5	no	
Carbon Tetrachloride	5	1	1	04/11/02	<0.9	no	

QUARTERLY REPORT ON DRINKING WATER QUALITY

April - June 2002, Chesterville Water Plant - Serving the Village of Chesterville

Dichloromethane	50	1	1	04/11/02	<4	no	
1,2 - Dichlorobenzene	200	1	1	04/11/02	<0.4	no	
1, 4 - Dichlorobenzene	5	1	1	04/11/02	<0.4	no	
1,2 - Dichloroethane	IMAC=5	1	1	04/11/02	<0.7	no	
1,1 - Dichloroethylene	14	1	1	04/11/02	<0.5	no	
Ethylbenzene	24	1	1	04/11/02	<0.5	no	
Volatile Organics (ug/l)	**MAC or IMAC**	**# of Samples**	**# of Detectable Results**	**Sampling Dates (m/d/y)**	**Range**	**Exceedence?**	**Typical Source of Contaminant**
Monochlorobenzene	80	1	1	04/11/02	<0.2	no	
Tetrachloroethylene	30	1	1	04/11/02	<0.3	no	
Toluene	24	1	1	04/11/02	<0.5	no	
Trichloroethlyene	50	1	1	04/11/02	<0.3	no	
Vinyl chloride	2	1	1	04/11/02	<0.5	no	
Xylene	300	1	1	04/11/02	<2.0	no	
Bromodichloromethane	n/a	1	1	04/11/02	1.6	no	
Bromoform	n/a	1	1	04/11/02	<0.4	no	
Chloroform	n/a	1	1	04/11/02	1.9	no	
Dibromochloromethane	n/a	1	1	04/11/02	1	no	
Pesticides & PCB (ug/L)	**MAC or IMAC**	**# of Samples**	**# of Detectable Results**	**Sampling Dates (m/d/y)**	**Range**	**Exceedence?**	**Typical Source of Contaminant**
Alachlor	IMAC=5	1	1	04/11/02	<0.5	no	
Aldicarb	9	1	1	04/11/02	<5.0	no	
Aldrin+Dieldrin	0.7	1	1	04/11/02	<0.07	no	
Atrazine	IMAC=5	1	1	04/11/02	<1.0	no	
Azinphos-methyl	20	1	1	04/11/02	<2.0	no	
Bendiocarb	40	1	1	04/11/02	<2.0	no	
Bromoxynil	IMAC=5	1	1	04/11/02	<0.5	no	
Carbaryl	90	1	1	04/11/02	<5.0	no	
Carbofuran	90	1	1	04/11/02	<5.0	no	
Chlordane	7	1	1	04/11/02	<0.7	no	
Chorpyrifos	90	1	1	04/11/02	<1.0	no	
Cyanazine	IMAC=10	1	1	04/11/02	<1.0	no	
Diaznon	20	1	1	04/11/02	<1.0	no	
Dicamba	120	1	1	04/11/02	<1.0	no	
2,4 Dichlorophenol	900	1	1	04/11/02	<0.5	no	
DDT + Metapolites	30	1	1	04/11/02	<3	no	
2,4 - Dichlorophenexy acid (2,4 -D)	IMAC=100	1	1	04/11/02	<1.0	no	
Diclofop-methyl	9	1	1	04/11/02	<0.9	no	
Dimethoate	IMAC=20	1	1	04/11/02	<2.5	no	
Dinoseb	10	1	1	04/11/02	<1.0	no	
Diquat	70	1	1	04/11/02	<7	no	
Diuron	150	1	1	04/11/02	<10	no	
Glyphosate	IMAC=280	1	1	04/11/02	<10	no	
Heprachlor + Heptachlor epoxide	3	1	1	04/11/02	<0.3	no	
Lindane	4	1	1	04/11/02	<0.4	no	
Malathion	190	1	1	04/11/02	<5.0	no	
Methoxychlor	900	1	1	04/11/02	<90	no	
Metolachlor	IMAC=50	1	1	04/11/02	<0.5	no	
Metribuzin	80	1	1	04/11/02	<5.0	no	
Paraquat	IMAC=10	1	1	04/11/02	<1.0	no	
Parathion	50	1	1	04/11/02	<1.0	no	
Pentachlorophenol	60	1	1	04/11/02	<0.5	no	
Phorate	IMAC=2	1	1	04/11/02	<0.5	no	
Picloram	IMAC=19	1	1	04/11/02	<5.0	no	

	0						
Polychlorinated Biphenyls	IMAC=3	1	1	04/11/02	<0.3	no	
Prometryne	IMAC=1	1	1	04/11/02	<0.25	no	
Simazine	IMAC=10	1	1	04/11/02	<1.0	no	
Temephos	IMAC=28 0	1	1	04/11/02	<10	no	
Terbufos	IMAC=1	1	1	04/11/02	<0.7	no	
2,3,4,6 Tetrachlorophenol	100	1	1	04/11/02	<0.5	no	
Triallate	230	1	1	04/11/02	<1.0	no	
2,4,6-Trichlorophenol	5	1	1	04/11/02	<0.5	no	
2,4,5 - trichlorophenoxy acedic acid	IMAC=28 0	1	1	04/11/02	<1.0	no	
Trifluralin	45	1	1	04/11/02	<1.0	no	

Additional Parameters Non-Health Related (mg/L)	AO or OG	# of Samples	# of Detectable Results	Sampling Dates (m/d/y)	Range	Exceedence?	Typical Source of Contaminant
Colour	5	1	1	01/28/02	<2	no	
pH	6.8-8.5	1	1	01/28/02	7.93	no	
Alkalinity	30-500	1	1	01/28/02	200	no	
Total Hardness	80-100	1	1	01/28/02	256	yes	Limits are set as an operational guideline
Sulphate	500	1	1	01/28/02	53	no	
Conductivity	---	1	1	01/28/02	578	no	
Chloride	250	1	1	01/28/02	39	no	
Free Ammonia	---	1	1	01/28/02	<0.02	no	
Total Kjeldahl Nitrogen	---	1	1	01/28/02	<0.05	no	
Dissolved Organic Carbon	5	1	1	01/28/02	<0.5	no	
Calcium	---	1	1	01/28/02	63	no	
Magnesium	---	1	1	01/28/02	24	no	
Ammonia Unionized	---	1	1	01/28/02	<0.02	no	

Comment: Hardness (inorganic)
The operational guideline for hardness in drinking water is set at between 80 and 100 mg/L as calcium carbonate. This value is set to aid in water source selection where a choice exists. Hardness is caused by dissolved calcium and magnesium, and is expressed as the equivalent quantity of calcium carbonate. On heating, hard water has a tendency to form scale deposits and can form excessive scum with regular soaps. However, certain detergents are largely unaffected by hardness. Conversely, soft water may result in accelerated corrosion of water pipes. Hardness levels between 80 and 100 mg/L as calcium carbonate ($CaCO_3$) are considered to provide an acceptable balance between corrosion and incrustation. Water supplies with a hardness greater than 200 mg/L are considered poor but tolerable. Hardness in excess of 500 mg/L in drinking water is unacceptable for most domestic purposes.

Questions & Answers

Q. What is an Accredited Laboratory?

A. Accredited labs must have undergone an on-site assessment and performance review of their methods by the Canadian Association of Environmental and Analytical Laboratories. The Standards Council of Canada grants accreditation to the lab based on the recommendation of the CAEAL. The accreditation requirements are repeated every two years.

Q. What had to be done to meet the new regulations?

QUARTERLY REPORT ON DRINKING WATER QUALITY

April - June 2002, Chesterville Water Plant - Serving the Village of Chesterville

A. The Chesterville Water Treatment Plant was following the Ontario Drinking Water Objectives (ODWO) before they became law, so little change was required to meet the new regulations. Our chlorine residual in the water leaving the plant was raised slightly to achieve the (0.20 mg/L free chlorine) required level in the distribution system, and some changes were required in the way results are reported. This report to the public is also the result of the new regulations.

Q. What parameters did you test for?

A. Microbiological parameters, volatile organics, inorganics, PCB's and pesticides have been tested. The results are included in this report.

Q. Sometimes my water looks rusty or coloured. Why is that, and what should I do about it?

A. This is quite often caused when the tanks in older water heaters start to decay. If the colour is seen only in your hot water, this may be the problem. If the colour is also noticed in your cold water it could be coming from the water main. Various maintenance procedures in the distribution system - such as fire hydrant and valve maintenance, or main break repairs - require flushing of the water mains. Flushing can cause small particles of sediment to break off adding colour to the water. Please note that there is no health risk associated with this problem. This is usually only temporary, and opening your taps for a while to flush out your service line (the pipe from the water main to your house) should take care of the problem. Let the water run until the colour disappears.

Caduceon Environmental Laboratories

Division of Caduceon Enterprises Inc.

Certificate of Analysis

Client:
[redacted]tario Clean Water Agency
[redacted] Industrial Dr.
Chesterville, ON
K0C 1H0

Attention: **Dave Markell**

Report: **220002966**
Project: Chesterville WTP
Date Sampled: April 2, 2002
Date Received: April 3, 2002
Date Printed: April 05, 2002
Matrix: Drinking Water

Parameter	E. coli	Free Cl2	HPC	TC	Total Cl2
Unit	/100mL	mg/L	/mL	/100mL	mg/L
MDL	1	0.05	2	1	0.05
Sample ID					
Well #5 Raw	absent		200	absent	
Well #5 Treated	absent	1.10	absent	absent	1.10
Dist. Public School	absent	1.10	absent	absent	1.10
Dist. MacEwen Gas	absent	1.00		absent	1.00
[redacted]ist. 5 Industrial	absent	1.10		absent	1.10

Caduceon Environmental Laboratories
2378 Holly Lane, Ottawa, Ontario, K1V 7P1, Canada
Tel: (613)526-0123, Fax: (613)526-1244

Michael Ziebell, General Manager

Caduceon Environmental Laboratories

Division of Caduceon Enterprises Inc.

Certificate of Analysis

Client:

[O]ntario Clean Water Agency
[1] Industrial Dr.
Chesterville, ON
K0C 1H0

Attention: **Dave Markell**

Report: **220003201**
Project: Chesterville WTP
Date Sampled: April 8, 2002
Date Received: April 9, 2002
Date Printed: April 11, 2002
Matrix: Drinking Water

Parameter	E. coli	Free Cl2	HPC	TC	Total Cl2
Unit	/100mL	mg/L	/mL	/100mL	mg/L
MDL	1	0.05	2	1	0.05
Sample ID					
Well #5 Raw	absent		absent	absent	
Well #5 Treated	absent	0.90	absent	absent	1.00
Dist. St. Mary's School	absent	0.90	absent	absent	0.90
Dist. Public School	absent	0.90		absent	0.90
[D]ist. 232 Queen St. West	absent	0.70		absent	0.70

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Certificate of Analysis

Client:
[O]ntario Clean Water Agency
[ ]Industrial Dr.
Chesterville, ON
K0C 1H0

Attention: **Dave Markell**

Report: **220003478**
Project: Chesterville WTP
Date Sampled: April 15, 2002
Date Received: April 16, 2002
Date Printed: April 18, 2002
Matrix: Drinking Water

Parameter	E. coli	Free Cl2	HPC	TC	Total Cl2
Unit	/100mL	mg/L	/mL	/100mL	mg/L
MDL	1	0.05	2	1	0.05
Sample ID					
Well #5 Raw	absent		6	absent	
Well #5 Treated	absent	1.10	absent	absent	1.20
Dist. D&D Performance	absent	0.80	absent	absent	0.90
Dist. MacEwen Petro	absent	1.10		absent	1.10
[D]ist. 5 Industrial	absent			absent	

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Michael Ziebell, General Manager

Caduceon Environmental Laboratories

Division of Caduceon Enterprises Inc.

Certificate of Analysis

Client:
[illegible]tario Clean Water Agency
5 Industrial Dr.
Chesterville, ON
K0C 1H0

Attention: **Dave Markell**

Report: **220003770**
Project: Chesterville WTP
Date Sampled: April 22, 2002
Date Received: April 23, 2002
Date Printed: April 25, 2002
Matrix: Drinking Water

Parameter	E. coli	Free Cl2	HPC	TC	Total Cl2
Unit	/100mL	mg/L	/mL	/100mL	mg/L
MDL	1	0.05	2	1	0.05
Sample ID					
Well #5 Raw	absent		absent	absent	
Well #5 Treated	absent	0.80	absent	absent	1.00
Dist. St. Mary's School	absent	0.90	absent	absent	1.00
Dist. Public School	absent	0.90		absent	1.00
[illegible]ist. M & T Advertizing	absent	1.00		absent	1.10

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Certificate of Analysis

Client:
tario Clean Water Agency
5 Industrial Dr.
Chesterville, ON
K0C 1H0

Attention: **Dave Markell**

Report: **220004027**
Project: Chesterville WTP
Date Sampled: April 29, 2002
Date Received: April 30, 2002
Date Printed: May 02, 2002
Matrix: Drinking Water

Parameter	E. coli	Free Cl2	HPC	TC	Total Cl2
Unit	/100mL	mg/L	/mL	/100mL	mg/L
MDL	1	0.05	2	1	0.05
Sample ID					
Well #5 Raw	absent			absent	
Well #5 Treated	absent	1.10	absent	absent	1.20
Dist. Water Tower	absent	1.00	absent	absent	1.10
Dist. Canada Post	absent	1.00		absent	1.20
Dist. 5 Industrial	absent	1.20		absent	1.20

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Tel: (613)526-0123, Fax: (613)526-1244

Michael Ziebell, General Manager

ACCUTEST LABORATORIES LTD.

REPORT OF ANALYSIS

Client: CHESTERVILLE WELL SUPPLY

ATT: Mr. Blair Henderson

Report Number: 2204290
Date: 2002-04-17
Date Submitted: 2002-04-12

Project: Chesterville - Quarterly Chem

P.O. Number:

Matrix: Supply Water

		LAB ID:	176575				
		Sample Date:	2002-04-11				
		Sample ID:	CW-02				
PARAMETER	**UNITS**	**MDL**					
BTEX / 624 / PURGEABLE HYDROCARBONS							
Benzene	ug/L	0.5	<0.5 ✓				
Toluene	ug/L	0.5	<0.5 ✓				
Ethylbenzene	ug/L	0.5	<0.5 ✓				
m/p-xylene	ug/L	1.0	<1.0				
o-xylene	ug/L	0.5	<0.5				
Bromodichloromethane	ug/L	0.3	1.6 ✓				
Bromoform	ug/L	0.4	<0.4 ✓				
Carbon Tetrachloride	ug/L	0.9	<0.9 ✓				
Chlorobenzene	ug/L	0.2	<0.2 ✓				
Chloroform	ug/L	0.5	1.9 ✓				
Dibromochloromethane	ug/L	0.3	1.0 ✓				
1,2-dichlorobenzene	ug/L	0.4	<0.4 ✓				
1,4-dichlorobenzene	ug/L	0.4	<0.4 ✓				
1,2-dichloroethane	ug/L	0.7	<0.7 ✓				
1,1-dichloroethylene	ug/L	0.5	<0.5 ✓				
Dichloromethane	ug/L	4.0	<4.0 ✓				
Tetrachloroethylene	ug/L	0.3	<0.3 ✓				
Trichloroethylene	ug/L	0.3	<0.3 ✓				
Vinyl Chloride	ug/L	0.5	<0.5 ✓				
TOTALS							
Trihalomethanes (total)	ug/L	2.0	4.5 ✓				
Xylene; total	ug/L	2.0	<2.0 ✓				
BTEX / 624 Surrogate Recoveries							
Toluene-d8	%		99				
1,2-dichloroethane-d4	%		86				
4-bromofluorobenzene	%		102				

MDL = Method Detection Limit INC = Incomplete

Comment:

APPROVAL:

8-146 Colonnade Road, Ottawa, ON, K2E 7Y1

608 Norris Court, Kingston, ON, K7P 2R9

ACCUTEST LABORATORIES LTD.

REPORT OF ANALYSIS

Client: Chesterville Well Supply

ATT: Mr. Blair Henderson

Report Number: 2204290
Date: 2002-05-02
Date Submitted: 2002-04-12

Project: Chesterville - Quarterly Chem

Sample Matrix: Supply Water

		LAB ID:	176575				
		Sample Date:	2002-04-11				
		Sample ID:	CW-02				
PARAMETER	**UNITS**	**MDL**					
PESTICIDES & PCB's							
Alachlor	mg/L	0.0005	<0.0005				
Aldicarb	mg/L	0.0050	<0.0050				
Aldrin + Dieldrin	mg/L	0.00007	<0.00007				
Atrazine	mg/L	0.001	<0.001				
Azinphos-methyl	mg/L	0.002	<0.002				
Bendiocarb	mg/L	0.0020	<0.0020				
Bromoxynil	mg/L	0.0005	<0.0005				
Carbaryl	mg/L	0.0050	<0.0050				
Carbofuran	mg/L	0.0050	<0.0050				
Chlordane (Total)	mg/L	0.0007	<0.0007				
Chloropyrifos	mg/L	0.0010	<0.0010				
Cyanazine	mg/L	0.0010	<0.0010				
Diazinon	mg/L	0.0010	<0.0010				
Dicamba	mg/L	0.0010	<0.0010				
Diquat	mg/L	0.0070	<0.0070				
2,4-Dichlorophenol	mg/L	0.0005	<0.0005				
DDT	mg/L	0.0030	<0.0030				
2,4-D	mg/L	0.0010	<0.0010				
Diclofop-methyl	mg/L	0.0009	<0.0009				
Dimethoate	mg/L	0.0025	<0.0025				
Dinoseb	mg/L	0.0010	<0.0010				
Diuron	mg/L	0.010	<0.010				
Glyphosate	mg/L	0.010	<0.010				
Heptachlor + Hept. Epoxide	mg/L	0.0003	<0.0003				
Lindane (Total)	mg/L	0.0004	<0.0004				
Malathion	mg/L	0.0050	<0.0050				
Methoxychlor	mg/L	0.0900	<0.0900				
Metolachlor	mg/L	0.0005	<0.0005				

all checked

ND = Not Detected (< MDL) MDL = Method Detection Limit

Comment:

APPROVAL: _____

146 Colonnade Road, Unit 8, Nepean, Ontario K2E 7Y1 Tel:(613)727-5692 Fax:(613)727-5222

ACCUTEST LABORATORIES LTD.

REPORT OF ANALYSIS

Client: Chesterville Well Supply

ATT: Mr. Blair Henderson

Report Number: 2204290
Date: 2002-05-02
Date Submitted: 2002-04-12

Project: Chesterville - Quarterly Chem

Sample Matrix: Supply Water

			LAB ID:	176575			
			Sample Date:	2002-04-11			
			Sample ID:	CW-02			
PARAMETER	**UNITS**	**MDL**					
Metribuzin	mg/L	0.005	<0.005				
Paraquat	mg/L	0.0010	<0.0010				
Parathion	mg/L	0.0010	<0.0010				
Pentachlorophenol	mg/L	0.0005	<0.0005				
Phorate	mg/L	0.0005	<0.0005				
Picloram	mg/L	0.0050	<0.0050				
PCB's (total)	mg/L	0.0003	<0.0003				
Prometryne	mg/L	0.00025	<0.00025				
Simazine	mg/L	0.0010	<0.0010				
[illegible]mephos	mg/L	0.010	<0.010				
[illegible]rbufos	mg/L	0.0007	<0.0007				
2,3,4,6-Tetrachlorophenol	mg/L	0.0005	<0.0005				
Triallate	mg/L	0.0010	<0.0010				
2,4,6-Trichlorophenol	mg/L	0.0005	<0.0005				
Trifluralin	mg/L	0.0010	<0.0010				
2,4,5-T	mg/L	0.0010	<0.0010				

all checked

ND = Not Detected (< MDL)

MDL = Method Detection Limit

Comment:

APPROVAL: _____

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ACCUTEST LABORATORIES LTD.

REPORT OF ANALYSIS

Client: CHESTERVILLE WELL SUPPLY

ATT: Mr. Blair Henderson

Report Number: 2204290
Date: 2002-04-19
Date Submitted: 2002-04-12

Project: Chesterville -Quarterly Chem

P.O. Number:
Matrix: Supply Water

		LAB ID:	176575				
		Sample Date:	2002-04-11				
		Sample ID:	CW-02				
PARAMETER	**UNITS**	**MDL**	TREATEDWATER				
N-NO2	mg/L	0.10	<0.10				
N-NO3	mg/L	0.10	<0.10				

MDL = Method Detection Limit INC = Incomplete
Comment:

APPROVAL: _____

8-146 Colonnade Road, Ottawa, ON, K2E 7Y1

608 Norris Court, Kingston, ON, K7P 2R9

ACCUTEST LABORATORIES LTD.

REPORT OF ANALYSIS

Client: CHESTERVILLE WELL SUPPLY

ATT: Mr. Blair Henderson

Report Number: 2204304
Date: 2002-04-17
Date Submitted: 2002-04-12
Project: Chesterville - Quarterly Chem
P.O. Number:
Matrix: Supply Water

		LAB ID:	176593				
		Sample Date:	2002-04-11				
		Sample ID:	CW-02				
PARAMETER	**UNITS**	**MDL**					
BTEX / 624 / PURGEABLE HYDROCARBONS							
Bromodichloromethane	ug/L	0.3	1.0				
Bromoform	ug/L	0.4	<0.4				
Chloroform	ug/L	0.5	1.4				
Dibromochloromethane	ug/L	0.3	0.8				
TOTALS							
Trihalomethanes (total)	ug/L	2.0	3.2 ✓				
BTEX / 624 Surrogate Recoveries							
Toluene-d8	%		98				

MDL = Method Detection Limit INC = Incomplete
Comment:

APPROVAL:

Caduceon Environmental Laboratories

Division of Caduceon Enterprises Inc.

Certificate of Analysis

Client:
tario Clean Water Agency
5 Industrial Dr.
Chesterville, ON
K0C 1H0

Attention: **Dave Markell**

Report: **220004304**
Project: Chesterville WTP
Date Sampled: May 6, 2002
Date Received: May 7, 2002
Date Printed: May 09, 2002
Matrix: Drinking Water

Parameter	E. coli	Free Cl2	HPC	TC	Total Cl2
Unit	/100mL	mg/L	/mL	/100mL	mg/L
MDL	1	0.05	2	1	0.05
Sample ID					
Well #5 Raw	absent			absent	
Well #5 Treated	absent	1.00	absent	absent	1.00
Dist. Esso	absent	0.90	absent	absent	1.00
Dist. Public School	absent	0.90		absent	1.10
Dist. L.C.B.O	absent	0.90		absent	0.90

Caduceon Environmental Laboratories
2378 Holly Lane, Ottawa, Ontario, K1V 7P1, Canada
Tel: (613)526-0123, Fax: (613)526-1244

FOR Michael Ziebell, General Manager

Caduceon Environmental Laboratories

Division of Caduceon Enterprises Inc.

Certificate of Analysis

Client:

tario Clean Water Agency
Industrial Dr.
Chesterville, ON
K0C 1H0

Attention: **Dave Markell**

Report: **220004610**
Project: Chesterville WTP
Date Sampled: May 13, 2002
Date Received: May 14, 2002
Date Printed: May 16, 2002
Matrix: Drinking Water

Parameter	E. coli	Free Cl2	HPC	TC	Total Cl2
Unit	/100mL	mg/L	/mL	/100mL	mg/L
MDL	1	0.05	2	1	0.05
Sample ID					
Well #5 Raw	absent			absent	
Well #5 Treated	absent	1.10	absent	absent	1.10
Dist. MacEwan Fuel Oil	absent	1.00	2	absent	1.00
Dist. Public School	absent	1.10		absent	1.10
Dist. Curran's Garage	absent	1.10		absent	1.10

Caduceon Environmental Laboratories
2378 Holly Lane, Ottawa, Ontario, K1V 7P1, Canada
Tel: (613)526-0123, Fax: (613)526-1244

Michael Ziebell, General Manager

Caduceon Environmental Laboratories

Division of Caduceon Enterprises Inc.

Certificate of Analysis

Client:
ntario Clean Water Agency
5 Industrial Dr.
Chesterville, ON
K0C 1H0

Attention: **Dave Markell**

Report: **220004901**
Project: Chesterville WTP
Date Sampled: May 21, 2002
Date Received: May 22, 2002
Date Printed: May 24, 2002
Matrix: Drinking Water

Parameter	E. coli	Free Cl2	HPC	TC	Total Cl2
Unit	/100mL	mg/L	/mL	/100mL	mg/L
MDL	1	0.05	2	1	0.05
Sample ID					
Well #5 Raw	absent			absent	
Well #5 Treated	absent	1.00	absent	absent	1.10
Dist. St. Mary's	absent	1.10	absent	absent	1.20
Dist. D&D Performance	absent	0.90		absent	0.90
Dist. 5 Industrial	absent	1.20		absent	1.20

Caduceon Environmental Laboratories
2378 Holly Lane, Ottawa, Ontario, K1V 7P1, Canada
Tel: (613)526-0123, Fax: (613)526-1244

Michael Ziebell, General Manager

Caduceon Environmental Laboratories

Division of Caduceon Enterprises Inc.

Certificate of Analysis

Client:
Ontario Clean Water Agency
5 Industrial Dr.
Chesterville, ON
K0C 1H0

Attention: **Dave Markell**

Report: **220005175**
Project: Chesterville WTP
Date Sampled: May 27, 2002
Date Received: May 28, 2002
Date Printed: May 30, 2002
Matrix: Drinking Water

Parameter	E. coli	Free Cl2	HPC	TC	Total Cl2
Unit	/100mL	mg/L	/mL	/100mL	mg/L
MDL	1	0.05	2	1	0.05
Sample ID					
Well #5 Raw	absent			absent	
Well #5 Treated	absent	1.40	2	absent	1.50
Dist. Water Tower	absent	1.00	absent	absent	1.00
Dist. MacEwan Gas Bar Washroom	absent	1.10		absent	1.20
Dist. Nestle's Lagoon's Lab Sink	absent	0.60		absent	0.80

Caduceon Environmental Laboratories
2378 Holly Lane, Ottawa, Ontario, K1V 7P1, Canada
Tel: (613)526-0123, Fax: (613)526-1244

For Michael Ziebell, General Manager

Caduceon Environmental Laboratories

Division of Caduceon Enterprises Inc.

Certificate of Analysis

Client:

Ontario Clean Water Agency
5 Industrial Dr.
Chesterville, ON
K0C 1H0

Attention: **Dave Markell**

FAXED
JUN 0 6 2002
Page ____ of ____

Report: 220005451
Project: Chesterville WTP
Date Sampled: June 3, 2002
Date Received: June 4, 2002
Date Printed: June 06, 2002
Matrix: Drinking Water

Parameter	Background	E. coli	Free Cl2	HPC	TC	Total Cl2
Unit	/100mL	/100mL	mg/L	/mL	/100mL	mg/L
MDL	1	1	0.05	2	1	0.05
Sample ID						
Well #5 Raw	1	absent			absent	
Well #5 Treated		absent	1.00	<2	absent	1.20
Dist. Stinson		absent	1.10	4	absent	1.20
Dist. Public School		absent	1.00		absent	1.20
Dist. 5 Industrial		absent	1.00		absent	1.00

Caduceon Environmental Laboratories
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Tel: (613)526-0123, Fax: (613)526-1244

Michael Ziebell, General Manager

Caduceon Environmental Laboratories

Division of Caduceon Enterprises Inc.

Certificate of Analysis

Client:
Ontario Clean Water Agency
5 Industrial Dr.
Chesterville, ON
K0C 1H0

Attention: **Dave Markell**

Report: **220005851**
Project: Chesterville WTP
Date Sampled: June 10, 2002
Date Received: June 11, 2002
Date Printed: June 13, 2002
Matrix: Drinking Water

Parameter	E. coli	Free Cl2	HPC	TC	Total Cl2
Unit	/100mL	mg/L	/mL	/100mL	mg/L
MDL	1	0.05	2	1	0.05
Sample ID					
Well #5 Raw	absent		absent	absent	
Well #5 Treated	absent	1.10	absent	absent	1.20
Dist. MacEwen	absent	1.10	absent	absent	1.20
Dist. Public School	absent	1.10		absent	1.10
Dist. Convenience Store (Queen)	absent	1.10		absent	1.20

Caduceon Environmental Laboratories
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Michael Ziebell, General Manager

Caduceon Environmental Laboratories

Division of Caduceon Enterprises Inc.

Certificate of Analysis

Client:
Ontario Clean Water Agency
5 Industrial Dr.
Chesterville, ON
K0C 1H0

Attention: **Dave Markell**

Report: **220006126**
Project: Chesterville WTP
Date Sampled: June 17, 2002
Date Received: June 18, 2002
Date Printed: June 20, 2002
Matrix: Drinking Water

Parameter	Unit	MDL	Sample Identification				
			Well #5 Raw	Well #5 Treated	Dist. St. Mary's	Dist. Water Tower	Dist. Well #1
Total Chlorine	mg/L	0.05		1.30	1.20	1.30	1.00
Free Chlorine	mg/L	0.05		1.20	1.20	1.10	0.90
E. coli	/100mL	1	absent	absent	absent	absent	absent
HPC	/mL	2		2	absent		
Background bacteria	/100mL	1	absent				
Total Coliforms	/100mL	1	absent	absent	absent	absent	absent

Caduceon Environmental Laboratories
2378 Holly Lane, Ottawa, Ont[illegible]1V 7P1, Canada
Tel: (613)526-0123, F[illegible]13)526-1244
Micheal Ziebell[illegible]eral Manager

Caduceon Environmental Laboratories

Division of Caduceon Enterprises Inc.

Certificate of Analysis

Client:

Ontario Clean Water Agency
5 Industrial Dr.
Chesterville, ON
K0C 1H0

Attention: **Dave Markell**

Report: **220006431**
Project: Chesterville WTP
Date Sampled: June 24, 2002
Date Received: June 25, 2002
Date Printed: June 27, 2002
Matrix: Drinking Water

Parameter	Background	E. coli	Free Cl2	HPC	TC	Total Cl2
Unit	/100mL	/100mL	mg/L	/mL	/100mL	mg/L
MDL	1	1	0.05	2	1	0.05
Sample ID						
Well #5 Raw	1	absent			absent	
Well #5 Treated		absent	1.10	absent	absent	1.20
Dist. MacEwen Petro		absent	1.20	absent	absent	1.30
Dist. Canada Post		absent	1.10		absent	1.10
Dist. 5 Industrial		absent	1.00		absent	1.10

Caduceon Environmental Laboratories
2378 Holly Lane, O[illegible] Ontario, K1V 7P1, Canada
Tel: (613)526-[illegible], Fax: (613)526-1244

Michael Ziebell, [illegible]neral Manager

QUARTERLY REPORT ON DRINKING WATER QUALITY

July-September 2002, Chesterville Water Plant - Serving the Village of Chesterville

Chesterville Drinking Water Quality

Ontario Drinking Water Protection Regulations

The Ontario Clean Water Agency, as the contract operator of the Chesterville Water Treatment Facility on behalf of the Township of North Dundas, is pleased to present the 2002 Third Quarter Report on drinking water quality. This report has been prepared in response to legislative changes brought about by "Operation Clean Water", an initiative of Ontario's Ministry of the Environment to ensure high quality drinking water for the residents of Ontario. The new regulations put into law what was formerly the Ontario Drinking Water Objectives (ODWO), and sets requirements for public waterworks with regard to sampling and testing, levels of treatment, licensing of staff, and notification of authorities and the public about water quality.

Further information on the Ontario Drinking Water Regulations can be found on the Ministry of the Environment web site at www.ene.gov.on.ca

Where to contact us for information

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Web site at www.ocwa.com

Client Services Representative: John Kingsbury
Phone : (613) 774-3663
E-mail Address: jkingsbury@ocwa.com

Operations Manager: Blair Henderson
Phone: (613) 448-3098
E-mail Address: bhenderson@ocwa.com

You may also contact the Township of North Dundas directly by contacting Howard Smith, C.A.O., Tel. (613) 774-2105 or e-mail address: info@northdundas.com
Free copies of this report are available at the Township office in Winchester or their website @ www.northdundas.com

TOWNSHIP OF
North Dundas

INSIDE THIS REPORT

QUARTERLY REPORT ON DRINKING WATER QUALITY

July-September 2002, Chesterville Water Plant - Serving the Village of Chesterville

Introduction

We are proud to report that for the period July to September 2002, your water conformed to the Ontario Drinking Water Standards as set out in Ontario Regulation 459/00. The Ontario Clean Water Agency (OCWA) is dedicated to maximizing public health and safety through efficient and reliable operation of your water facility and distribution system.

Plant Description and Treatment Processes

Facility Name:	Chesterville WTP
Total Design Capacity	2,805 cubic meters/day
Raw Water Source	Groundwater
Disinfection Method	Sodium Hypochlorite
Municipal Location	Municipal Office, 636 St. Lawrence St., Winchester
Service Area	Village of Chesterville
Service Population	1,458

Operational Description:

Raw Water Source: Three drilled wells, one duty and two standby. One well located on Queen Street West (Well # 1), two wells (one duty and one standby) located north of County Road 43, Lot 12, Concession 5, Winchester Township (Well # 5).

Low Lift Pumps: Well # 5 low lift pump directs the water to a 650 cubic meter underground reservoir through a low pressure feeder line. Sodium Hypochlorite is injected into the feeder line prior to the underground reservoir.

High Lift Pumps: Two high lift pumps, one duty, one standby, move the treated water from the reservoir into the distribution system and elevated water tower with a storage capacity of 568 cubic meters. Two emergency fire pumps are available when water demand exceeds normal operating capacity.

Distribution System: There are approximately 1,458 persons supplied with water from the Chesterville Water Treatment System.

QUARTERLY REPORT ON DRINKING WATER QUALITY

July-September 2002, Chesterville Water Plant - Serving the Village of Chesterville

Quality Control & Compliance With Provincial Regulations

This plant provides multiple barriers against bacteriological contamination. Bacteriological testing is carried out on raw water, treated water and distribution samples on a regular frequency. On-line analysers for chlorine residuals and turbidity ensure daily monitoring of water leaving the plant. Chlorine levels in the distribution system are also checked on a regular basis. More specialized testing occurs monthly and quarterly and includes Volatile Organics, Inorganics, Pesticides and PCB's.

OCWA uses internal compliance auditing techniques by teams from within the organization. OCWA operates the Chesterville Water Treatment Facility in accordance with provincial regulations. Here is how we do it:

- Use of Accredited Labs. Analytical tests to monitor your water quality are conducted by a laboratory audited by the Canadian Association for Environmental Analytical Laboratories (CAEAL) and accredited by the Standards Council of Canada (SCC). Accreditation ensures that the laboratory has acceptable laboratory protocols and test methods in place. It also requires the laboratory to provide evidence and assurances of the proficiency of the analysts performing the test methods.

- Operation by Licensed Operators. Your water treatment plant is operated and maintained by the Ontario Clean Water Agency's competent and licensed staff. The mandatory licensing program for operators of drinking water facilities is regulated under the *Ontario Water Resources Act (OWRA)* Regulation 435/93. Licensing means that an individual meets the education and experience requirements and has successfully passed the certificate exam.

- Sampling and Analytical requirements. OCWA follows a sampling and analysis schedule required by *OWRA* Regulation 459/00, the Ontario Drinking Water Standards. More information on sampling and analysis including results are available in this report and from your municipal office.

- Adherence to Ministry Guidelines and Procedures. To ensure the protection of the health and operational excellence, the OCWA adheres to the guidelines and procedures developed by the Ministry of the Environment and the Ministry of Health.

Did We Exceed the Standards?

With respect to Operational Parameters, no reportable exeedances were experienced.

QUARTERLY REPORT ON DRINKING WATER QUALITY

July-September 2002, Chesterville Water Plant - Serving the Village of Chesterville

Definitions & Terms

m^3 - Cubic Meter, $1m^3 = 1000$ litres
TCU - True Colour Units
$CaCO_3$ - Calcium Carbonate
mg - milligram
mg/L - milligrams per litre
ug/L - micrograms per litre
ng/L - nanograms per litre
NTU - Nephelometric Turbidity Units
MAC - Maximum Acceptable Concentration
IMAC - Interim Maximum Acceptable Concentration
Coliform Bacteria - a group of commonly occurring rod shaped bacteria. Their presence in a water sample is indicative of inadequate filtration and/or disinfection.
Fecal Coliform Bacteria - refers to a subgroup of coliform bacteria present in the digestive system of warm blooded animals and humans.
Heterotrophic Plate Count - a method of measuring bacterial content in water samples. Also known as Standard Plate Count.
Organic Parameter - a group of chemical compounds containing carbon.
Inorganic Parameter - a group of chemical compounds not containing carbon.
Raw Water - Surface or ground water available as a source of drinking water that has not received any treatment.
AO - Aesthetic Objectives - aspects of drinking water quality (namely taste, odour, colour and clarity) that are perceivable by the senses.
OG - Operational Guidelines are established for parameters which need to be controlled to ensure efficient treatment and distribution of the water.

Required Testing

The Ontario Drinking Water Regulations and Certificates of Approval (C of A) set sampling requirements for the plant. All other sampling conforms to the Drinking Water Protection Regulation schedule for sampling and analysis. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases can pick up substances resulting from the presence of animals or from human activity. Your water is extensively tested for the presence of dozens of compounds. The results of all analytical tests are available at your municipal office. The following table lists all compounds analyzed.

Chesterville Water Quality Test Results

QUARTERLY REPORT ON DRINKING WATER QUALITY

July-September 2002, Chesterville Water Plant - Serving the Village of Chesterville

Microbiological Parameters	MAC or IMAC	# of Samples	# of Detectable Results	Sampling Dates (m/d)	Range	Exceedence?	Typical Source of Contaminant
Total Coliform (counts/100ml)	0	57	0	07/01-09/30	n/a	no	Indicate possible presence of coliform
Escherichia Coliform (counts/100 ml)	0	57	0	07/01-09/30	n/a	no	Definite indicator of fecal contamination
Heterotrophic Plate Count (count/100 ml)	500	29	10	07/01-09/30	<2-84	no	Indicator of deteriorating water quality if greater than 500
Parameters related to Microbiological Quality	**MAC or IMAC**	**# of Samples**	**# of Detectable Results**	**Sampling Dates (m/d)**	**Range**	**Exceedence?**	**Typical Source of Contaminant**
Turbidity (NTU)	1	Continuous	Continuous	07/01-09/30	0.07-0.69	no	Turbidity is a measure of particles in water
Free Chlorine – Plant Effluent (mg/l)	-	Continuous	continuous	07/01-09/30	0.79-1.48	no	Chlorine added for Disinfection
Free Chlorine-Distribution (mg/l min 0.05 & max. 4.0)	-	Grab Sample weekly	Weekly	07/01-09/30	0.7-1.8	no	Objective is 0.20 mg/l in the Distribution System (min. 0.05 mg/l required)
Inorganic Parameters (mg/l)	**MAC or IMAC**	**# of Samples**	**# of Detectable Results**	**Sampling Dates (m/d/y)**	**Range**	**Exceedence?**	**Typical Source of Contaminant**
Lead - Distribution	0.01	1	1	01/21/02	<0.001	no	Leached from lead solder or brass plumbing fixtures
Nitrate	10	1	1	08/08/02	<0.1	no	Natural component of water
Nitrite	1	1	1	08/08/02	<0.1	no	
Arsenic	IMAC= 0.025	1	1	09/18/00	<0.001	no	
Barium	1	1	1	09/18/00	0.18	no	
Boron	IMAC= 5.0	1	1	09/18/00	0.01	no	
Cadmium	0.005	1	1	09/18/00	<0.0001	no	
Chromium (Total)	0.05	1	1	09/18/00	<0.01	no	
Copper	1	1	1	09/18/00	0.004	no	
Iron	0.3	1	1	01/28/02	<0.01	no	
Lead	0.01	1	1	09/18/00	<0.001	no	
Manganese	0.05	1	1	09/18/00	<0.01	no	
Mercury	0.001	1	1	09/18/00	<0.0001	no	
Selenium	0.01	1	1	09/18/00	<0.001	no	
Uranium	0.1	1	1	09/18/00	0.001	no	
Sodium	200	1	1	01/28/02 -02/13/02	23-26	no	
Fluoride	2.4	1	1	01/28/02	0.15	no	
Volatile Organics (ug/l)	**MAC or IMAC**	**# of Samples**	**# of Detectable Results**	**Sampling Dates (m/d/y)**	**Range**	**Exceedence?**	**Typical Source of Contaminant**
Trihalomethanes - Plant	100	1	1	08/08/02	4.1	no	
Trihalomethanes - Dist.	100	1	1	08/08/02	2.6	no	
Benzene	5	1	1	08/08/02	<0.5	no	
Carbon Tetrachloride	5	1	1	08/08/02	<0.9	no	
Dichloromethane	50	1	1	08/08/02	<4	no	
1,2 - Dichlorobenzene	200	1	1	08/08/02	<0.4	no	
1, 4 - Dichlorobenzene	5	1	1	08/08/02	<0.4	no	
1,2 - Dichloroethane	IMAC= 5	1	1	08/08/02	<0.7	no	
1,1 - Dichloroethylene	14	1	1	08/08/02	<0.5	no	
Volatile Organics (ug/l)	**MAC or IMAC**	**# of Samples**	**# of Detectable Results**	**Sampling Dates (m/d/y)**	**Range**	**Exceedence?**	**Typical Source of Contaminant**
Ethylbenzene	24	1	1	08/08/02	<0.5	no	
Monochlorobenzene	80	1	1	08/08/02	<0.2	no	

QUARTERLY REPORT ON DRINKING WATER QUALITY

July-September 2002, Chesterville Water Plant - Serving the Village of Chesterville

Tetrachloroethylene	30	1	1	08/08/02	<0.3	no	
Toluene	24	1	1	08/08/02	<0.5	no	
Trichloroethlyene	50	1	1	08/08/02	<0.3	no	
Vinyl chloride	2	1	1	08/08/02	<0.5	no	
Xylene	300	1	1	08/08/02	<2.0	no	
Bromodichloromethane	n/a	1	1	08/08/02	1.4	no	
Bromoform	n/a	1	1	08/08/02	<0.4	no	
Chloroform	n/a	1	1	08/08/02	1.7	no	
Dibromochloromethane	n/a	1	1	08/08/02	1	no	

Pesticides & PCB (ug/L)	MAC or IMAC	# of Samples	# of Detectable Results	Sampling Dates (m/d/y)	Range	Exceedence?	Typical Source of Contaminant
Alachlor	IMAC=5	1	1	08/08/02	<0.5	no	
Aldicarb	9	1	1	08/08/02	<5.0	no	
Aldrin+Dieldrin	0.7	1	1	08/08/02	<0.012	no	
Atrazine	IMAC=5	1	1	08/08/02	<0.5	no	
Azinphos-methyl	20	1	1	08/08/02	<2.0	no	
Bendiocarb	40	1	1	08/08/02	<2.0	no	
Bromoxynil	IMAC=5	1	1	08/08/02	<0.5	no	
Carbaryl	90	1	1	08/08/02	<5.0	no	
Carbofuran	90	1	1	08/08/02	<5.0	no	
Chlordane	7	1	1	08/08/02	<0.012	no	
Chorpyrifos	90	1	1	08/08/02	<1.0	no	
Cyanazine	IMAC=10	1	1	08/08/02	<1.0	no	
Diaznon	20	1	1	08/08/02	<1.0	no	
Dicamba	120	1	1	08/08/02	<1.0	no	
2,4 Dichlorophenol	900	1	1	08/08/02	<0.5	no	
DDT + Metapolites	30	1	1	08/08/02	<0.024	no	
2,4 - Dichlorophenexy acid (2,4 -D)	IMAC=100	1	1	08/08/02	<1.0	no	
Diclofop-methyl	9	1	1	08/08/02	<0.9	no	
Dimethoate	IMAC=20	1	1	08/08/02	<2.5	no	
Dinoseb	10	1	1	08/08/02	<1.0	no	
Diquat	70	1	1	08/08/02	<7	no	
Diuron	150	1	1	08/08/02	<10	no	
Glyphosate	IMAC=280	1	1	08/08/02	<10	no	
Heprachlor + Heptachlor epoxide	3	1	1	08/08/02	<0.012	no	
Lindane	4	1	1	08/08/02	<0.006	no	
Malathion	190	1	1	08/08/02	<5.0	no	
Methoxychlor	900	1	1	08/08/02	<0.024	no	
Metolachlor	IMAC=50	1	1	08/08/02	<0.5	no	
Metribuzin	80	1	1	08/08/02	<5.0	no	
Paraquat	IMAC=10	1	1	08/08/02	<1.0	no	
Parathion	50	1	1	08/08/02	<1.0	no	
Pentachlorophenol	60	1	1	08/08/02	<0.5	no	
Phorate	IMAC=2	1	1	08/08/02	<0.5	no	
Picloram	IMAC=190	1	1	08/08/02	<5.0	no	
Polychlorinated Biphenyls	IMAC=3	1	1	08/08/02	<0.05	no	
Prometryne	IMAC=1	1	1	08/08/02	<0.25	no	
Simazine	IMAC=10	1	1	08/08/02	<1.0	no	
Temephos	IMAC=280	1	1	08/08/02	<10	no	
Terbufos	IMAC=1	1	1	08/08/02	<0.7	no	
2,3,4,6 Tetrachlorophenol	100	1	1	08/08/02	<0.5	no	
Triallate	230	1	1	08/08/02	<1.0	no	
2,4,6-Trichlorophenol	5	1	1	08/08/02	<0.5	no	
2,4,5 - trichlorophenoxy acedic acid	IMAC=280	1	1	08/08/02	<1.0	no	
Trifluralin	45	1	1	08/08/02	<1.0	no	

QUARTERLY REPORT ON DRINKING WATER QUALITY

July-September 2002, Chesterville Water Plant - Serving the Village of Chesterville

Additional Parameters Non-Health Related (mg/L)	AO or OG	# of Samples	# of Detectable Results	Sampling Dates (m/d/y)	Range	Exceedence?	Typical Source of Contaminant
Colour	5	1	1	01/28/02	<2	no	
pH	6.8-8.5	1	1	01/28/02	7.93	no	
Alkalinity	30-500	1	1	01/28/02	200	no	
Total Hardness	80-100	1	1	01/28/02	256	yes	Limits are set as an operational guideline
Sulphate	500	1	1	01/28/02	53	no	
Conductivity	---	1	1	01/28/02	578	no	
Chloride	250	1	1	01/28/02	39	no	
Free Ammonia	---	1	1	01/28/02	<0.02	no	
Total Kjeldahl Nitrogen	---	1	1	01/28/02	<0.05	no	
Dissolved Organic Carbon	5	1	1	01/28/02	<0.5	no	
Calcium	---	1	1	01/28/02	63	no	
Magnesium	---	1	1	01/28/02	24	no	
Ammonia Unionized	---	1	1	01/28/02	<0.02	no	

Comment: Hardness (inorganic)
The operational guideline for hardness in drinking water is set at between 80 and 100 mg/L as calcium carbonate. This value is set to aid in water source selection where a choice exists. Hardness is caused by dissolved calcium and magnesium, and is expressed as the equivalent quantity of calcium carbonate. On heating, hard water has a tendency to form scale deposits and can form excessive scum with regular soaps. However, certain detergents are largely unaffected by hardness. Conversely, soft water may result in accelerated corrosion of water pipes. Hardness levels between 80 and 100 mg/L as calcium carbonate ($CaCO_3$) are considered to provide an acceptable balance between corrosion and incrustation. Water supplies with a hardness greater than 200 mg/L are considered poor but tolerable. Hardness in excess of 500 mg/L in drinking water is unacceptable for most domestic purposes.

Questions & Answers

Q. What is an Accredited Laboratory?

A. Accredited labs must have undergone an on-site assessment and performance review of their methods by the Canadian Association of Environmental and Analytical Laboratories. The Standards Council of Canada grants accreditation to the lab based on the recommendation of the CAEAL. The accreditation requirements are repeated every two years.

Q. What had to be done to meet the new regulations?

A. The Chesterville Water Treatment Plant was following the Ontario Drinking Water Objectives (ODWO) before they became law, so little change was required to meet the new regulations. Our chlorine residual in the water leaving the plant was raised slightly to achieve the (0.20 mg/L free chlorine) required level in the distribution system, and some changes were required in the way results are reported. This report to the public is also the result of the new regulations.

Q. What parameters did you test for?

A. Microbiological parameters, volatile organics, inorganics, PCB's and pesticides have been tested. The results are included in this report.

Q. Sometimes my water looks rusty or coloured. Why is that, and what should I do about it?

A. This is quite often caused when the tanks in older water heaters start to decay. If the colour is seen only in your hot water, this may be the problem. If the colour is also noticed in your cold water it could be coming from the water main. Various maintenance procedures in the distribution system - such as fire hydrant and valve maintenance, or main break repairs - require flushing of the water mains. Flushing can cause small particles of sediment to break off adding colour to the water. Please note that there is no health risk associated with this problem. This is usually only temporary, and opening your taps for a while to flush out your service line (the pipe from the water main to your house) should take care of the problem. Let the water run until the colour disappears.

CHESTERVILLE WATER REQUIRED SAMPLES

JULY, AUGUST, SEPTEMBER 2002

Chemical Parameters

			Date Samples Collected	Initials	Date Results Received	Initials
Table B & D		Treated		DM		
NO2&NO3		Treated		DM		
System THM		Treated		DM		
Flouride	annual	Treated				

Bacti Parameters

Raw			
Well#5	E.Coli	Total Coli.	Background
Treated			
	E.Coli	Total Coli.	HPC
System			
3 Sites	E.Coli	Total Coli.	HPC 25%

JULY 1	Bacti's	✓	n
JULY 8	Bacti's	✓	
JULY 15	Bacti's	✓	
JULY 22	Bacti's	✓	
JULY 29	Bacti's	✓	
AUG. 5	Bacti's	✓	
AUG. 12	Bacti's	✓	
AUG. 19	Bacti's	✓	
AUG. 26	Bacti's	✓	
SEPT. 2	Bacti's	✓	
SEPT. 9	Bacti's	✓	
SEPT. 16	Bacti's	✓	
SEPT. 23	Bacti's	✓	
SEPT. 30	Bacti's	✓	

Flouride Treated Water (Annual)
Lead Distribution System (Annual)
Table C Treated Water (Jan. 2003)
Sodium Treated Water (Jan. 2007)

Caduceon Environmental Laboratories

Division of Caduceon Enterprises Inc.

Certificate of Analysis

Client:
Ontario Clean Water Agency
5 Industrial Dr.
Chesterville, ON
K0C 1H0

Attention: **Dave Markell**

Report:	**220006762**
Project:	Chesterville WTP
Date Sampled:	July 2, 2002
Date Received:	July 3, 2002
Date Printed:	July 05, 2002
Matrix:	Drinking Water

Parameter	Unit	MDL	Sample Identification				
			Well #5 Raw	Well #5 Treated	Dist. St. Mary's	Dist. Public School	Dist. D & D Performance
Total Chlorine	mg/L	0.05		1.10	1.10	0.90	1.30
Free Chlorine	mg/L	0.05		1.10	0.90	0.90	1.10
E. coli	/100mL	1	absent	absent	absent	absent	absent
HPC	/mL	2		absent	absent		
Background bacteria	/100mL	1	absent				
Total Coliforms	/100mL	1	absent	absent	absent	absent	absent

Caduceon Environmental Laboratories
2378 Holly Lane, Ottawa, Ontario, K0A 1P1, Canada
Tel: (613)526-0123, Fax: (613)526-1244

Michael Ziebell, General Manager

Caduceon Environmental Laboratories

Division of Caduceon Enterprises Inc.

Certificate of Analysis

Client:
tario Clean Water Agency
5 Industrial Dr.
Chesterville, ON
K0C 1H0

Attention: **Dave Markell**

Report: **220007055**
Project: Chesterville WTP
Date Sampled: July 8, 2002
Date Received: July 9, 2002
Date Printed: July 11, 2002
Matrix: Drinking Water

Parameter	Background	E. coli	Free Cl2	HPC	TC	Total Cl2
Unit	/100mL	/100mL	mg/L	/mL	/100mL	mg/L
MDL	1	1	0.05	2	1	0.05
Sample ID						
Well #5 Raw	absent	absent			absent	
Well #5 Treated		absent	1.10	absent	absent	1.30
Dist. Water Tower		absent	1.10	2	absent	1.30
Dist. Kick Boxing		absent	1.00		absent	1.30
Dist. 5 Industrial		absent	1.10		absent	1.40

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Certificate of Analysis

Client:
Ontario Clean Water Agency
5 Industrial Dr.
Chesterville, ON
K0C 1H0

Attention: **Dave Markell**

Report: **220007197**
Project: Chesterville WTP
Date Sampled: July 10, 2002
Date Received: July 11, 2002
Date Printed: July 17, 2002
Matrix: Drinking Water

Parameter	Unit	MDL	Sample Identification
			North Blow Off Thompson Subdivision
Total Chlorine	mg/L	0.05	1.30
Free Chlorine	mg/L	0.05	1.00
E. coli	/100mL	1	absent
Heterotrophic Plate Count	/mL	2	absent
Total Coliforms	/100mL	1	absent

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Michael Ziebell, General Manager

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Certificate of Analysis

Client:
Ontario Clean Water Agency
5 Industrial Dr.
Chesterville, ON
K0C 1H0

Attention: **Dave Markell**

Report: **220007321**
Project: Chesterville WTP
Date Sampled: July 15, 2002
Date Received: July 16, 2002
Date Printed: July 18, 2002
Matrix: Drinking Water

Parameter	Background	E. coli	Free Cl2	HPC	TC	Total Cl2
Unit	/100mL	/100mL	mg/L	/mL	/100mL	mg/L
MDL	1	1	0.05	2	1	0.05
Sample ID						
Well #5 Raw	absent	absent			absent	
Well #5 Treated		absent	1.10	absent	absent	1.20
Dist. 38 Howard		absent	0.90	absent	absent	1.00
Dist. 17 Steeter Pete		absent	1.10		absent	1.10
Dist. Swimming Pool		absent	1.10		absent	1.10

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Michael Ziebell, General Manager

Caduceon Environmental Laboratories

Division of Caduceon Enterprises Inc.

Certificate of Analysis

Client:
[illegible]tario Clean Water Agency
[illegible] Industrial Dr.
Chesterville, ON
K0C 1H0

Attention: **Dave Markell**

Report: **220007575**
Project: Chesterville WTP
Date Sampled: July 22, 2002
Date Received: July 23, 2002
Date Printed: July 25, 2002
Matrix: Drinking Water

Parameter	Background	E. coli	Free Cl2	HPC	TC	Total Cl2
Unit	/100mL	/100mL	mg/L	/mL	/100mL	mg/L
MDL	1	1	0.05	2	1	0.05
Sample ID						
Well #5 Raw	absent	absent			absent	
Well #5 Treated		absent	1.10	2	absent	1.30
Dist. Currans Auto		absent	1.10	2	absent	1.10
Dist. MacEwan Fuel		absent	1.00		absent	1.00
Dist. OCWA Office		absent	1.00		absent	1.00

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For Michael Ziebell, General Manager

Caduceon Environmental Laboratories

Division of Caduceon Enterprises Inc.

Certificate of Analysis

Client:

Ontario Clean Water Agency
5 Industrial Dr.
Chesterville, ON
K0C 1H0

Attention: **Dave Markell**

Report: **220007874**
Project: Chesterville WTP
Date Sampled: July 30, 2002
Date Received: July 31, 2002
Date Printed: August 02, 2002
Matrix: Drinking Water

Parameter	Background	E. coli	Free Cl2	HPC	TC	Total Cl2
Unit	/100mL	/100mL	mg/L	/mL	/100mL	mg/L
MDL	1	1	0.05	2	1	0.05
Sample ID						
Well #5 Raw	9	absent			absent	
Well #5 Treated		absent	1.00	absent	absent	1.10
Dist. Lannins Garage		absent	1.00	6	absent	1.00
Dist. Well #1		absent	0.70		absent	0.70
Dist. McEwen Gas Bar		absent	1.00		absent	1.10

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for Michael Ziebell, General Manager

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Division of Caduceon Enterprises Inc.

Certificate of Analysis

Client:
Ontario Clean Water Agency
5 Industrial Dr.
Chesterville, ON
K0C 1H0

Attention: **Dave Markell**

Report: **220008073**
Project: Chesterville WTP
Date Sampled: August 6, 2002
Date Received: August 7, 2002
Date Printed: August 09, 2002
Matrix: Drinking Water

Parameter	Background	E. coli	Free Cl2	HPC	TC	Total Cl2
Unit	/100mL	/100mL	mg/L	/mL	/100mL	mg/L
MDL	1	1	0.05	2	1	0.05
Sample ID						
Well #5 Raw	3	absent			absent	
Well #5 Treated		absent	1.04	12	absent	1.18
Dist. 5 Industrial Dr.		absent	1.08	6	absent	1.11
Dist. Mckewen's		absent	0.96		absent	1.10
Dist. Lannin's		absent	0.95		absent	0.98

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Certificate of Analysis

Client:
Ontario Clean Water Agency
5 Industrial Dr.
Chesterville, ON
K0C 1H0

Attention: **Dave Markell**

Report: **220008330**
Project: Chesterville WTP
Date Sampled: August 12, 2002
Date Received: August 13, 2002
Date Printed: August 15, 2002
Matrix: Drinking Water

Parameter	Unit	MDL	Sample Identification				
			WellI #5 Raw	WellI #5 Treated	Dist. Co-op	Dist. LCBO	Dist. D&D
Total Chlorine	mg/L	0.05		1.30	1.23	1.60	1.30
Free Chlorine	mg/L	0.05		0.98	1.14	1.20	1.26
E. coli	/100mL	1	absent	absent	absent	absent	absent
HPC	/mL	2		absent	absent		
Background bacteria	/100mL	1	7				
Total Coliforms	/100mL	1	absent	absent	absent	absent	absent

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Certificate of Analysis

Client:
Ontario Clean Water Agency
5 Industrial Dr.
Chesterville, ON
K0C 1H0

Attention: **Dave Markell**

Report: **220008614**
Project: Chesterville WTP
Date Sampled: August 19, 2002
Date Received: August 20, 2002
Date Printed: August 22, 2002
Matrix: Drinking Water

Parameter	Unit	MDL	Sample Identification				
			Well #5 Raw	Well #5 Treated	Dist. 57 South St.	Dist. 35 Main St.	Dist. Curran's Garage
Total Chlorine	mg/L	0.05		1.00	1.00	1.10	1.00
Free Chlorine	mg/L	0.05		1.00	0.90	1.00	1.00
E. coli	/100mL	1	absent	absent	absent	absent	absent
HPC	/mL	2		absent	absent		
Background bacteria	/100mL	1	absent				
Total Coliforms	/100mL	1	absent	absent	absent	absent	absent

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Certificate of Analysis

Client:
Ontario Clean Water Agency
5 Industrial Dr.
Chesterville, ON
K0C 1H0

Attention: **Dave Markell**

Report: **220008936**
Project: Chesterville WTP
Date Sampled: August 26, 2002
Date Received: August 27, 2002
Date Printed: August 29, 2002
Matrix: Drinking Water

Parameter	Background	E. coli	Free Cl2	HPC	TC	Total Cl2
Unit	/100mL	/100mL	mg/L	/mL	/100mL	mg/L
MDL	1	1	0.05	2	1	0.05
Sample ID						
Well #5 Raw	21	absent			absent	
Well #5 Treated		absent	1.10	absent	absent	1.20
Dist. Nestles Lagoon Lab		absent	1.00	84	absent	1.00
Dist. Public School		absent	0.70		absent	0.70
Dist. 5 Industrial Dr.		absent	1.00		absent	1.00

Caduceon Environmental Laboratories
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Tel: (613)526-0123, Fax: (613)526-1244

Michael Ziebell, General Manager

ACCUTEST LABORATORIES LTD.

REPORT OF ANALYSIS

Client: CHESTERVILLE WELL SUPPLY

ATT: Mr. Blair Henderson

Report Number: 2210849
Date: 2002-08-19
Date Submitted: 2002-08-09

Project: Chesterville Wells

P.O. Number:
Matrix: Supply Water

		LAB ID:	198037				
		Sample Date:	2002-08-08				
		Sample ID:	CW-05				
PARAMETER	**UNITS**	**MDL**	TREATEDWATER				
N-NO2	mg/L	0.10	<0.10				
N-NO3	mg/L	0.10	<0.10				

MDL = Method Detection Limit INC = Incomplete
Comment:

APPROVAL: _____

8-146 Colonnade Road, Ottawa, ON, K2E 7Y1

608 Norris Court, Kingston, ON, K7P 2R9

ACCUTEST LABORATORIES LTD.

REPORT OF ANALYSIS

Client: CHESTERVILLE WELL SUPPLY

ATT: Mr. Blair Henderson

Report Number: 2210849
Date: 2002-08-16
Date Submitted: 2002-08-09

Project: Chesterville Wells

P.O. Number:
Matrix: Supply Water

			LAB ID:	198037			
			Sample Date:	2002-08-08			
			Sample ID:	CW-05			
PARAMETER	**UNITS**	**MDL**					
BTEX / 624 / PURGEABLE HYDROCARBONS							
Benzene	ug/L	0.5	<0.5				
Toluene	ug/L	0.5	<0.5				
Ethylbenzene	ug/L	0.5	<0.5				
m/p-xylene	ug/L	1.0	<1.0				
o-xylene	ug/L	0.5	<0.5				
Bromodichloromethane	ug/L	0.3	1.4				
Bromoform	ug/L	0.4	<0.4				
Carbon Tetrachloride	ug/L	0.9	<0.9				
Monochlorobenzene	ug/L	0.2	<0.2				
Chloroform	ug/L	0.5	1.7				
Dibromochloromethane	ug/L	0.3	1.0				
1,2-dichlorobenzene	ug/L	0.4	<0.4				
1,4-dichlorobenzene	ug/L	0.4	<0.4				
1,2-dichloroethane	ug/L	0.7	<0.7				
1,1-dichloroethylene	ug/L	0.5	<0.5				
Dichloromethane	ug/L	4.0	<4.0				
Tetrachloroethylene	ug/L	0.3	<0.3				
Trichloroethylene	ug/L	0.3	<0.3				
Vinyl Chloride	ug/L	0.5	<0.5				
TOTALS							
Trihalomethanes (total)	ug/L	2.0	4.1				
Xylene; total	ug/L	2.0	<2.0				
BTEX / 624 Surrogate Recoveries							
Toluene-d8	%		97				
1,2-dichloroethane-d4	%		101				
4-bromofluorobenzene	%		101				

MDL = Method Detection Limit INC = Incomplete
Comment:

APPROVAL: _____

8-146 Colonnade Road, Ottawa, ON, K2E 7Y1

608 Norris Court, Kingston, ON, K7P 2R9

ACCUTEST LABORATORIES LTD.

REPORT OF ANALYSIS

Client: CHESTERVILLE WELL SUPPLY

ATT: Mr. Blair Henderson

Report Number: 2210849
Date: 2002-08-29
Date Submitted: 2002-08-09

Project: Chesterville Wells

Sample Matrix: Supply Water

		LAB ID:	198037			
		Sample Date:	8/8/02			
		Sample ID:	CW-05			
PARAMETER	**UNITS**	**MDL**				
PESTICIDES & PCB's						
Alachlor	ug/L	0.5	<0.5			
Aldicarb	ug/L	5	<5			
Aldrin	ug/L	0.006	<0.006			
Aldrin + Dieldrin	ug/L	0.012	<0.012			
Atrazine	ug/L	0.5	<0.5			
Desethyl-atrazine	ug/L	0.5	<0.5			
Atrazine+Desethyl-atrazine	ug/L	1	<1			
Azinphos-methyl	ug/L	2	<2			
[illegible]diocarb	ug/L	2	<2			
[illegible]moxynil	ug/L	0.5	<0.5			
Carbaryl	ug/L	5	<5			
Carbofuran	ug/L	5	<5			
Chlordane (Total)	ug/L	0.012	<0.012			
a-Chlorodane	ug/L	0.006	<0.006			
g-Chlorodane	ug/L	0.006	<0.006			
Oxychlorodane	ug/L	0.006	<0.006			
Chloropyrifos	ug/L	1	<1			
Cyanazine	ug/L	1	<1			
Diazinon	ug/L	1	<1			
Dicamba	ug/L	1	<1			
Dieldrin	ug/L	0.006	<0.006			
Diquat	ug/L	7	<7			
2,4-Dichlorophenol	ug/L	0.5	<0.5			
DDT + Metabolites	ug/L	0.024	<0.024			
o,p'-DDT	ug/L	0.006	<0.006			
p,p'-DDT	ug/L	0.006	<0.006			
2,4-D	ug/L	1	<1			
p,p'-DDE	ug/L	0.006	<0.006			

NOTE: mg/L=1000xug/L

MDL = Method Detection Limit

Comment:

APPROVAL:

146 Colonnade Road, Unit 8, Nepean, Ontario K2E 7Y1 Tel:(613)727-5692 Fax:(613)727-5222

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REPORT OF ANALYSIS

Client: CHESTERVILLE WELL SUPPLY

ATT: Mr. Blair Henderson

Report Number: 2210849
Date: 2002-08-29
Date Submitted: 2002-08-09

Project: Chesterville Wells

Sample Matrix: Supply Water

	LAB ID:	198037				
	Sample Date:	8/8/02				
	Sample ID:	CW-05				
PARAMETER	**UNITS**	**MDL**				
p,p'-DDD	ug/L	0.006	<0.006			
Diclofop-methyl	ug/L	0.9	<0.9			
Dimethoate	ug/L	2.5	<2.5			
Dinoseb	ug/L	1	<1			
Diuron	ug/L	10	<10			
Glyphosate	ug/L	10	<10			
Heptachlor	ug/L	0.006	<0.006			
Heptachlor epoxide	ug/L	0.006	<0.006			
Heptachlor + Hept. Epoxide	ug/L	0.012	<0.012			
Lindane	ug/L	0.006	<0.006			
Malathion	ug/L	5	<5			
Methoxychlor	ug/L	0.024	<0.024			
Metolachlor	ug/L	0.5	<0.5			
Metribuzin	ug/L	5	<5			
Paraquat	ug/L	1	<1			
Parathion	ug/L	1	<1			
Pentachlorophenol	ug/L	0.5	<0.5			
Phorate	ug/L	0.5	<0.5			
Picloram	ug/L	5	<5			
PCB's (total)	ug/L	0.05	<0.05			
Prometryne	ug/L	0.25	<0.25			
Simazine	ug/L	1	<1			
Temephos	ug/L	10	<10			
Terbufos	ug/L	0.7	<0.7			
2,3,4,6-Tetrachlorophenol	ug/L	0.5	<0.5			
Triallate	ug/L	1	<1			
2,4,6-Trichlorophenol	ug/L	0.5	<0.5			
Trifluralin	ug/L	1	<1			
2,4,5-T	ug/L	1	<1			

NOTE: mg/L=1000xug/L MDL = Method Detection Limit

Comment:

APPROVAL:

146 Colonnade Road, Unit 8, Nepean, Ontario K2E 7Y1 Tel:(613)727-5692 Fax:(613)727-5222

ACCUTEST LABORATORIES LTD.

REPORT OF ANALYSIS

Client: CHESTERVILLE WELL SUPPLY

ATT: Mr. Blair Henderson

Report Number: 2210855
Date: 2002-08-16
Date Submitted: 2002-08-09
Project:
P.O. Number:
Matrix: Supply Water

		LAB ID:	198043				
		Sample Date:	2002-08-08				
		Sample ID:	CW System				
PARAMETER	**UNITS**	**MDL**					
BTEX / 624 / PURGEABLE HYDROCARBONS							
Bromodichloromethane	ug/L	0.3	0.8				
Bromoform	ug/L	0.4	<0.4				
Chloroform	ug/L	0.5	1.1				
Dibromochloromethane	ug/L	0.3	0.7				
TOTALS							
Trihalomethanes (total)	ug/L	2.0	2.6				
BTEX / 624 Surrogate Recoveries							
[redacted]uene-d8	%		97				

MDL = Method Detection Limit INC = Incomplete
Comment:

APPROVAL:

8-146 Colonnade Road, Ottawa, ON, K2E 7Y1

608 Norris Court, Kingston, ON, K7P 2R9

Caduceon Environmental Laboratories

Division of Caduceon Enterprises Inc.

Certificate of Analysis

Client:
[redacted]ario Clean Water Agency
[redacted]dustrial Dr.
Chesterville, ON
K0C 1H0

Attention: **Dave Markell**

Report: **220009259**
Project: Chesterville WTP
Date Sampled: September 3, 2002
Date Received: September 4, 2002
Date Printed: September 06, 2002
Matrix: Drinking Water

Parameter	Background	E. coli	Free Cl2	HPC	TC	Total Cl2
Unit	/100mL	/100mL	mg/L	/mL	/100mL	mg/L
MDL	1	1	0.05	2	1	0.05
Sample ID						
Well #5 Raw	absent	absent			absent	
Well #5 Treated		absent	1.10	absent	absent	1.20
St. Mary's		absent	1.20	2	absent	1.20
Public School		absent	1.00		absent	1.10
D&D Performance		absent	1.20		absent	1.30

Caduceon Environmental Laboratories
2378 Holly Lane, Ottawa, Ontario, K1V 7P1, Canada
Tel: (613)526-0123, Fax: (613)526-1244

Michael Ziebell, General Manager

Caduceon Environmental Laboratories

Division of Caduceon Enterprises Inc.

Certificate of Analysis

Client:
Ontario Clean Water Agency
5 Industrial Dr.
Chesterville, ON
K0C 1H0

Attention: **Dave Markell**

Report: **220009544**
Project: Chesterville WTP
Date Sampled: September 9, 2002
Date Received: September 10, 2002
Date Printed: September 12, 2002
Matrix: Drinking Water

Parameter	Unit	MDL	Sample Identification				
			Well #5 Raw	Well #5 Treated	Dist. MacEwen Petro	Dist. Water Tower	Dist. 5 Industrial Dr.
Total Chlorine	mg/L	0.05		1.20	1.10	1.10	1.10
Free Chlorine	mg/L	0.05		1.20	1.10	1.00	1.00
E. coli	/100mL	1	absent	absent	absent	absent	absent
HPC	/mL	2		absent	absent		
Background bacteria	/100mL	1	absent				
Total Coliforms	/100mL	1	absent	absent	absent	absent	absent

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Michael Ziebell, General Manager

Caduceon Environmental Laboratories

Division of Caduceon Enterprises Inc.

Certificate of Analysis

Client:

Ontario Clean Water Agency
5 Industrial Dr.
Chesterville, ON
K0C 1H0

Attention: **Dave Markell**

Report: **220009885**
Project: Chesterville WTP
Date Sampled: September 16, 2002
Date Received: September 17, 2002
Date Printed: September 19, 2002
Matrix: Drinking Water

Parameter	Background	E. coli	Free Cl2	HPC	TC	Total Cl2
Unit	/100mL	/100mL	mg/L	/mL	/100mL	mg/L
MDL	1	1	0.05	2	1	0.05
Sample ID						
Well #5 Raw	absent	absent			absent	
Well #5 Treated		absent	1.42	absent	absent	1.56
Dist. MT Advertizing		absent	1.40	absent	absent	1.40
Dist. D&D Automotive		absent	1.80		absent	1.80
Dist. Marc's School		absent	1.50		absent	1.50

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Michael Ziebell, General Manager

Caduceon Environmental Laboratories

Division of Caduceon Enterprises Inc.

Certificate of Analysis

Client:
Ontario Clean Water Agency
5 Industrial Dr.
Chesterville, ON
K0C 1H0

Attention: **Dave Markell**

Report: **220010229**
Project: Chesterville WTP
Date Sampled: September 23, 2002
Date Received: September 24, 2002
Date Printed: September 26, 2002
Matrix: Drinking Water

Parameter	Unit	MDL	Sample Identification				
			Well #5 Raw	Well #5 Treated	Dist. Public School	Dist. McEwen Convenience	Dist. 5 Industrial Dr.
Total Chlorine	mg/L	0.05		1.30	1.29	1.36	1.43
Free Chlorine	mg/L	0.05		1.30	1.17	1.22	1.28
E. coli	/100mL	1	absent	absent	absent	absent	absent
HPC	/mL	2		22	absent		
Background bacteria	/100mL	1	absent				
Total Coliforms	/100mL	1	absent	absent	absent	absent	absent

Caduceon Environmental Laboratories
2378 Holly Lane, Ottawa, Ontario, K1V 7P1, Canada
Tel: (613)526-0123, Fax: [redacted]26-1244

Michael Ziebell, [redacted]l Manager

Caduceon Environmental Laboratories

Division of Caduceon Enterprises Inc.

Certificate of Analysis

Client:
Ontario Clean Water Agency
5 Industrial Dr.
Chesterville, ON
K0C 1H0

Attention: **Dave Markell**

Report:	**220010466**
Project:	Chesterville WTP
Date Sampled:	September 30, 2002
Date Received:	October 1, 2002
Date Printed:	October 03, 2002
Matrix:	Drinking Water

Parameter	Unit	MDL	Sample Identification				
			Well #5 Raw	Well #5 Treated	Dist. Canada Post	Dist. Chest SPS	Dist. LCBO
Total Chlorine	mg/L	0.05		1.05	1.10	0.40	1.10
Free Chlorine	mg/L	0.05		1.05	1.10	0.40	1.10
E. coli	/100mL	1	absent	absent	absent	absent	absent
HPC	/mL	2		absent	2		
Background bacteria	/100mL	1	2				
Total Coliforms	/100mL	1	absent	absent	absent	absent	absent

Caduceon Environmental Laboratories
2378 Holly Lane, Ottawa, Ontario, K1V 7P1, Canada
Tel: (613)526-0123, Fax: [redacted]26-1244

Michael Ziebell, [redacted]l Manager

QUARTERLY REPORT ON DRINKING WATER QUALITY

October - December 2002, Chesterville Water Plant - Serving the Village of Chesterville

Chesterville Drinking Water Quality

Ontario Drinking Water Protection Regulations

The Ontario Clean Water Agency, as the contract operator of the Chesterville Water Treatment Facility on behalf of the Township of North Dundas, is pleased to present the 2002 Fourth Quarter Report on drinking water quality. This report has been prepared in response to legislative changes brought about by "Operation Clean Water", an initiative of Ontario's Ministry of the Environment to ensure high quality drinking water for the residents of Ontario. The new regulations put into law what was formerly the Ontario Drinking Water Objectives (ODWO), and sets requirements for public waterworks with regard to sampling and testing, levels of treatment, licensing of staff, and notification of authorities and the public about water quality.

Further information on the Ontario Drinking Water Regulations can be found on the Ministry of the Environment web site at www.ene.gov.on.ca

Where to contact us for information

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Web site at www.ocwa.com

Client Services Representative:
John Kingsbury
Phone : (613) 774-3663
E-mail Address: jkingsbury@ocwa.com

Operations Manager:
Blair Henderson
Phone: (613) 448-3098
E-mail Address: bhenderson@ocwa.com

You may also contact the Township of North Dundas directly.
Howard Smith, C.A.O.
Phone: (613) 774-2105
E-mail Address: info@northdundas.com

Free copies of this report are available at the Township Office at 636 St. Lawrewnce St. Winchester, or their website @ www.northdundas.com

INSIDE THIS REPORT

QUARTERLY REPORT ON DRINKING WATER QUALITY

October - December 2002, Chesterville Water Plant - Serving the Village of Chesterville

We are proud to report that for the period October to December 2002, your water conformed to the Ontario Drinking Water Standards as set out in Ontario Regulation 459/00. The Ontario Clean Water Agency (OCWA) is dedicated to maximizing public health and safety through efficient and reliable operation of your water facility and distribution system.

Plant Description and Treatment Processes

Facility Name:	Chesterville WTP
Total Design Capacity	2,805 cubic meters/day
Raw Water Source	Groundwater
Disinfection Method	Sodium Hypochlorite
Municipal Location	Municipal office, 636 St. Lawrence Street, Winchester
Service Area	Village of Chesterville
Service Population	1,458

Operational Description:

Raw Water Source: Three drilled wells, one duty and two standby. One well located on Queen Street West (Well # 1), two wells (one duty and one standby) located north of County Road 43, Lot 12, Concession 5, Winchester Township (Well # 5).

Low Lift Pumps: Well # 5 low lift pump directs the water to a 650 cubic meter underground reservoir through a low pressure feeder line. Sodium Hypochlorite is injected into the feeder line prior to the underground reservoir.

High Lift Pumps: Two high lift pumps, one duty, one standby, move the treated water from the reservoir into the distribution system and elevated water tower with a storage capacity of 568 cubic meters. Two emergency fire pumps are available when water demand exceeds normal operating capacity.

Distribution System: There are approximately 1,458 persons supplied with water from the Chesterville Water Treatment System.

QUARTERLY REPORT ON DRINKING WATER QUALITY

October - December 2002, Chesterville Water Plant - Serving the Village of Chesterville

Quality Control & Compliance With Provincial Regulations

This plant provides multiple barriers against bacteriological contamination. Bacteriological testing is carried out on raw water, treated water and distribution samples on a regular frequency. On-line analysers for chlorine residuals and turbidity ensure daily monitoring of water leaving the plant. Chlorine levels in the distribution system are also checked on a regular basis. More specialized testing occurs monthly and quarterly and includes Volatile Organics, Inorganics, Pesticides and PCB's.

OCWA uses internal compliance auditing techniques by teams from within the organization. OCWA operates the Chesterville Water Treatment Facility in accordance with provincial regulations. Here is how we do it:

- Use of Accredited Labs. Analytical tests to monitor your water quality are conducted by a laboratory audited by the Canadian Association for Environmental Analytical Laboratories (CAEAL) and accredited by the Standards Council of Canada (SCC). Accreditation ensures that the laboratory has acceptable laboratory protocols and test methods in place. It also requires the laboratory to provide evidence and assurances of the proficiency of the analysts performing the test methods.

- Operation by Licensed Operators. Your water treatment plant is operated and maintained by the Ontario Clean Water Agency's competent and licensed staff. The mandatory licensing program for operators of drinking water facilities is regulated under the *Ontario Water Resources Act (OWRA)* Regulation 435/93. Licensing means that an individual meets the education and experience requirements and has successfully passed the certificate exam.

- Sampling and Analytical requirements. OCWA follows a sampling and analysis schedule required by *OWRA* Regulation 459/00, the Ontario Drinking Water Standards. More information on sampling and analysis including results are available in this report and from your municipal office.

- Adherence to Ministry Guidelines and Procedures. To ensure the protection of the health and operational excellence, the OCWA adheres to the guidelines and procedures developed by the Ministry of the Environment and the Ministry of Health

Annual Compliance Report

The Annual Compliance Report covers the period from January 1, 2002 to December 31, 2002. Copies of the report will be made available for inspection by any member of the public during normal business hours without charge at the Township Office. The Annual Compliance Rport for 2002 will be completed and made available not later than March 31, 2003.

The Compliance Report will include, at a minimum, the following:

- A statement as to compliance with all of the terms and conditions of the certificate and a detailed description of all of the measures taken to ensure compliance with the certificate, including and supporting data or other information;
- In the event of any non-compliance during the reporting period, details of the non-compliance as well as details of how and when any non-compliance was corrected;
- A summary and discussion of the quantity of water supplied during the reporting period compared to the rated capacity specified in the Certificate of Approval, including monthly average and maximum daily flows;
- A summary of records related to flow rate excedences, and a summary of analytical results of sampling required by the certificate, including raw water and in-process parameters as specified in the operations manual in accordance with the Certificate of Approval;
- A summary listing treatment chemicals used, including average dosage rates with special reference to any abnormal usages

Did We Exceed the Standards?

During the fourth quarter 2002, in the month of October, two water samples were found to exceed the Ontario Drinking Water Standards as set out in Ontario Regulation 459/00. On October 7, 2002, the distribution sample collected at the Nestle's Lagoon Laboratory sink faucet was found to have an overgrown HPC count. There were no E. Coli or Total Coliforms present. Subsequent resampling as per Reg. 459 was completed with no adverse results. On October 21, 2002, the treated sample collected at Well #5 was found to have an overgrown HPC count. There were no E. coli or Total Coliforms present. Subsequent resampling as per Reg. 459 was completed with no adverse results.

On each occasion, the Ministry of Environment and the Ministry of Health were immediately notified as per the Ontario Drinking Water Standards.

QUARTERLY REPORT ON DRINKING WATER QUALITY

October - December 2002, Chesterville Water Plant - Serving the Village of Chesterville

Definitions & Terms

m^3 - Cubic Meter, 1 m^3 = 1000 litres
TCU - True Colour Units
$CaCO_3$ - Calcium Carbonate
mg - milligram
mg/L - milligrams per litre.
ug/L - micrograms per litre.
ng/L - nanograms per litre.
NTU - Nephelometric Turbidity Units.
MAC - Maximum Acceptable Concentration
IMAC - Interim Maximum Acceptable Concentration

Coliform Bacteria - a group of commonly occurring rod shaped bacteria. Their presence in a water sample is indicative of inadequate filtration and/or disinfection.
Fecal Coliform Bacteria - refers to a subgroup of coliform bacteria present in the digestive system of warm blooded animals and humans
Background Count - a method of measuring bacterial content in water samples
Heterotrophic Plate Count - a method of measuring bacterial content in water samples. Also known as Standard Plate Count.
Organic Parameter - a group of chemical compounds containing carbon
Inorganic Parameter - a group of chemical compounds not containing carbon
Raw Water - Surface or ground water available as a source of drinking water that has not received any treatment.

Required Testing

The Ontario Drinking Water Regulations and Certificates of Approval (C of A) set sampling requirements for the plant. All other sampling conforms to the Drinking Water Protection Regulation schedule for sampling and analysis. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases can pick up substances resulting from the presence of animals or from human activity. Your water is extensively tested for the presence of dozens of compounds. The results of all analytical tests are available at your municipal office. The following table lists all compounds analyzed.

QUARTERLY REPORT ON DRINKING WATER QUALITY

October - December 2002, Chesterville Water Plant - Serving the Village of Chesterville

Chesterville Water Quality Test Results

Microbiological Parameters	MAC or IMAC	# of Samples	# of Detectable Results	Sampling Dates	Range	Exceedence?	Typical Source of Containment
Total Coliform,Raw (CFU/100mL)	n/a	15	0	10/07 - 12/30 weekly	n/a	n/a	Indicate possible presence of fecal matter
E. Coli, Raw (CFU/100 mL)	n/a	15	0	10/07 - 12/30 weekly	n/a	n/a	Definite indicator of fecal contamination
Background Count, Raw (CFU/100 mL)	n/a	13	2	10/07 - 12/30 weekly	1-4	n/a	Indicator of adverse water quality
Hetrotrophic Plate Count, Raw (CFU/1 mL)	n/a	2	1	10/07 - 12/30 weekly	2	n/a	Indicator of adverse water quality
Total Coliform, Treated (CFU/100mL)	0	15	0	10/07 - 12/30 weekly	n/a	no	Indicate possible presence of fecal matter
E. coli, Treated (CFU/100 mL)	0	15	0	10/07 - 12/30 weekly	n/a	no	Definite indicator of fecal contamination
Hetrotrophic Plate Count, Treated (CFU/1 mL)	500	15	3	10/07 - 12/30 weekly	4 - >500	yes	Indicator of adverse water quality
Total Coliform, Dist. (CFU/100mL)	0	62	0	10/07 - 12/30 weekly	n/a	no	Indicate possible presence of fecal matter
E. Coli, Dist. (CFU/100 mL)	0	62	0	10/07 - 12/30 weekly	n/a	no	Definite indicator of fecal contamination
Hetrotrophic Plate Count, Dist. (CFU/1 mL)	500	36	4	10/07 - 12/30 weekly	2->500	yes	Indicator of adverse water quality

Parameters related to Microbiological Quality	MAC or IMAC	# of Samples	# of Detectable Results	Sampling Dates (m/d/y)	Range	Exceedence	Typical Source of Contaminant
Turbidity (NTU)	1	Continuous	Continuous	10/01/02 - 12/31/02	0.05-0.27	no	Turbidity is a measure of particles in water
Free Chlorine – Plant Effluent (mg/l)	-	Continuous	continuous	10/01/02 - 12/31/02	0.88-1.21	no	Chlorine added for Disinfection
Free Chlorine- Distribution (mg/l min 0.05 & max. 4.0)	-	Grab Sample weekly	Weekly	10/07/02 - 12/30/02	0.6-1.3	no	Objective is 0.20 mg/l in the Distribution System (min. 0.05 mg/l required)

Comments: MAC/IMAC values do not apply to Raw Water results. MOE recommend a level of at least 0.2 mg/l free chlorine residual in system to maintain microbiological quality in system. Adverse water quality occurs when the free chlorine residual is less than 0.05mg/l.

QUARTERLY REPORT ON DRINKING WATER QUALITY

October - December 2002, Chesterville Water Plant - Serving the Village of Chesterville

Inorganic Parameters (mg/l)	MAC or IMAC	# of Samples	# of Detectable Results	Sampling Dates (m/d/y)	Range	Exceedence	Typical Source of Contaminant
Lead - Distribution	0.01	1	1	01/21/02	<0.001	no	Leached from lead solder or brass plumbing fixtures
Nitrate	10	1	1	10/15/02	<0.1	no	Natural component of water
Nitrite	1	1	1	10/15/02	<0.1	no	
Arsenic	IMAC= 0.025	1	1	09/18/00	<0.001	no	
Barium	1	1	1	09/18/00	0.18	no	
Boron	IMAC= 5.0	1	1	09/18/00	0.01	no	
Cadmium	0.005	1	1	09/18/00	<0.0001	no	
Chromium (Total)	0.05	1	1	09/18/00	<0.01	no	
Copper	1	1	1	09/18/00	0.004	no	
Iron	0.3	1	1	01/28/02	<0.01	no	
Lead	0.01	1	1	09/18/00	<0.001	no	
Manganese	0.05	1	1	09/18/00	<0.01	no	
Mercury	0.001	1	1	09/18/00	<0.0001	no	
Selenium	0.01	1	1	09/18/00	<0.001	no	
Uranium	0.1	1	1	09/18/00	0.001	no	
Sodium	200	1	1	01/28/02 -02/13/02	23-26	no	
Fluoride	2.4	1	1	01/28/02	0.15	no	

Volatile Organics (ug/l)	MAC or IMAC	# of Samples	# of Detectable Results	Sampling Dates (m/d/y)	Range	Exceedence	Typical Source of Contaminant
Trihalomethanes - Plant	100	1	1	10/15/02	7.2	no	
Trihalomethanes - Dist.	100	1	1	10/15/02	9.3	no	
Benzene	5	1	1	10/15/02	<0.5	no	
Carbon Tetrachloride	5	1	1	10/15/02	<0.9	no	
Dichloromethane	50	1	1	10/15/02	<4.0	no	
1,2 - Dichlorobenzene	200	1	1	10/15/02	<0.4	no	
1, 4 - Dichlorobenzene	5	1	1	10/15/02	<0.4	no	
1,2 - Dichloroethane	IMAC= 5	1	1	10/15/02	<0.7	no	
1,1 - Dichloroethylene	14	1	1	10/15/02	<0.5	no	
Ethylbenzene	24	1	1	10/15/02	<0.5	no	
Monochlorobenzene	80	1	1	10/15/02	<0.2	no	
Tetrachloroethylene	30	1	1	10/15/02	<0.3	no	
Toluene	24	1	1	10/15/02	<0.5	no	
Trichloroethlyene	50	1	1	10/15/02	<0.3	no	
Vinyl chloride	2	1	1	10/15/02	<0.5	no	
Xylene	300	1	1	10/15/02	<2.0	no	
Bromodichloromethane	n/a	1	1	10/15/02	2.3	no	
Bromoform	n/a	1	1	10/15/02	<0.4	no	
Chloroform	n/a	1	1	10/15/02	3.5	no	
Dibromochloromethane	n/a	1	1	10/15/02	1.4	no	

QUARTERLY REPORT ON DRINKING WATER QUALITY

October - December 2002, Chesterville Water Plant - Serving the Village of Chesterville

Pesticides & PCB (ug/L)	MAC or IMAC	# of Samples	# of Detectable Results	Sampling Dates (m/d/y)	Range	Exceedence	Typical Source of Contaminant
Alachlor	IMAC=5	1	1	10/15/02	<0.5	no	
Aldicarb	9	1	1	10/15/02	<5.0	no	
Aldrin+Dieldrin	0.7	1	1	10/15/02	<0.012	no	
Atrazine	IMAC=5	1	1	10/15/02	<0.5	no	
Azinphos-methyl	20	1	1	10/15/02	<2.0	no	
Bendiocarb	40	1	1	10/15/02	<2.0	no	
Bromoxynil	IMAC=5	1	1	10/15/02	<0.5	no	
Carbaryl	90	1	1	10/15/02	<5.0	no	
Carbofuran	90	1	1	10/15/02	<5.0	no	
Chlordane	7	1	1	10/15/02	<0.012	no	
Chorpyrifos	90	1	1	10/15/02	<1.0	no	
Cyanazine	IMAC=10	1	1	10/15/02	<1.0	no	
Diazinon	20	1	1	10/15/02	<1.0	no	
Dicamba	120	1	1	10/15/02	<1.0	no	
2,4 Dichlorophenol	900	1	1	10/15/02	<0.5	no	
DDT + Metapolites	30	1	1	10/15/02	<0.024	no	
2,4 - Dichlorophenexy acid (2,4 -D)	IMAC=100	1	1	10/15/02	<1.0	no	
Diclofop-methyl	9	1	1	10/15/02	<0.9	no	
Dimethoate	IMAC=20	1	1	10/15/02	<2.5	no	
Dinoseb	10	1	1	10/15/02	<1.0	no	
Diquat	70	1	1	10/15/02	<7	no	
Diuron	150	1	1	10/15/02	<10	no	
Glyphosate	IMAC=280	1	1	10/15/02	<10	no	
Heprachlor + Heptachlor epoxide	3	1	1	10/15/02	<0.012	no	
Lindane	4	1	1	10/15/02	<0.006	no	
Malathion	190	1	1	10/15/02	<5.0	no	
Methoxychlor	900	1	1	10/15/02	<0.024	no	
Metolachlor	IMAC=50	1	1	10/15/02	<0.5	no	
Metribuzin	80	1	1	10/15/02	<5.0	no	
Paraquat	IMAC=10	1	1	10/15/02	<1.0	no	
Parathion	50	1	1	10/15/02	<1.0	no	
Pentachlorophenol	60	1	1	10/15/02	<0.5	no	
Phorate	IMAC=2	1	1	10/15/02	<0.5	no	
Picloram	IMAC=190	1	1	10/15/02	<5.0	no	
Polychlorinated Biphenyls	IMAC=3	1	1	10/15/02	<0.05	no	
Prometryne	IMAC=1	1	1	10/15/02	<0.25	no	
Simazine	IMAC=10	1	1	10/15/02	<1.0	no	
Temephos	IMAC=280	1	1	10/15/02	<10	no	
Terbufos	IMAC=1	1	1	10/15/02	<0.7	no	
2,3,4,6 Tetrachlorophenol	100	1	1	10/15/02	<0.5	no	
Triallate	230	1	1	10/15/02	<1.0	no	
Pesticides & PCB	MAC or	# of	# of	Sampling	Range	Exceedence	Typical Source of

QUARTERLY REPORT ON DRINKING WATER QUALITY

October - December 2002, Chesterville Water Plant - Serving the Village of Chesterville

(cont'd) (ug/L)	IMAC	Samples	Detectable Results	Dates (m/d/y)			Contaminant
2,4,6-Trichlorophenol	5	1	1	10/15/02	<0.5	no	
2,4,5 - trichlorophenoxy acedic acid	IMAC=280	1	1	10/15/02	<1.0	no	
Trifluralin	45	1	1	10/15/02	<1.0	no	

Additional Parameters Non-Health Related (mg/L)	AO or OG	# of Samples	# of Detectable Results	Sampling Dates (m/d/y)	Range	Exceedance	Typical Source of Contaminant
Colour	5	1	1	01/28/02	<2	no	
pH	6.8-8.5	1	1	01/28/02	7.93	no	
Alkalinity	30-500	1	1	01/28/02	200	no	
Total Hardness	80-100	1	1	01/28/02	256	yes	Limits are set as an operational guideline
Sulphate	500	1	1	01/28/02	53	no	
Conductivity	---	1	1	01/28/02	578	no	
Chloride	250	1	1	01/28/02	39	no	
Free Ammonia	---	1	1	01/28/02	<0.02	no	
Total Kjeldahl Nitrogen	---	1	1	01/28/02	<0.05	no	
Dissolved Organic Carbon	5	1	1	01/28/02	<0.5	no	
Calcium	---	1	1	01/28/02	63	no	
Magnesium	---	1	1	01/28/02	24	no	
Ammonia Unionized	---	1	1	01/28/02	<0.02	no	

Comment: Hardness (inorganic)

The operational guideline for hardness in drinking water is set at between 80 and 100 mg/L as calcium carbonate. This value is set to aid in water source selection where a choice exists. Hardness is caused by dissolved calcium and magnesium, and is expressed as the equivalent quantity of calcium carbonate. On heating, hard water has a tendency to form scale deposits and can form excessive scum with regular soaps. However, certain detergents are largely unaffected by hardness. Conversely, soft water may result in accelerated corrosion of water pipes. Hardness levels between 80 and 100 mg/L as calcium carbonate ($CaCO_3$) are considered to provide an acceptable balance between corrosion and encrustation. Water supplies with a hardness greater than 200 mg/L are considered poor but tolerable. Hardness in excess of 500 mg/L in drinking water is unacceptable for most domestic purposes.

Questions & Answers

Q. *What is an Accredited Laboratory?*

A. Accredited labs must have undergone an on-site assessment and performance review of their methods by the Canadian Association of Environmental and Analytical Laboratories. The Standards Council of Canada grants accreditation to the lab based on the recommendation of the CAEAL. The accreditation requirements are repeated every two years.

Q. *What had to be done to meet the new regulations?*

A. The Chesterville Water Treatment Plant was following the Ontario Drinking Water Objectives (ODWO) before they became law, so little change was required to meet the new regulations. Our chlorine residual in the water leaving the plant was raised slightly to achieve the (0.20 mg/L free chlorine) required level in the distribution system, and some changes were required in the way results are reported. This report to the public is also the result of the new regulations.

Q. *What parameters did you test for?*

A. Microbiological parameters, volatile organic, inorganic and pesticides & PCBs have been tested. The results are included in this report.

Q. *Sometimes my water looks rusty or coloured. Why is that, and what should I do about it?*

A. This is quite often caused when the tanks in older water heaters start to decay. If the colour is seen only in your hot water, this may be the problem. If the colour is also noticed in your cold water it could be coming from the water main. Various maintenance procedures in the distribution system - such as fire hydrant and valve maintenance, or main break repairs - require flushing of the water mains. Flushing can cause small particles of sediment to break off adding colour to the water. Please note that there is no health risk associated with this problem. This is usually only temporary, and opening your taps for a while to flush out your service line (the pipe from the water main to your house) should take care of the problem. Let the water run until the colour disappears.

CHESTERVILLE WATER REQUIRED SAMPLES

OCTOBER,NOVEMBER,DECEMBER 2002

Chemical Parameters

			Date Samples Collected	Initials	Date Results Received	Initials
Table B & D		Treated ✓	Oct 15	Dave	Oct/Nov	Dave
NO2&NO3		Treated ✓	"	"		"
			"	"		
System THM		Treated ✓	"	"		"
Flouride	annual	Treated ✓				

Bacti Parameters

Raw			
Well#5	E.Coli	Total Coli.	Background
Treated			
	E.Coli	Total Coli.	HPC
System			
3 Sites	E.Coli	Total Coli.	HPC 25%

Oct.6	Bacti's	✓	Oct 7	Dave	Oct 10	Dave
Oct.13	Bacti's	✓	15/10	Dave	18/10	Dave
Oct.20	Bacti's	✓	Oct 21	JV	Oct 24	Dave
Oct.27	Bacti's	✓	Oct 28	AJB	Oct 31	Dave
Nov.3	Bacti's	✓	Nov 4	AJB	Nov 7	Dave
Nov.10	Bacti's	✓	12th	JV	15th	Dave
Nov.17	Bacti's	✓	18th	JV	21	Dave
Nov.24	Bacti's	✓	25	Dave	28	Dave
Dec.1	Bacti's	✓	Dec 2	Dave	Dec 5	Dave
Dec.8	Bacti's	✓	Dec 9	Dave	Dec 12	JV
Dec.15	Bacti's	✓	Dec 16	JV	Dec 19	JV
Dec.22	Bacti's	✓	Dec 23	AJB	Dec 27	Dave
Dec.29	Bacti's	✓	Dec 30	Dave	Jan 2	Dave
				Dave		

Flouride Treated Water (Annual) ✓
Lead Distribution System (Annual) ✓
Table C Treated Water (Jan. 2003)
Sodium Treated Water (Jan. 2007)

			Dave

Caduceon Environmental Laboratories

Division of Caduceon Enterprises Inc.

Certificate of Analysis

Client:
Ontario Clean Water Agency
5 Industrial Dr.
Chesterville, ON
K0C 1H0

Attention: **Dave Markell**

Report: **220010886**
Project: Chesterville WTP
Date Sampled: October 7, 2002
Date Received: October 8, 2002
Date Printed: October 10, 2002
Matrix: Drinking Water

Parameter	Unit	MDL	Sample Identification				
			Well #5 Raw	Well #5 Treated	Nestle Lagoons Lab	St-Mary's School	37 Joseph St.
Total Chlorine	mg/L	0.05		1.40	0.80	1.20	1.10
Free Chlorine	mg/L	0.05		1.30	0.80	1.20	1.10
E. coli	/100mL	1	absent	absent	absent	absent	absent
HPC	/mL	2		absent	OG		
Background bacteria	/100mL	1	absent				
Total Coliforms	/100mL	1	absent	absent	absent	absent	absent

ADVERSE CONDITION

OG - Overgrown

Caduceon Environmental Laboratories
2378 Holly Lane, Ottawa, Ontario, K1V 7P1, Canada
Tel: (613)526-0123, Fax: [redacted]26-1244

Michael [redacted]

Caduceon Environmental Laboratories

Division of Caduceon Enterprises Inc.

Certificate of Analysis

Client:
Ontario Clean Water Agency
Industrial Dr.
Chesterville, ON
K0C 1H0

Attention: **Dave Markell**

Report: **220011076**
Project: Chesterville WTP
Date Sampled: October 10, 2002
Date Received: October 11, 2002
Date Printed: October 15, 2002
Matrix: Drinking Water

Parameter	Unit	MDL	Sample Identification		
			Nestle's Lagoon Lab CW-03	61 Emma St. CW-04	Curran's Esso CW-05
Total Chlorine	mg/L	0.05	0.96	1.14	1.09
Free Chlorine	mg/L	0.05	0.82	1.01	0.96
E. coli	/100mL	1	absent	absent	absent
Heterotrophic Plate Count	/mL	2	absent	absent	absent
Total Coliforms	/100mL	1	absent	absent	absent

Caduceon Environmental Laboratories
2378 Holly Lane, Ottawa, Ontario, K1V 7P1, Canada
Tel: (613)526-0123, Fax: (613)526-1244

Michael Ziebell, General Manager

Caduceon Environmental Laboratories

Division of Caduceon Enterprises Inc.

Certificate of Analysis

Client:
Ontario Clean Water Agency
[illegible]ndustrial Dr.
Chesterville, ON
K0C 1H0

Attention: **Dave Markell**

Report: **220011077**
Project: Chesterville WTP
Date Sampled: October 11, 2002
Date Received: October 11, 2002
Date Printed: October 15, 2002
Matrix: Drinking Water

Parameter	Unit	MDL	Sample Identification		
			Nestle's Lagoon Lab CW-03	61 Emma CW-04	Curran Esso CW-05
Total Chlorine	mg/L	0.05	1.16	1.20	1.28
Free Chlorine	mg/L	0.05	1.08	1.06	1.19
E. coli	/100mL	1	absent	absent	absent
Heterotrophic Plate Count	/mL	2	8	absent	absent
Total Coliforms	/100mL	1	absent	absent	absent

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Michael Ziebell, General Manager

Caduceon Environmental Laboratories

Division of Caduceon Enterprises Inc.

Certificate of Analysis

Client:
Ontario Clean Water Agency
[redacted] Industrial Dr.
Chesterville, ON
K0C 1H0

Attention: **Dave Markell**

Report: **220011201**
Project: Chesterville WTP
Date Sampled: October 15, 2002
Date Received: October 16, 2002
Date Printed: October 18, 2002
Matrix: Drinking Water

Parameter	Background	E. coli	Free Cl2	HPC	TC	Total Cl2
Unit	/100mL	/100mL	mg/L	/mL	/100mL	mg/L
MDL	1	1	0.05	2	1	0.05
Sample ID						
Well #5 Raw	absent	absent			absent	
Well #5 Treated		absent	1.04	absent	absent	1.10
Dist. D&D Performance		absent	1.01	absent	absent	1.10
Dist. Chesterville SPS		absent	0.60		absent	0.65
Dist. 5 Industrial		absent	1.01		absent	1.03

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Certificate of Analysis

Client:
Ontario Clean Water Agency
[redacted]Industrial Dr.
Chesterville, ON
K0C 1H0

Attention: **Dave Markell**

Report: **220011474**
Project: Chesterville WTP
Date Sampled: October 21, 2002
Date Received: October 22, 2002
Date Printed: October 24, 2002
Matrix: Drinking Water

Parameter	Background	E. coli	Free Cl2	HPC	TC	Total Cl2
Unit	/100mL	/100mL	mg/L	/mL	/100mL	mg/L
MDL	1	1	0.05	2	1	0.05
Sample ID						
Well #5 Raw	absent	absent			absent	
Well #5 Treated		absent	1.00	OG	absent	1.20
Dist. Public School		absent	0.90	2	absent	1.00
Dist. MacEwen Gas Bar		absent	1.10		absent	1.20
Dist. 5 Industrial Dr.		absent	1.20		absent	1.30

ADVERSE CONDITION

[redacted]G - Over Grown

Caduceon Environmental Laboratories
2378 Holly Lane, Ottawa, Ontario, K1V 7P1, Canada
Tel: (613)526-0123, Fax: (613)526-1244

For Michael Ziebell, General Manager

Caduceon Environmental Laboratories

Division of Caduceon Enterprises Inc.

Certificate of Analysis

Client:
[O]ntario Clean Water Agency
[I]ndustrial Dr.
Chesterville, ON
K0C 1H0

Attention: **Dave Markell**

Report: **220011742**
Project: Chesterville WTP
Date Sampled: October 24, 2002
Date Received: October 25, 2002
Date Printed: October 28, 2002

Matrix: Drinking Water

Parameter	Unit	MDL	Sample Identification		
			Well #5 Raw	Well #5 Treated	Dist. 5 Industrial
Total Chlorine	mg/L	0.05		1.11	1.06
Free Chlorine	mg/L	0.05		1.02	1.00
E. coli	/100mL	1	absent	absent	absent
Heterotrophic Plate Count	/mL	2	absent	absent	absent
Total Coliforms	/100mL	1	absent	absent	absent

Caduceon Environmental Laboratories
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Tel: (613)526-0123, Fax: (613)526-1244

Michael Ziebell, General Manager

Caduceon Environmental Laboratories

Division of Caduceon Enterprises Inc.

Certificate of Analysis

Client:
[illegible]ntario Clean Water Agency
[illegible]ndustrial Dr.
Chesterville, ON
K0C 1H0

Attention: **Dave Markell**

Report: **220011741**
Project: Chesterville WTP
Date Sampled: October 25, 2002
Date Received: October 25, 2002
Date Printed: October 28, 2002
Matrix: Drinking Water

Parameter	Unit	MDL	Sample Identification		
			Well #5 Raw	Well #5 Treated	Dist. 5 Industrial Dr.
Total Chlorine	mg/L	0.05		1.18	1.15
Free Chlorine	mg/L	0.05		1.03	1.00
E. coli	/100mL	1	absent	absent	absent
Heterotrophic Plate Count	/mL	2	2	4	absent
Total Coliforms	/100mL	1	absent	absent	absent

Caduceon Environmental Laboratories
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Tel: (613)526-0123, Fax: (613)526-1244

Michael Ziebell, General Manager

Caduceon Environmental Laboratories

Division of Caduceon Enterprises Inc.

Certificate of Analysis

Client:
Ontario Clean Water Agency
[redacted]ndustrial Dr.
Chesterville, ON
K0C 1H0

Attention: **Dave Markell**

Report: **220011848**
Project: Chesterville WTP
Date Sampled: October 28, 2002
Date Received: October 29, 2002
Date Printed: October 31, 2002
Matrix: Drinking Water

Parameter	Background	E. coli	Free Cl2	HPC	TC	Total Cl2
Unit	/100mL	/100mL	mg/L	/mL	/100mL	mg/L
MDL	1	1	0.05	2	1	0.05
Sample ID						
Well #5 Raw	4	absent			absent	
Well #5 Treated		absent	1.10	4	absent	1.15
Dist. 20 Riverside		absent	1.00	absent	absent	1.00
Dist. Public School		absent	0.90		absent	1.00
Dist. Liquor Store		absent	1.00		absent	1.10

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Tel: (613)526-0123, Fax: (613)526-1244

Michael Ziebell, General Manager

ACCUTEST LABORATORIES LTD.

REPORT OF ANALYSIS

Client: CHESTERVILLE WELL SUPPLY

ATT: Mr. Blair Henderson

Report Number: 2214339
Date: 2002-10-22
Date Submitted: 2002-10-16

Project: Quarterly Chemicals

P.O. Number:
Matrix: Supply Water

		LAB ID:	210872				
		Sample Date:	2002-10-15				
		Sample ID:	CW-01 Treated Water Well #5				
PARAMETER	**UNITS**	**MDL**	TREATEDWATER				
N-NO2	mg/L	0.10	<0.10				
N-NO3	mg/L	0.10	<0.10				

MDL = Method Detection Limit INC = Incomplete
Comment:

APPROVAL: _____

8-146 Colonnade Road, Ottawa, ON, K2E 7Y1

608 Norris Court, Kingston, ON, K7P 2R9

ACCUTEST LABORATORIES LTD.

REPORT OF ANALYSIS

Client: CHESTERVILLE WELL SUPPLY

ATT: Mr. Blair Henderson

Report Number: 2214339
Date: 2002-10-21
Date Submitted: 2002-10-16

Project: Quarterly Chemicals

P.O. Number:
Matrix: Supply Water

			LAB ID:	210872	210873			
			Sample Date:	2002-10-15	2002-10-15			
			Sample ID:	CW-01 Treated Water Well	CW-001			
PARAMETER	**UNITS**	**MDL**						
BTEX / 624 / PURGEABLE HYDROCARBONS								
Benzene	ug/L	0.5		<0.5				
Toluene	ug/L	0.5		<0.5				
Ethylbenzene	ug/L	0.5		<0.5				
m/p-xylene	ug/L	1.0		<1.0				
o-xylene	ug/L	0.5		<0.5				
Bromodichloromethane	ug/L	0.3		2.3	2.6			
Bromoform	ug/L	0.4		<0.4	<0.4			
Carbon Tetrachloride	ug/L	0.9		<0.9				
[illegible]ochlorobenzene	ug/L	0.2		<0.2				
Chloroform	ug/L	0.5		3.5	5.3			
Dibromochloromethane	ug/L	0.3		1.4	1.4			
1,2-dichlorobenzene	ug/L	0.4		<0.4				
1,4-dichlorobenzene	ug/L	0.4		<0.4				
1,2-dichloroethane	ug/L	0.7		<0.7				
1,1-dichloroethylene	ug/L	0.5		<0.5				
Dichloromethane	ug/L	4.0		<4.0				
Tetrachloroethylene	ug/L	0.3		<0.3				
Trichloroethylene	ug/L	0.3		<0.3				
Vinyl Chloride	ug/L	0.5		<0.5				
TOTALS								
Trihalomethanes (total)	ug/L	2.0		7.2	9.3			
Xylene; total	ug/L	2.0		<2.0				
BTEX / 624 Surrogate Recoveries								
Toluene-d8	%			97	97			
1,2-dichloroethane-d4	%			99				
4-bromofluorobenzene	%			100				

MDL = Method Detection Limit INC = Incomplete
Comment:

APPROVAL:

8-146 Colonnade Road, Ottawa, ON, K2E 7Y1 608 Norris Court, Kingston, ON, K7P 2R9

ACCUTEST LABORATORIES LTD.

REPORT OF ANALYSIS

Client: CHESTERVILLE WELL SUPPLY

ATT: Mr. Blair Henderson

Report Number: 2214339
Date: 2002-10-31
Date Submitted: 2002-10-16

Project: Quarterly Chemicals

Sample Matrix: Supply Water

		LAB ID:	210872			
		Sample Date:	2002-10-15			
		Sample ID:	CW-01 Treated Water Well #5			
PARAMETER	**UNITS**	**MDL**				
PESTICIDES & PCB's						
Alachlor	ug/L	0.5	<0.5			
Aldicarb	ug/L	5	<5			
Aldrin	ug/L	0.006	<0.006			
Aldrin + Dieldrin	ug/L	0.012	<0.012			
Atrazine	ug/L	0.5	<0.5			
Desethyl-atrazine	ug/L	0.5	<0.5			
Atrazine+Desethyl-atrazine	ug/L	1	<1			
Azinphos-methyl	ug/L	2	<2			
Bendiocarb	ug/L	2	<2			
Bromoxynil	ug/L	0.5	<0.5			
Carbaryl	ug/L	5	<5			
Carbofuran	ug/L	5	<5			
Chlordane (Total)	ug/L	0.012	<0.012			
a-Chlorodane	ug/L	0.006	<0.006			
g-Chlorodane	ug/L	0.006	<0.006			
Oxychlorodane	ug/L	0.006	<0.006			
Chloropyrifos	ug/L	1	<1			
Cyanazine	ug/L	1	<1			
Diazinon	ug/L	1	<1			
Dicamba	ug/L	1	<1			
Dieldrin	ug/L	0.006	<0.006			
Diquat	ug/L	7	<7			
2,4-Dichlorophenol	ug/L	0.5	<0.5			
DDT + Metabolites	ug/L	0.024	<0.024			
o,p'-DDT	ug/L	0.006	<0.006			
p,p'-DDT	ug/L	0.006	<0.006			
2,4-D	ug/L	1	<1			
p,p'-DDE	ug/L	0.006	<0.006			

NOTE: mg/L (ppm)=1000xug/L (ppb) MDL = Method Detection Limit

Comment:

APPROVAL:

146 Colonnade Road, Unit 8, Nepean, Ontario K2E 7Y1 Tel:(613)727-5692 Fax:(613)727-5222

ACCUTEST LABORATORIES LTD.

REPORT OF ANALYSIS

Client: CHESTERVILLE WELL SUPPLY

ATT: Mr. Blair Henderson

Report Number: 2214339
Date: 2002-10-31
Date Submitted: 2002-10-16

Project: Quarterly Chemicals

Sample Matrix: Supply Water

		LAB ID:	210872				
		Sample Date:	2002-10-15				
		Sample ID:	CW-01 Treated Water Well				
PARAMETER	**UNITS**	**MDL**					
p,p'-DDD	ug/L	0.006	<0.006				
Diclofop-methyl	ug/L	0.9	<0.9				
Dimethoate	ug/L	2.5	<2.5				
Dinoseb	ug/L	1	<1				
Diuron	ug/L	10	<10				
Glyphosate	ug/L	10	<10				
Heptachlor	ug/L	0.006	<0.006				
Heptachlor epoxide	ug/L	0.006	<0.006				
Heptachlor + Hept. Epoxide	ug/L	0.012	<0.012				
Lindane	ug/L	0.006	<0.006				
Malathion	ug/L	5	<5				
Methoxychlor	ug/L	0.024	<0.024				
Metolachlor	ug/L	0.5	<0.5				
Metribuzin	ug/L	5	<5				
Paraquat	ug/L	1	<1				
Parathion	ug/L	1	<1				
Pentachlorophenol	ug/L	0.5	<0.5				
Phorate	ug/L	0.5	<0.5				
Picloram	ug/L	5	<5				
PCB's (total)	ug/L	0.05	<0.05				
Prometryne	ug/L	0.25	<0.25				
Simazine	ug/L	1	<1				
Temephos	ug/L	10	<10				
Terbufos	ug/L	0.7	<0.7				
2,3,4,6-Tetrachlorophenol	ug/L	0.5	<0.5				
Triallate	ug/L	1	<1				
2,4,6-Trichlorophenol	ug/L	0.5	<0.5				
Trifluralin	ug/L	1	<1				
2,4,5-T	ug/L	1	<1				

NOTE: mg/L (ppm)=1000xug/L (ppb) MDL = Method Detection Limit

Comment:

APPROVAL:

146 Colonnade Road, Unit 8, Nepean, Ontario K2E 7Y1 Tel:(613)727-5692 Fax:(613)727-5222

Caduceon Environmental Laboratories

Division of Caduceon Enterprises Inc.

Certificate of Analysis

Client:
Ontario Clean Water Agency
5 Industrial Dr.
Chesterville, ON
K0C 1H0

Attention: **Dave Markell**

Report: **220012191**
Project: Chesterville WTP
Date Sampled: November 4, 2002
Date Received: November 5, 2002
Date Printed: November 07, 2002
Matrix: Drinking Water

Parameter	Unit	MDL	Sample Identification				
			Well #5 Raw	Well #6 Treated - Lot 12, Conc. 5, Hwy 43, Chester	Dist. D&D Performance	Dist. Stinson	Dist. 5 Industrial
Total Chlorine	mg/L	0.05		1.20	1.10	1.10	1.20
Free Chlorine	mg/L	0.05		1.10	1.00	1.10	1.10
E. coli	/100mL	1	absent	absent	absent	absent	absent
HPC	/mL	2		absent	absent		
Background bacteria	/100mL	1	absent				
Total Coliforms	/100mL	1	absent	absent	absent	absent	absent

Caduceon Environmental Laboratories
2378 Holly Lane, Ottawa, Ontario, K1V 7P1, Canada
Tel: (613)526-0123, Fax: (613)526-1244

For Michael Ziebell, General Manager

Caduceon Environmental Laboratories

Division of Caduceon Enterprises Inc.

Certificate of Analysis

Client:
Ontario Clean Water Agency
[illegible] Industrial Dr.
Chesterville, ON
K0C 1H0

Attention: **Dave Markell**

Report: **220012676**
Project: Chesterville WTP
Date Sampled: November 12, 2002
Date Received: November 13, 2002
Date Printed: November 15, 2002
Matrix: Drinking Water

Parameter	Background	E. coli	Free Cl2	HPC	TC	Total Cl2
Unit	/100mL	/100mL	mg/L	/mL	/100mL	mg/L
MDL	1	1	0.05	2	1	0.05
Sample ID						
Well #5 Raw	absent	absent			absent	
Well #5 Treated		absent	1.06	absent	absent	1.19
Dist. McEwen Depot		absent	1.05	2	absent	1.15
Dist. Public School		absent	1.00		absent	1.10
Dist. Convenience Gas Bar		absent	0.91		absent	1.02

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Krystyna Pipin, Laboratory Supervisor

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Client:
Ontario Clean Water Agency
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Chesterville, ON
K0C 1H0

Attention: **Dave Markell**

Report:	**220012900**
Project:	Chesterville WTP
Date Sampled:	November 18, 2012
Date Received:	November 19, 2002
Date Printed:	November 21, 2002
Matrix:	Drinking Water

Parameter	Unit	MDL	Sample Identification				
			Well # 5 - Raw	Well # 5 - Treated	Curan's Garage	Post Office	Becker's
Total Chlorine	mg/L	0.05		1.22	1.10	1.15	1.22
Free Chlorine	mg/L	0.05		1.10	1.04	1.09	1.10
E. coli	/100mL	1	absent	absent	absent	absent	absent
HPC	/mL	2		absent	absent		
Background bacteria	/100mL	1	1				
Total Coliforms	/100mL	1	absent	absent	absent	absent	absent

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K0C 1H0

Attention: **Dave Markell**

Report: **220013268**
Project: Chesterville WTP
Date Sampled: November 25, 2002
Date Received: November 26, 2002
Date Printed: November 28, 2002
Matrix: Drinking Water

Parameter	Background	E. coli	Free Cl2	HPC	TC	Total Cl2
Unit	/100mL	/100mL	mg/L	/mL	/100mL	mg/L
MDL	1	1	0.05	2	1	0.05
Sample ID						
Well #5 Raw	absent	absent			absent	
Well #5 Treated		absent	1.08	absent	absent	1.18
Dist. LCBO		absent	1.04	absent	absent	1.13
Dist. St. Mary's Catholic School		absent	1.04		absent	1.12
Dist. D&D Performance		absent	0.98		absent	0.99

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[illegible]ario Clean Water Agency
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K0C 1H0

Attention: **Dave Markell**

Report: **220013594**
Project: Chesterville WTP
Date Sampled: December 2, 2002
Date Received: December 3, 2002
Date Printed: December 05, 2002
Matrix: Drinking Water

Parameter	Background	E. coli	Free Cl2	HPC	TC	Total Cl2
Unit	/100mL	/100mL	mg/L	/mL	/100mL	mg/L
MDL	1	1	0.05	2	1	0.05
Sample ID						
Well #5 Raw	absent	absent			absent	
Well #5 Treated		absent	1.04	absent	absent	1.14
Dist. Becker's		absent	1.03	absent	absent	1.01
Dist. Lannins		absent	0.99		absent	1.02
Dist. 5 Industrial Dr.		absent	1.08		absent	1.12

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Attention: **Dave Markell**

Report: **220013982**
Project: Chesterville WTP
Date Sampled: December 9, 2002
Date Received: December 10, 2002
Date Printed: December 12, 2002
Matrix: Drinking Water

Parameter	Unit	MDL	Well #5 Raw	Well #6 Treated	Dist. MB Foster 82 Main St.	Dist. Co-op 33 King St.	Dist. BBL 66 Main St.
Total Chlorine	mg/L	0.05		1.16	1.07	0.74	1.12
Free Chlorine	mg/L	0.05		1.07	1.06	0.68	1.12
E. coli	/100mL	1	absent	absent	absent	absent	absent
HPC	/mL	2		absent	absent		
Background bacteria	/100mL	1	absent				
Total Coliforms	/100mL	1	absent	absent	absent	absent	absent

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Attention: **Dave Markell**

Report: **220014312**
Project: Chesterville WTP
Date Sampled: December 16, 2002
Date Received: December 17, 2002
Date Printed: December 19, 2002
Matrix: Drinking Water

Parameter	Background	E. coli	Free Cl2	HPC	TC	Total Cl2
Unit	/100mL	/100mL	mg/L	/mL	/100mL	mg/L
MDL	1	1	0.05	2	1	0.05
Sample ID						
Well #5 Raw	absent	absent			absent	
Well #5 Treated		absent	1.05	absent	absent	1.06
Dist. 19a Industrial Dr.		absent	1.26	absent	absent	1.30
Dist. Chesterville Library Victoria St.		absent	1.03		absent	1.08
Dist. D & D Main St. N.		absent	1.13		absent	1.18

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Attention: **Dave Markell**

Report: **220014628**
Project: Chesterville WTP
Date Sampled: December 23, 2002
Date Received: December 23, 2002
Date Printed: December 27, 2002
Matrix: Drinking Water

Parameter	Background	E. coli	Free Cl2	HPC	TC	Total Cl2
Unit	/100mL	/100mL	mg/L	/mL	/100mL	mg/L
MDL	1	1	0.05	2	1	0.05
Sample ID						
Well #5 Raw	absent	absent			absent	
Well #5 Treated		absent	1.10	absent	absent	1.20
Dist. MacEwen Petro		absent	1.00	absent	absent	1.20
Dist. 5 Industrial Dr.		absent	1.00		absent	1.20
Dist. Canada Post		absent	1.20		absent	1.20

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K0C 1H0

Attention: **Dave Markell**

Report: **220014782**
Project: Chesterville WTP
Date Sampled: December 30, 2002
Date Received: December 30, 2002
Date Printed: January 02, 2003
Matrix: Drinking Water

Parameter	Background	E. coli	Free Cl2	HPC	TC	Total Cl2
Unit	/100mL	/100mL	mg/L	/mL	/100mL	mg/L
MDL	1	1	0.05	2	1	0.05
Sample ID						
Well # 5 Raw	absent	absent			absent	
Well # 5 Treated		absent	1.20	absent	absent	1.40
Dist. 5 Industrial		absent	1.20	absent	absent	1.30
Dist. D & D Performance		absent	1.10		absent	1.20
Dist. MacEwen Gas		absent	1.00		absent	1.10

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