ARCHIVED

MUNICIPAL WATER QUALITY REPORTS

CHESTERVILLE WATER



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

То	MOE mot
Company	
Fax Number	268-6061 933-7930
From	Dave Markell
Date	Oct 24/02
Number of Pages	(including this page)
Subject	Adverse Water.
Chester	wille Well #5
Work's	# 210000728
As a	or will see on the attached
Cert of	Analysis the raw water
e we	ll 5 contained no E.C.
T.C.	or Baelchourd.

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8	Ontario)
\smile		

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 grain posification to the MOE Spille Action Contro (SAC) at 1-800-368-6660 or 1-416-325-3600 and the local Medical Officer of Hoalth (MOH) of indicators of adverse drinking water quality and exceedances of standards as outlined in the Regulation and remedial actions taken. Further, within 24 fewers of the oval notification, the party shall provide urities motification on this completed form by Fax to the Spills Action Centro at 1-800-268-4661 or 1-416-325-3811 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 size (www.ane.gov.on.on) or by contacting any MOE office.

PART 1 - NOTIFICATION BY LABORATORY	
Indicators of Adverse Water Quality Phys/Chem Raccods N	
ORAL NOTIFICATION to SPILLS ACTION CENTRE by LABO	
Date: OCT 24102 Time: 3:40 14	By: KRYSTYNA PIPIN
Laboratory Name: CADULEON ENV. LAB	Laboratory Emergency Contact Name KR4574NA PISIN
Address 2378 HOLLY LANE OFTHUM	Position SUCERVISOR
Email sáitean	Phone 613 526 -0123 Fax 613 526 -1244
Waterwarks Name CHESTERVILLE	Waterworks Energency Contact
Works# 210000728	Num DAVE MARKELL
Location Crics FERUILLE	Position OPERATOR
Essail Address	Phone #613 448-3098 Pac # 448-1616
NOTIFICATION OF WATER WORKS OWNER	NOTIFICATION OF LOCAL MEDICAL OFFICER OF HEALTH
Person Connected DAVE MARKELL	Person Contacted 10 ALIA
Position OFERTUR	Position STECIAL PROJECTS
Date OCT 24 102 Time 2: 35 F.M.	Jan 1 Am
Laboratory Written Notification Prepared by: Name (please pri (Lah Results must be attached using Part 3 of form)	mi) STYNA PICIN
Signature	Date
K I. L	OC! 27/02
PART 2 - NOTIFICATION BY WATER WORKS OWNER	
Indicators of Adverse Phys/Chem Exceeds M.	
Water Quality Exceeds IM	
☐ This natification is for operational problems identified at the waterworks; SPILLS ACTION CENTRE ORAL NOTIFICATION BY OWNER	WATERWORKS EMERGENCY CONTACT
De Oct 14/02 700 3:35	Name Dave Markell
Waterworks Name Chesterville	Position Process Tech
Works # 210000728	Phone 613-448-3088 Fec. 613-448-1616
Works Person Providing and Notification Dave Marke (1	<u> </u>
MEDICAL OFFICER OF HEALTH ORAL NOTIFICATION BY OWNER	1
Person Contacted	Resampling Initiated XYes No
Idalia.	Flushing Mains Yes No
Position Special Projects	Other Actions Taken Yes No
Position Special Projects	Other Actions Taken Yes No Describe:
Proces of 1-800-267-7120 par 933-7930 Works Person Providing Oral Notification Dave Markell	Other information attached
Money/-800267-7120 Part 933-7930	Other information attached
Position Special Projects Phose #1-800-267-7120 Pac # 933-7930 Works Person Providing Oral Natification Dave Markell Water Works Written Natification Prepared by: Name (please print) Signature (Other information attached Dave Marke (
Position Special Projects Phose of 1-800-267-7120 Par. 9 933-7935 Works Person Providing Oral Notification Dave Markell Water Works Written Notification Prepared by: Name (please print) Signature Caw Awalla	Other information attached Dave Marke (



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) (: p.m.)	Sample Type / Location	Count/100mi		ocation Count/100ml Presumptive/ Confirmed		ion Count/100ml Presumptive/	HPC/ 1ml	Date of Analysis (M/D/Y)
				Total Coliforms	Back- ground	E.coli/ Fecal C.				
120011474		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) (: p.m.)	Sample Type/ Location	Parameter	Result	Unit	MAC/ IMAC	Date of Analysis (M/D/Y)

Laboratory Results Authorized by:	KRYSTYNA	PIPIN	Authorization Date:	ocr	24/02
For Ministry Use Only:		O	ccurrence Report #:		
				_ 2	• 2

1402-047 (07/00)

Page _ _ of _ 2

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 Markeli

Report:

220011474

Project:
Date Sampled:
Date Received:

Chesterville WTP October 21, 2002 October 22, 2002

Date Printed:

October 24, 2002

Matrix:

Drinking Water

TATOMONIA. DUTO INIC.							
	Parameter	Background	E. coli	Free CI2	НРС	TC	Total Cl2
	Unit	/100mL	/100mL	mg/L	/mL	/100mL	mg/L
	MOL	1	1	0.05	2	1	0.05
Sample ID							
Well #5 Raw		absent	absent			absent	
					of the same of the		
Well #5 Treated			absent	1.00	/ og)	absent	1.20
Dist. Public School			absent	0.90	2	absent	1.00
Dist. MacEwen Gas B	ar		absent	1.10		absent	1.20
Dist. 5 Industrial Dr.			absent	1.20		absent	1.30
Dist. o incustrial bi.							

OG - Over Grown

Caduceon Environmental Laboratories 2378 Holly Lane, Ottawa, Ontario, K1V 7P1, Canada Tel: (513)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 24 2002 4:44pm

Last Transaction

<u>Date Time Type Identification</u> <u>Duration Pages Result</u>

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



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

То	8 Cindy
Company	Och A'
Fax Number	1-613-962-1966
From	Dave Markey
Date	Och 25/02
Number of Pages	(including this page)
Subject	Adverse Water
Chesteru	Me Treated.
This or	re was overgrown with mold
too:	

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HP OfficeJet K Series K80 Personal Printer/Fax/Copier/Scanner Log for OCWA 613 448-1616 Oct 25 2002 12:15pm

Last Transaction

<u>Date Time Type Identification</u> <u>Duration Pages Result</u>

Oct 25 12:13pm Fax Sent 16139621966 2:01 7 OK



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 MOH
Company	
Fax Number	800-268-661 933-7930
From	Dave Markell
Date	Oct. 10/02
Number of Pages	(including this page)
Subject	Adverse Water Chesterville.
- Works #	210000728
- Duerson	un HPC @ Nestle's Lagoon Lab.
- Resample	line Initiated as per Standards
- Cla re	ling Initiated as per Standards esid at site at the time of the
semple	O.B Free aB Total



Ministry of the Environmen

Ministère de ment 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 Chimers must immediately provide and molfication to the MOE Spills Action Centre (SAC) at 1-200-268-6060 or 1-416-325-3000 and the local Medical Officer of ficalth (MOH) of Indicators of adverse drinking water quality and exceedances of standards as outlined in the Regulation and romadial 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	C Radiological Exceeds IMAC					
Indicators of Adverse Phys/Chem Exceeds MA Water Quality Exceeds IMA						
ORAL NOTIFICATION to SPILLS ACTION CENTRE by LABORA						
L.C. AM						
Date: US 13732 Time:	BY: KRYSTYNA PIPIN					
Laboratory Name: CADUCEON ENV. LAB.	Laboratory Emergency Contact Name KRYSTYWA PIPIN					
Address 2578 HOLLY CANE OFFAUA	Position SIPERVISOR					
Emuil 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 COWE HS HUT 43 CHESTERY	HERRION 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 Consected DAVE MARKELL	Person Contacted IDALIA					
Position PROCESS FECHN.	Position SPECIAL PLODECTS					
Date OCT 10 102 Time 1:50 P.M.	Date Oction of Time 1:55 1.4					
Laboratory Written Notification Prepared by: Name (please print						
(Lab Results must be attached using Part 3 of form) KRUSTYA	I David					
Signature	OU 10/02					
PART 2 - NOTIFICATION BY WATER WORKS OWNER						
Indicators of Adverse Phys/Chem L Exceeds MA						
Water Quality Exceeds IMA						
☐ This notification is for operational problems identified at the waterworks; the	re is no Laboratory notification associated with this report					
SPILLS ACTION CENTRE ORAL NOTIFICATION BY OWNER	WATERWORKS EMERGENCY CONTACT					
Date Oct. 10/02 Time) . ()	Name Dave Markell					
Waterworks Name Chesteruile	Privation Process Tech					
Works # 210000728	Phone # 613-449-309B Fax # 448-1616					
Works Person Providing Oral Notification Dave Marke (1						
MEDICAL OFFICER OF HEALTH ORAL NOTIFICATION BY OWNER	REMEDIAL ACTIONS TAKEN BY OWNER:					
Date Oct. 10/0+ Time 250	Resampling Initiated Yes No Increase Chlorine Dose Yes No					
Person Contracted Adalia	Flushing Mains Yes No					
Position Special projects	Other Actions Taken Yes No					
Phone# 900 267-7120 Fax# 933 7930	Describe:					
A	Other information attached 🖂					
Works Person Providing Ocal Notification Propaged by: Name (please print)	Dave Markell					
Signature	Date 0 0/02					
Law Woulder	currence Report #:					
I Pas Ministry Hos Only:	CIR I CIRCE INCEPTE I 7.					
For Ministry Use Only:						

1402-047 (07/00)

♥ Ontario

Ministère de l'Environnement

PART 3:

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

Microbiological Testing

Sample 1	Sample Field ID No.	Date/Time Collected (M/D/Y)	Sample Type / Location		rane Filtr unt/100m		P-A/100ml Presumptive/ Confirmed (if applicable)	HPC/ 1ml	Date of Analysis (M/D/Y)
		p.m./		Total Coliforms	Back- ground	E.coli/ Fecal C.			
220010886	CH-03	1017/02		HBSENT		ABSENT		OG	10/08/01

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	Date of Analysis (M/D/Y)
	<u> </u>						
		†					
-							

Laboratory Results Authorized by:	KRYSTYNIK	2181N	Authorization Date:	OCS	(0/02
For Ministry Use Only:			Occurrence Report #:		

1402-047 (07/00)

Page 2 of 1

Caduceon Environmental Laboratories

Division of Caduceon Enterprises Inc.

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\$

Ontario Clean Water Agency

5 Industrial Dr. Chesterville, ON

Attention: KOC 1HO

Dave Markell

Parameter

Report: Project:

Certificate of Analysis

Date Received: Date Sampled:

Date Printed: October 3, 2002 October 8, 2002 Chesterville WTP 220010886

October 10, 2002 **Drinking Water**

Matrix:

Sample Identification

Total Coliforms /1	Background bacteria /1	HPC /#	E. coli /1	Free Chlorine mg	Total Chlorine mg	
/100mL	/100mL	/mt.	/100mL	mg/L	ng/L	
,2	4	N	۳	0.05	0.05	
absent	absent		absent			Well #5 Raw
absent		absent	absent	1.30	1.40	Well #5 Treated
absent		8	absent	0.80	0.80	Nestle Lagoons Lab
absent			absent	1.20	1.20	St-Mary's School
absent			absent	1.10	1.10	37 Joseph St.

OG - Overgrown

Page 1 of

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

ر ر Michael Ziebell, Gene al Manager

1.9

e13-25e-1544

Caduceon Env. Labs.

Oct 10 02 02:02p

HP OfficeJet K Series K80 Personal Printer/Fax/Copier/Scanner Log for OCWA 613 448-1616 Oct 10 2002 3:39pm

Last	Tran	saction
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<u>Date Time Type Identification</u> <u>Duration Pages Result</u>

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

<u>Date Time Type Identification</u> <u>Duration Pages Result</u>

Oct 10 3:34pm Fax Sent 16139337930 2:55 4 OK



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

То	MOH MOE
Company	
Fax Number	933-7930 268-6061
From	Dave Markell
Date	
Number of Pages	(including this page)
Subject	Turbidity Exceedances.
Fire	pump exercised during system flushing.
dist	system flushing.
	

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1402-047 (07/00)

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 I-800-268-6060 or I-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 I-800-268-6061 or I-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.

AC CofA/Order Exceeds IMAC (AC CofA/Order Exceeds Limit RATORY By: Laboratory Emergency Contact Name Position Phone # Fax # Waterworks Emergency Contact Name Position Phone # Fax # NOTIFICATION OF LOCAL MEDICAL OFFICER OF HEALTH Person Contacted Position Date Time
By: Laboratory Emergency Contact Name Position Phone # Fax # Waterworks Emergency Contact Name Position Phone # Fax # NOTIFICATION OF LOCAL MEDICAL OFFICER OF HEALTH Person Contacted Position Date Time
By: Laboratory Emergency Contact Name Position Phone # Fax # Waterworks Emergency Contact Name Position Phone # Fax # NOTIFICATION OF LOCAL MEDICAL OFFICER OF HEALTH Person Contacted Position Date Time
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Phone # Fax # Waterworks Emergency Contact Name Position Phone # Fax # NOTIFICATION OF LOCAL MEDICAL OFFICER OF HEALTH Person Contacted Position Date Time
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Phone # Fax # NOTIFICATION OF LOCAL MEDICAL OFFICER OF HEALTH Person Contacted Position Date Time
Person Contacted Position Date Time
Position Date Time it)
Date Time
Date Time
t)
Date
Date
C Radiological Exceeds IMAC
AC CofA/Order Exceeds Limit
here is no Laboratory notification associated with this report
WATERWORKS EMERGENCY CONTACT
Name O Mantell
Position Tech
Phone# 43-448-3058 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 [4
Other information attached [5]
Date 1
May 24/02
ccurrence Report #:

Page ____

of _2



Ministry Ministère de Environment 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) (: p.m.)	Sample Type / Location	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** ction Regulation

Laboratory Sample ID No.	Sample Field ID No.	Date/Time Collected (M/D/Y) _{a.m.}	Sample Type/ Location	Parameter	Result	Unit	MAC/ IMAC	Date of Analysis (M/D/Y)
			Continuoses	Turkidity	5.2	NTU	iWAC	May 34/02
			-					

Laboratory Results Authorized by:	Authorization Date:		
For Ministry Use Only:	Occurrence Report #:		

Page 2 of 2

TRANSMISSION VERIFICATION REPORT

TIME: 05/24/2002 14:44

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

TIME: 05/24/2002 14:46

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



Ontario Clean Water Agency Agence Ontarienne Des Eaux

513-925-6355

Chesterville Hup

5 Industrial Drive, P.O. Box 460 Chesterville, Ontario K0C 1H0

Tel: (613) 448-3:98

Pax: (613) 448-1616 www.ocwa.com

Fax

To	
Company	M.O.H. SAC.
Fax Number	613-93)-7930 800 268 6061
From	TONY KELLY
Date	MAY 19 2002
Number of Pages	(including this page)
Suoject	TURBIDITY EXCHENER'S
ON	PUMP STARTS.
White with a second	
4	

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Officiatry of two 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 Delnaing Water Protection Regulation, Laboratories and Water Works Owner i must immediately provide acts notification to the MOE Spills Acts on Centre (SAC) or 1.886-268-5000 or 1.825-325-3000 and the local Medical Miles of Newton of Indicators of an error delinking water quality and accordances of standards as mediand in the Regulation and remedial section labor. Further, within 26 hours of the internation, the party shall provide a <u>strikes</u> multication on this complete form in Fax in the Spills Action Centre of 1.800-258-4661 or 1.416-523-531-5012 and the local Medical Officer of Health Policy to with the operation and accordance with the xegulation constitutes an officer under the Act is copy of the Environment (ACC) public web site from each of accordance on the Notice of the Environment (ACC) public web site from each or consecting on: ACC office.

PART 1 - NOTIFICATION BY LABORATORY Indicators of Adverse Physic Fem Exceeds	MAC Radio gical Exceeds IMAC
Indicators of Adverse Phys/Crem Exceeds Water Quality Exceeds	
ORAL NOTIFICATION to SPILLS ACTION CENTRE by LAS	
·	
Dute: Time:	By
Laboratory Rame:	Laboratory Emergency Contact Name
Address	Position
Email address	Phone # Fan #
Waterwerks Name	Weserworks Emergency Contact
Works #	Yane
Location	Pocision
Exall Address NOTIFICATION OF WATER WORKS OWNER	NOTIFICATION OF LOCAL MEDITAL OFFICER OF HEALTH
Person Contected	Person Contacts 5
Position	Position
Date Time	Cotts Tin s
Laboratory Written Notification Prepared by: Name (please (Lab Ranaks must be anached using Part 3 of form)	ргия)
Signature	D \$24
PART 2 - NOTIFICATION BY WATER WORKS OWNE	R
Indicators of Adverse Phys/Chem Exceeds	
Water Quality Exceeds	
This notification is for operational problems identified at the waterwork	
SPILLS ACTION CENTRE ORA CNOTIFICATION BY OWNER	WATERWORKS EMERGENA CONTACT
Date MAYIG 62 Time 1200	Name Seathfulant 10.0 Kally
Waterworks Name Windowsky Water CHESTERVILLE	Position Mechanic/Operator
Works # ***********************************	Phone # (613) 448-3088 Fax # (513) 448-1615
Works Person Providing Oce Notification Democratical Towy Kelly	
MEDICAL OFFICER OF HEALTH ORAL NOTIFICATION BY OWN	REMEDIAL ACTIONS TAKEN BY OVERERS
mm MAY 19/02 Time 12:15	Resumpting (nitiated Yes No
MELISSA	Flushing Mains Yes 🗋 '6
C F D	Other Actions Taken Yes [So
A CONTRACTOR OF THE PROPERTY O	Describe: Momentary turn idity spine during plun p startup. Attributed to package from and entrained air.
alle and the second	Other information at calend [7]
Works Person Provising Onl Notification Commission Town Kerly Water Works Written Notifications Prepared by: Norma (picase prin	
and the same of th	Die h
Signature I / Cur	10 lay 13, 22
For Ministry (se Only:	Occurrence Report #:
<u>-</u>	

1402-047 (07/00)

ONTICLEAN MATER PAGE 18:

	PUMP STAR	T-UP TUR	BIDITY SPIKES	AP (ABV) dis Assassadanas successibility (a. (general)
	DATE	IME	DURATION OUR O	Max
MOOSE CREEK	WAY IR	04:34	La company de la	4.3 E.E
RESERVOIR	MAY 19	07:34		4.1
CHESTERVILLE	MAY17	1802		1.2 NP4.
	and the second of the second o			
	enter en	engan pengangan		

TRANSMISSION VERIFICATION REPORT

TIME: 05/15/2002 12:26 NAME: ONT.CLEAN WATER FAX: 513-925-0555 TEL: 013-925-0115

PAGE 95

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



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	MOH
Fax Number	1-613-262220 7933-7930
From	Dave
Date	FEB 21/02
Number of Pages	(including this page)
Subject	Please find attached
lab A	heets from moose creek,
Finch,	Chesterville and Winchester
Wells =	± 1,5 86.
These o	are as a required follow-up
	fications of adverse water
	over 20 ms/c) FEB 7/02.
any qu	vestions please call Dave
	•

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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.

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ACCUTEST LABORATORIES LTD.

REPORT OF ANALYSIS

Client: CHESTERVILLE WELL SUPPLY

Report Number:

Date Submitted:

2201832

Date:

2002-02-20 2002-02-14

ATT: Mr. Blair Henderson

Project:

Chesterville Wells Resample

				P.O. Number:			
				Matrix:		Supply Water	
		LAB ID:	169943				
	Sample Date:		2002-02-13		1		
	San	nple ID:	CW-01				
PARAMETER	UNITS	MDL	TREATEDWATER				
Na	mg/L	2	26		<u> </u>	 	

MDL = Method Detection Limit

INC = Incomplete

Comment:

608 Norris Court, Kingston, ON, K7P 2R9

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

TRANSMISSION VERIFICATION REPORT

TIME: 02/21/2002 13:47

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

146 Colonnade Rd., Unit 8, Nepsan, Ontario, K2E 7Y1

Fax phone:

e-mail:

www.accutestlabs.com



To: Blair Henderson **OCWA Chesterville** Phone: 613-448-3098 Fax phone: 613-448-1616 CC:

February 7, 2002 Number of pages including cover sheet: From: Kristina Hay **QA/QC** Coordinator 613-727-5692 Phone:

613-727-5222

khay@accutestlabs.com

REMARKS Originals to follow:		Urgent YES		For your re	view VIA:		Reply ASAP Mail	Please comment Courier
Your Reference: Na	ODW	S Exceed	ance	s	Our Re	efere	nce:	
Mr. Henderson.								
This is a notice of adverse have attached a preliminal Analysis form.								
Please contact me if you h	ave a	nny questi	on s .					
Best regards,								
Switne Ho Kristina Hay	y	<i>.</i> /						

Ottawa · Kingston

ACCUTEST LABORATORIES LTD.

Report of Analysis

Client:

CHESTERVILLE WELL SUPPLY

5 Industrial Drive Chesterville, ON

KOC 1HO

Report Number:

2201008

Date Reported:

2002-01-29

Date Submitted: **Date Collected** Project:

2002-01-28

Chesterville Wells

Quarterly Chemicals

P.O. Number:

Matrix

Supply Water

DAD	AMETI	ED	

Attention: Mr. Blair Henderson

PARAMETER	UNITS	MDL	167758 CW-05
Alkalinity as CaCO3	mg/L	5	200
Ca	mg/L	1	63
C)	mg/L	1	39
Colour	TCO	2	<2
Conductivity	uS/cm	5	578
DOC	mg/L	0.5	₹0.5
	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-1/1-13	mg/L	0.02	<0.02
N-NH3 (unionized)	mg/L	0.02	<0.02
Na .	mg/L	. 2	(23)
p R			7.93
SO4	mg/L	1	53
Total Kjeldahl Nitrogen	mg/L	0.05	<0.05

MOL = METHOD DETECTION LIMIT

Comment:

APPROVAL:

146 Colomnade Road Unit 8, Nepean Ontario, K2E 7Y1 Tel: 1-868-271-8378 (613)727-5692 Fax: (613)727-5222 www.accutestlabs.com



402.047 (07.00)

Ministry Ministry of the de Environment l'Em

LEUNINGUERAMENT de musikand

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

In accordance with the Orinking Water Protession Regulation, Laboretories and Water Horks Owners must impositionally provide upid notification to the MOE Spills Action Centre (SAC) as 1-500-258-6860 or 1-416-325-3000 and the local Medical Officer of Health (MOH) of indicators of photosynthese detailing water quality and quantitations of standards are instituted in the Regulation and remaind actions taken. Further, which Library of the area settlements, the purp shall provide vertices notification on this complete form by Fax to the Spills Action Centre at 1-00-258-4061 or 1-416-325-3971 and the local Medical Officer of Figure 1. Politics to notify these purious in accordance with the Regulation constitutes an officer under the Act. A copy of this form may be acquired through the Ministry of the Environment (MOE) public web site (with some grants and in MOE office.

The Taylor S. M. (Province of the Environment (MOE) public web site (with some grants and or by constanting any MOE office.

cators of Adverse Phys/Cham Exceeds M/ Les Quality Exceeds IM	IAC CofA/Order 🗆 Exceeds Limit
AL NOTIFICATION to SPILLS ACTION CENTRE by LABOR	
1. Feb 7. 2002 Time 420	m Kristina Hay
Accutest Laboratories Ltd.	Taboratory Emergency Control Name Pater Haulens
146 Colonnade Rd., Unit 8, Nepean, ON KZE 7Y1	Position Analytical Services Manager
info@accutestlabs.com	(842) 727 8682 (842) 727 6622
Chestaville well Supely	
	Name Blair Henderson
410000728 -	
	Operator (1)
DITFICATION OF WATER WORKS OWNER	NOTIFICATION OF LOCAL MEDICAL OFFICER OF HEALTH
Blair Henderson	lean Marchand
Ciora potos	Lidnia
shoratory Written Notification Prepared by: Name (niceses to	want \
ab Results must be adached using Part 3 of form)	Kristine Hay
dristina Hay.	Feb 7, 2002.
The same of the sa	المتحديدين والمتحديدي والمتحديدي والمتحديد المتحارية والمتحدد والمتحدد والمتحدد والمتحدد والمتحدد والمتحدد والمتحدد
ART 2 - NOTIFICATION BY WATER WORKS OWNER	
Indicators of Adverse Phys/Chem Exceeds	VAC Radiological Exceeds IMAC
Indicators of Adverse Fhyu'Chem Exceeds I Water Quality Exceeds I This notification is for operational problems identified at the waterwork	MAC Radiological Exceeds IMAC MAC CofA/Order Exceeds Limit
Indicators of Adverse PhysiChem Exceeds Nuter Quality Exceeds I This notification is for operational problems identified at the waterwork SPILLS ACTION CENTRE ORAL NOTIFICATION BY OWNER	MAC Residence Exceeds IMAC MAC CofA/Order Exceeds Limit Exceeds Limit Exceeds Limit WATERWORKS EMERGENCY CONTACT
Indicators of Adverse	MAC Radiological Exceeds IMAC IMAC CofA/Order Exceeds Limit ### There is no Laboratory notification associated with this report
Indicators of Adverse PhysiChem Exceeds Nuter Quality This nonification is for operational problems identified at the waterwork SPILLS ACTION CENTRE ORAL NOTIFICATION BY OWNER	MAC Radiological Exceeds IMAC IMAC CofA/Order Exceeds Limit It there is no Laboratory notification associated with this report WATERWORKS EMERGENCY CONTACT
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Intelligators of Adverse PhysiChem Exceeds Newter Quality This notification is for operational problems identified at the waterwork SPILLS ACTION CENTRE ORAL NOTIFICATION BY OWNER One FEB 7 02 Time /6.16 Weapprooned Name Chesterville Well Worker & 210000728	MAC Radiological Exceeds IMAC MAC CofA/Order Exceeds Limit There is no Laboratory notification associated with this report WATERWORKS EMERGENCY CONTACT Name Blain Henderson Position OPS Manager Phone # 613-448-3058 Page 613-448-161
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Intelligators of Adverse Physichem Exceeds Newtor Quality This notification is for operational problems identified at the waterwork SPILLS ACTION CENTRE ORAL NOTIFICATION BY OWNER Outer FEB 7 02 Time /6.16 Weignworks Name Chestery the Well Works A 20000729 Works Person Providing Oral Notification Blank Hendels of MEDICAL OFFICER OF HEALTH ORAL NOTIFICATION BY OWN	MAC CofA/Order Exceeds IMAC MAC CofA/Order Exceeds Limit Fithere is no Laboratory notification associated with this report WATERWORKS EMERGENCY CONTACT Name Blain Hender On Position OPS Manager Phone # 613-448-3098 Par # 613-448-161.
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Rectilications of Adverse Physichem Exceeds Nature Quality This notification is for operational problems identified at the water work SPILLS ACTION CENTRE ORAL NOTIFICATION BY OWNER Onto FEB 7 02 Time /6.16 Weignworks Name Chesterville Well Works & 210000728 Works Person Providing Oral Notification Blank Hendelson MEDICAL OFFICER OF HEALTH ORAL NOTIFICATION BY OWN Data FEB 7 02 Time /6.24 Person Contents C (2000 the	MAC Radiological Exceeds IMAC MAC CofA/Order Exceeds IMAC States is no Laboratory notification associated with this report WATERWORKS EMERGENCY CONTACT Name Position Position PS Manaser Phone of 613-448-3098 Pare 613-448-161- NER REMEDIAL ACTIONS TAKEN BY OWNER: Resumpling initiated Yes No Increase Chlorine Dose Yes No Other Actions Taken Yes No Other Actions Taken Yes No
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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)	Sample Type / Location		Membrane Filtration Count/100ml			iiPC/ ind	Date of Analysis (M/D/Y)
				Total Coliforms	Back- ground	E.call/ Fecal C.			
						,			
		<u> </u>							

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 1D No.	Date/Time Collected (M/D/Y)	Sample Type/ Location	Parameter	Result	Unit		Date of Analysis (M/D/Y)
167758	 	01/28/02	CW-05	Na	23	mg/L	20	02/07/02
		/3 ^{or} .						
		1						

Laboratory Results Authorized by: Assuma Hay	Authorization Date: Feb 7,2002
Fur Ministry Use Only:	Occurrence Report #:
	Page of

TRANSMISSION VERIFICATION REPORT

TIME: 02/07/2002 17:30

DATE, TIME FAX NO./NAME DURATION PAGE(S) RESULT MODE 02/07 17:25 18002586061 00:04:48 09 OK STANDARD ECM TRANSMISSION VERIFICATION REPORT

TIME: 02/07/2002 17:24

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

OUARTERLY 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



Web site at www.ocwa.com

Client Services Representative: John Kingsbury Operations Manager: Blair Henderson

Phone: (613) 774-3663 Phone: (613) 448-3098

E-mail Address: jkingsbury@ocwa.com 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



INSIDE THIS REPORT

Drinking Water Regulations		.1
Where To Contact Us		1
Plant Description & Treatment Processes		2
Quality Control and Compliance with Provincial Regulations		3
Definitions & Terms	A. 2256.4	4

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

Required Testing	4
Water Quality Test Results	
Questions & Answers	

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.

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

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.

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

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

CaCO₃ - 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

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	MAC	# of	# of	Sampling	Range	Excuedence?	Typical Source of
Microbiological	or	Samples	Detectable	Dates			Contaminant
Quality	IMAC	•	Results	(m/d)			
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	11	01/21/02	<0.10	no	
Arsenic	IMAC= 0.025	1	1	09/18/00	<0.001	tio	
Barium	1	11	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	<u> </u>
Copper	1	1	1	09/18/00	0.004	no	

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

	0.3	i		1	01/2	28/02	< 0.0	_	ne)		
ron	0.01	1		1	09/	8/00	< 0.00	1	n	0		
Lead	+	1			09/	18/00	<0.0	1	n	0		
Manganese	0.05			$\frac{1}{1}$	09/	18/00	< 0.00	01	n	- 		
Mercury	0.001	1					<0.00		n			
Selenium	0.01	1		!		18/00 18/00	0.00			0		
Uranium	0.1	1		1		28/02	23-2			0		
Sodium	200	1		1		/13/02						
	2.4	1		1		28/02	0.1:	5		0		
Fluoride Volatile Organics (ug/l)	MAC	# of	# o	f		pling	Range		Exceed	ence?		al Source of minant
Volatile Organies (49-)	or	Samples	**************************************	ectable	Dat						Conta	Illiant
	IMAC		Re	sults	(m/		9.7		no			
Trihalomethanes - Plant	100	11	+-			01/21 01/21	4.7		ne	-		
Trihalomethanes - Dist.	100	1	+	1		01/21	<0.		n			
Benzene	5	1	+	1		01/21	<0.		n			
Carbon Tetrachloride	50	1 1	+	1		01/21	<4		n	0		
Dichloromethane	200	+	1	1		01/21	<0.	4	n	0		
1,2 - Dichlorobenzene 1,4 - Dichlorobenzene	5	1 1	\top	<u> </u>		01/21	<0.	$\overline{}$	n	0		
1,2 - Dichloroethane	IMAC=	1		1		01/21	<0.			0		
1,1 - Dichloroethylene	14	1		1	١	01/21	<0.			0	-	
Ethylbenzene	24	1		1	├ ─	01/21	<0.			0		
Monochlorobenzene	80	111		_1	∔ —	01/21	<0			10		
Tetrachloroethylene	30	11_	_ _	_!	┼─	01/21	<0			10	-	
Toluene	24	1		of	Ca	mpling	Rang			dence?	Typi	cal Source of
Volatile Organics (ug/l)	MAC	# of		oı etectable		ites	1	•				aminant
	or DAAC	Sample		esults		/d)						
	IMAC 50	1		1		01/21	<0	.3		10	ļ	
Trichloroethlyene Vinyl chloride	2	+		1		01/21	<0			10	 	
Xylene	300	1		11		01/21		.0		no	 	
Bromodichloromethane	n/a	1		1		01/21	2			no	 -	
Bromoform	n/a	1_1_		1	+-	01/21) <u>.4</u> .5		no no	 	
Chloroform	n/a	11_			+	01/21		.5 .6	+	no	1	
Dibromochloromethane	n/a	1		1		Sampling		lange		Exceed	ence?	Typical Source of
Pesticides & PCB (ug/L)	MAC		ples	# of Detecta		Dates						Contaminant
	IMAC	34	apaca	Delection		(m/d)						
				Results								
Alachlor	IMAC	:=5	1	1		01/21		<0			10	
Aldicarb	9		1	1_		01/21		< <u>5</u>			10	
Aldrin+Dieldrin	0.7		1	1		01/21		<0 <1			10	
Atrazine	IMAC	<u>=5 </u>	1	1		01/21		<2			10	
Azinphos-methyl	20		1	1		01/21			.0		10	
Bendiocarb	40		1	1		01/21			.5		10	
Bromoxynil	IMAC		1	1		01/2			5.0		10	
	90		1 -	1		01/2		<:	0.0	ı	no	
Carbaryl	0.0			+ 1		01/2		<().7	<u></u>	no	
Carbofuran	90		1			01/2	1	<	1.0	1	no	
Carbofuran Chlordane	7		1 1	1		01/2						1
Carbofuran Chlordane Chorpyrifos	90					01/2	1		1.0		no	
Carbofuran Chlordane Chorpyrifos Cyanazine	7	C=10	1	1		01/2 01/2	1	<	1.0		no	
Carbofuran Chlordane Chorpyrifos Cyanazine Diaznon	7 90 IMAC) C=10	1 1	1 1		01/2 01/2 01/2	1 1 1	< <	1.0 1.0		no no	
Carbofuran Chlordane Chorpyrifos Cyanazine Diaznon Dicamba	7 90 IMAC 20	C=10 0	1 1 1	1 1 1 1		01/2 01/2 01/2 01/2	1 1 1	< < <	1.0 1.0 0.5		no no no	
Carbofuran Chlordane Chorpyrifos Cyanazine Diaznon Dicamba 2,4 Dichlorophenol	7 90 1MAC 20 12 90	D=10 D=10 D=10 D=10 D=10	1 1 1 1 1	1 1 1 1 1		01/2 01/2 01/2 01/2 01/2	1 1 1 1	< < <	1.0 1.0 0.5 <3		no no no no	
Carbofuran Chlordane Chorpyrifos Cyanazine Diaznon Dicamba	7 90 IMAC 20 12 90 30 IMAC	D=10 D=10 D=10 D=10 D=10	1 1 1 1	1 1 1 1		01/2 01/2 01/2 01/2	1 1 1 1	< < <	1.0 1.0 0.5		no no no	

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=28	1	1	01/21	<10	no	
	0						
Heprachlor + Heptachlor	3	1	1	01/21	<0.3	no	
epoxide							
Lindane	4	1	1	01/21	<0.4	no	
Malathion	190	11	1	01/21	<5.0	no	
Methoxychlor	900	1	11	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	11	1	01/21	< 0.5	no	
Phorate	IMAC=2	1	1	01/21	<0.5	no	
Picloram	IMAC=19	1	1	01/21	<5.0	no	
	0						
Polychlorinated Biphenyls	IMAC=3	1	1	01/21	< 0.3	no	
Prometryne	IMAC=1	1	11	01/21	<0.25	no	
Simazine	IMAC=10	1	1	01/21	<1.0	no	
Temephos	IMAC=28	1	1	01/21	<10	no	
-	0						
Terbufos	IMAC=1	1	1	01/21	<0.7	no	
2,3,4,6 Tetrachlorophenol	100	11	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	IMAC=28	1	1	01/21	<1.0	no	
acedic acid	0						
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	
рН	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		I	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	11	01/28/02	24	no	
Ammonia Unionized		1	11	01/28/02	< 0.02	no	

Comment: Hardness (inorganic)

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

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 (CaCO₃) 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.
- O. 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.

Environmental Laboratory

Client

tario Clean Water Agency

Industrial Dr. Chesterville, ON K0C 1H0

Attention:

Dave Markell

Certificate of Analysis

Report:

Project:

Date Sampled: Date Received:

Date Printed:

220000055

Chesterville WTP January 2, 2002

January 3, 2002 January 07, 2002

Matrix: Drinking Water

Attention. Dave in	ai ROII						
	Parameter	E. coli	Free CI2	нрс	тс	Total CI2	
	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	
ist. McEwen Conve	niance	absent	1.00		absent	1.10	

Environmental Laboratory

Client:

tario Clean Water Agency

Chesterville, ON K0C 1H0

Attention:

Dave Markell

Certificate of Analysis

Report:

Project:

Date Sampled:

Date Received: Date Printed:

220000174

Chesterville WTP

January 7, 2002 January 8, 2002 January 10, 2002

Matrix:

Parameter Unit MDL Sample ID	E. coli /100mL	Free CI2 mg/L 0.05	HPC /mL 2	TC /100mL 1	Total CI2 mg/L 0.05
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
ist. Becker's	absent	0.90		absent	1.00

Environmental Laboratory

Client:

tario Clean Water Agency

endustrial Dr. Chesterville, ON

K0C 1H0
Attention:

Dave Markell

Certificate of Analysis

Report:

220000385

Project:

Date Sampled:

Chesterville WTP January 14, 2002

Date Sampled: Date Received: January 14, 2002 January 15, 2002

Date Printed:

January 17, 2002

Matrix:

	Parameter Unit	E. coli /100mL	Free Cl2	HPC /mL	TC /100mL	Total CI2	
	MDL	1	0.05	2	1	0.05	
	Sample ID				aboant		
_	Well #5 Raw	absent		absent	absent		
	Well #5 Treated	absent	1.20	absent	absent	1.20	
				ahaa nt	aboant		
	Dist. 9 Industrial	absent		absent	absent		
	Dist. Esso	absent	1.00		absent	1.00	
_	_						
	ist. 5 Industrial Dr.	absent	1.10		absent	1.10	

Environmental Laboratory

Client:

tario Clean Water Agency

ndustrial Dr.

Chesterville, ON

K0C 1H0

Attention:

Dave Markell

Certificate of Analysis

Report:

220000611

Project:

Matrix:

Date Sampled:

Date Received: Date Printed: Chesterville WTP January 21, 2002 January 22, 2002

January 25, 2002 Drinking Water

Parameter	E. coli	Free CI2	НРС	тс	Total Ci2
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
ist. 5 Industrial Dr.	absent	1.10		absent	1.10

Environmental Laboratory

Client:

tario Clean Water Agency

ndustrial Dr. Chesterville, ON **K0C 1H0**

Attention:

Dave Markell

Certificate of Analysis

Report:

Project: Date Sampled:

Date Received:

Date Printed:

220000784

Chesterville WTP

January 28, 2002 January 29, 2002

January 31, 2002

Matrix:

Parameter	E. coli	Free CI2	НРС	тс	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. Ontario Works Office	apsent	0.90	2	absom	0.00
		0.00		absent	0.90
Dist. St. Mary's School	absent	0.90		auseni	0.50
ist. Public School	absent	0.90		absent	0.90

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

				IVIALITY.	 Supply water	
		LAB ID:	167012			
	Sam	ple Date:	2002-01-21			
	Sa	mple ID:	CW-01			
PARAMETER	UNITS	MDL				
BTEX / 624 / PURGEABLE HY						
Benzene	ug/L	0.5	<0.5 🗸			
Toluene	ug/L	0.5	<0.5 V			
Ethylbenzene	ug/L	0.5	<0.5 ₺			
m/p-xylene	ug/L	1.0	<1.0	e.l		
o-xylene	ug/L	0.5	<0.5 ∤			
Bromodichloromethane	ug/L	0.3	2.6			
Bromoform	ug/L	0.4	<0.4 🗸			
bon Tetrachloride	ug/L	0.9	<0.9 V			
nochlorobenzene	ug/L	0.2	<0.2 V]
Chloroform	ug/L	0.5	4.5 0			
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			1
Dichloromethane	ug/L	4.0	<4.0			
Tetrachloroethylene	ug/L	0.3	<0.3 V/			
Trichloroethylene	ug/L	0.3	<0.3 🏏			
Vinyl Chloride	ug/L	0.5	<0.5 ^{,V}			
TOTALS						
Trihalomethanes (total)	ug/L	2.0	9.7			ļ
Xylene; total	ug/L	2.0	<2.0 V			
BTEX / 624 Surrogate Recove						
Toluene-d8	%	• '	84			
1,2-dichloroethane-d4	%		106			
4-bromofluorobenzene	%		103			

MDL = Method Detection Limit

INC = Incomplete

Comment:

APPROVAL:

608 Norris Court, Kingston, ON, K7P 2R9

REPORT OF ANALYSIS

Client: CHESTERVILLE WELL SUPPLY

Report Number:

2200723

Date:

2002-01-25

Date Submitted:

2002-01-22

ATT: Mr. Blair Henderson

Project:

Chesterville System

P.O. Number:

Matrix: Supply Water

_			LAB ID:			
		Sam	ple Date:	2002-01-21		
		Sa	mple ID:			
•				SPS#1		
	PARAMETER	UNITS	MDL		 	
	BTEX / 624 / PURGEABLE HYD					
_	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		
	<u>TOTALS</u>			/		
	Trihalomethanes (total)	ug/L	2.0	4.7 🗸		
	BTEX / 624 Surrogate Recoveri	es				
	Toluene-d8	%		100		
-						
•						
					į	
П						
•						
		i				

MDL = Method Detection Limit

INC = Incomplete

Comment:

REPORT OF ANALYSIS

Client: Chesterville Well Supply

Report Number:

2200724

Date:

2002-03-12

ATT: Mr. Blair Henderson

Date Submitted:

2002-01-22

Project:

Chesterville Wells

Quarterly Chemicals

Sample Matrix:

Supply Water

				Sample Matrix	<u>. </u>	Supply Water	
		LAB ID:	167012				
	Sam	ple Date:	2002-01-21				
	Sa	mple ID:	CW-01				
						1	
PARAMETER	UNITS	MDL					
PESTICIDES & PCB's							
Alachlor	mg/L	0.0005	<0.0005				
Aldicarb	mg/L	0.0050	<0.0050	ľ		l	
Aldrin + Dieldrin	mg/L	0.00007	<0.00007				
Atrazine	mg/L	0.001	<0.001				i
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				
<u>Cor</u> bofuran	mg/L	0.0050	<0.0050			l	
ordane (Total)	mg/L	0.0007	<0.0007				
Chloropyrifos	mg/L	0.0010	<0.0010			ļ	
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			ļ	
DDT	mg/L	0.0030	<0.0030				
2,4-D	mg/L	0.0010	<0.0010			ļ	
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			1	i
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 = Mothor	Detection Lim	i.t		

ND = Not Detected (< MDL)

MDL = Method Detection Limit

Comment:

REPORT OF ANALYSIS

Client: Chesterville Well Supply

Report Number:

2200724

Date:

2002-03-12

Date Submitted:

2002-01-22

ATT: Mr. Blair Henderson

Project:

Chesterville Wells

Quarterly Chemicals

Sample Matrix: Supply Water

				Jampie maui	^.	Supply water	
		LAB ID:	167012				
	Sam	ple Date:	2002-01-21				
	Sa	ample 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				
nephos	mg/L	0.010	<0.010				
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				
	j]					
1]					
					•		

ND = Not Detected (< MDL)

MDL = Method Detection Limit

Comment:

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

		iviaurix.	Supply wa	ter
	LAB ID:	167012		
	Sample Date:	2002-01-21		
	Sample ID:	CW-01		
]	ĺ
PARAMETER	UNITS MDL	TREATEDWATER	 	
N-NO2		<0.10 /		
N-NO3		<0.10	[
IN-INO3	mg/L 0.10	<0.10		
		1		
			1	
	,		1	1
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	1	1	1	1
				[
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MDL = Method Detection Limit

INC = Incomplete

Comment:

APPROVAL

JON -

REPORT OF ANALYSIS

Client: CHESTERVILLE WELL SUPPLY

Report Number:

2200723

Date:

2002-01-29

Date Submitted:

2002-01-22

ATT: Mr. Blair Henderson

Project:

Chesterville System

P.O. Number:

Matrix: Supply Water

				1716461 1741	 Cappij Tratoi	
		LAB ID:	167011			
	Samp	le Date: nple ID:	2002-01-21			
	San	nple ID:	CW-System		 	
		•	SPS#1			
PARAMETER	UNITS	MDL	TREATEDWATER	/		
Pb	mg/L	0.001	<0.001 レ	/		
1					:	
	}	1				1
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	J				1	
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	J		1			
			[

MDL = Method Detection Limit

INC = Incomplete

Comment:

REPORT OF ANALYSIS

lient: 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

				MIGUIX.		Supply Water	
LAB ID:		167758					
		le Date:	2002-01-28				
	Sar	nple ID:	CW-05				
"		-					
PARAMETER	UNITS	MDL	TREATEDWATER				
Alkalinity as CaCO3	mg/L	5	200				
Ca	mg/L	1	63		Į		
CI	mg/L	1	39 ✓				
Conductivity	uS/cm	5	578				
Colour	TCU	2	<2 V				1
DOC	mg/L	0.5	<0.5				
F Fe	mg/L	0.10	0.15 V				
Fe	mg/L	0.01	<0.01				
Hardness as CaCO3	mg/L	1	256				
Ma	mg/L	l 1	24 ✔				
13	mg/L	0.02	<0.02V				
N-NH3 (unionized)	mg/L	0.02	<0.02				
pH	""	****	7.93				
Na	mg/L	2	23 V/				
SO4	mg/L	1	53				
Total Kjeldahl Nitrogen	mg/L	0.05	<0.05 ₺	ŕ			
l	g, _	0.00	10.00			1	
		ļ					
	İ	l				l	
	1						1

MDL = Method Detection Limit

INC = Incomplete

Comment:

Environmental Laboratory

Client:

ario Clean Water Agency

Chesterville, ON K0C 1H0

Attention:

Dave Markell

Certificate of Analysis

Report:

Project:

Date Sampled: Date Received:

Date Printed:

220000963

Chesterville WTP February 4, 2002

February 5, 2002

February 07, 2002

Matrix: Drinking Water

Parameter Unit	E. coli /100mL	Free CI2	HPC /mL	TC /100mL	Total Cl2	
MDL Sample ID	1	0.05	2	1	0.05	
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	
ist. Arena	absent	1.10		absent	1.10	

Environmental Laboratory

Client:

tario Clean Water Agency

Industrial Dr. Chesterville, ON

K0C 1H0

Attention:

Dave Markell

Certificate of Analysis

Report:

220001202

Project:

Date Sampled:

Date Received:

Chesterville WTP February 11, 2002 February 12, 2002

Date Printed:

February 14, 2002

Matrix:

Parame	eter	E. coli	Free CI2	HPC	тс	Total CI2
ι	Jnit	/100mL	mg/L	/mL	/100mL	mg/L
	IDL	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
ist. Liquor Store		absent	1.20		absent	1.20

Division of Caduceon Enterprises Inc.

tario Clean Water Agency

ndustrial Dr. Chesterville, ON **K0C 1H0**

Attention:

Dave Markell

Certificate of Analysis

Report:

220001418

Project:

Date Sampled:

Chesterville WTP February 18, 2002

Date Received:

February 19, 2002

Date Printed:

February 21, 2002

Matrix:

Parameter	E. coli	Free CI2	НРС	тс	Total CI2	
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	
ist. MacEwan Gas Bar	absent	1.10		absent	1.10	

Division of Caduceon Enterprises Inc.

Client:

tario Clean Water Agency

ndustrial Dr. Chesterville, ON **K0C 1H0**

Attention:

Dave Markell

Certificate of Analysis

Report:

Project:

Date Sampled:

Date Received: Date Printed:

Matrix:

220001623

Chesterville WTP February 25, 2002

February 26, 2002 February 28, 2002

	Parameter	E. coli	Free CI2	НРС	тс	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
ist. 54 Main Street		absent	1.10		absent	1.20

REPORT OF ANALYSIS

lient: CHESTERVILLE WELL SUPPLY

Report Number:

2201832

Date: **Date Submitted:**

2002-02-20 2002-02-14

ATT: Mr. Blair Henderson

Project:

Chesterville Wells Resample

P.O. Number:

Matrix: Supply Water

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	LAB ID:			169943				
		Samp	le Date:	2002-02-13				
4		Sar	le Date: nple ID:	CW-01			1	
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	PARAMETER	UNITS	MDL	TREATEDWATER				 -
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//DL = I	Method	Detection	Limi
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INC = Incomplete

Division of Caduceon Enterprises Inc.

Client:

tario Clean Water Agency

5 Industrial Dr. Chesterville, ON K0C 1H0

Attention:

Dave Markell

Certificate of Analysis

Report:

Project:

Date Sampled:

Date Received:

Date Printed:

220001904

Chesterville WTP

March 4, 2002 March 5, 2002

March 07, 2002

Matrix:

Para	ameter	E. coli	Free CI2	НРС	тс	Total Cl2
	Unit	/100mL	mg/L	/mL	/100mL	mg/L
Sample ID	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
						1.20

Division of Caduceon Enterprises Inc.

Client:

ntario Clean Water Agency

Industrial Dr. Chesterville, ON

K0C 1H0

Attention: Dave Markell

Certificate of Analysis

Report:

220002207

Project:

Chesterville WTP

Date Sampled:

March 11, 2002 March 12, 2002

Date Received: Date Printed:

March 14, 2002

Matrix:

	Parameter	E. coli	Free Cl2	НРС	тс	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 Fu	el	absent	0.90	2	absent	0.90	
Dist. Nestle's Lag	oons	absent	0.70		absent	0.80	
Dist. Community C	Centre	absent	0.80		absent	0.80	

Division of Caduceon Enterprises inc.

ntario Clean Water Agency

Industrial Dr. Chesterville, ON K0C 1H0

Attention:

Dave Markell

Certificate of Analysis

Report:

Project: Date Sampled:

Date Received:

Date Printed:

220002448

Chesterville WTP

March 18, 2002 March 19, 2002

March 21, 2002

Matrix:

	Parameter	E. colì	Free CI2	НРС	тс	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 Sch	nool	absent	1.18		absent	1.20

Division of Caduceon Enterprises Inc.

Certificate of Analysis

Client:

ntario Clean Water Agency

Industrial Dr. Chesterville, ON **K0C 1H0**

Attention:

Dave Markell

Report:

Project: Date Sampled:

Date Received:

Date Printed:

Matrix:

220002710

Chesterville WTP March 25, 2002 March 26, 2002

April 01, 2002

	Davo markon					Dilliking Water	
	Parameter	E. coli	Free CI2	HPC	TC	Total CI2	
	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 Trea	ted	absent	1.20	absent	absent	1.30	
Dist. Public S	School	absent	1.00	absent	absent	1.00	
Dist. Co-op		absent	0.80		absent	0.80	
Dist. Liquor S	Store	absent	1.00		absent	1.10	

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



Web site at www.ocwa.com

Client Services Representative: John Kingsbury Operations Manager: Blair Henderson

Phone: (613) 774-3663 Phone: (613) 448-3098

E-mail Address: jkingsbury@ocwa.com 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



INSIDE THIS REPORT

Drinking Water Regulations	
Where To Contact Us	
Plant Description & Treatment Processes	2
Quality Control and Compliance with Provincial Regulations	3
Definitions & Terms	4
Required Testing	4
Water Quality Test Results	5
Questions & Answers	7

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

Chesterville WTP
2,781 cubic meters/day
Groundwater
Sodium Hypochlorite
Municipal Office, 636 St. Lawrence St., Winchester
Village of Chesterville
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.

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

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 exceedance of 5.2 NTU was reported. On both occasions, free chlorine residuals were over 1.0 mg/l.

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

CaCO₃ - 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.

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

Chesterville Water Quality Test Results

Total Coliform (counts/100ml) Escherichia Coliform	or IMAC 0	Samples	Detectable	Dates			Typical Source of Contaminant
(counts/100ml) Escherichia Coliform							Contaminant
(counts/100ml) Escherichia Coliform	1 0		Results	(m/d)			
Escherichia Coliform	-	52	0	04/01-06/30	n/a	no	Indicate possible presence of coliform
1 (, // 00 %	0	52	0	04/01-06/30	n/a	no	Definite indicator of
(counts/100 ml)	<u> </u>	<u> </u>					fecal contamination
Heterotrophic Plate Count	500	26	5	04/01-06/30	<2-4	no	Indicator of
(count/100 ml)		į					deteriorating water
	i	1	j				quality if greater than
Parameters related to	MAC	# of	# of		TO .	Exceedence?	500
Microbiological	Of	Samples	n ut Detectable	Sampling Dates	Range	LACECGERCS.	Typical Source of
Quality	IMAC	Jumpica	Results	(m/d)			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	-	Continuous	continuous	04/01-06/30	0.77-1.41	no	Chlorine added for
Plant Effluent (mg/l)							Disinfection
Free Chlorine-	- 1	Grab	Weekly	04/01-06/30	0.6-1.20	no	Objective is 0.20 mg/l
Distribution (mg/l min		Sample			ļ		in the Distribution
0.05 & max. 4.0)		weekly			•		System
					}		(min. 0.05 mg/l required)
Inorganic Parameters	MAC	# of	# of	Sampling	Range	Exceedence?	Typical Source of
(mg/l)	or	Samples	Detectable	Dates			Contaminant
	IMAC		Results	(m/d/y)			
Lead - Distribution	0.01	1	1	01/21/02	<0.001	no	Leached from lead
ļ			1	}	{		solder or brass
The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s							plumbing fixtures
Nitrate	10	1]	1	04/11/02	<0.1	no	Natural component of
Nitrite	1	-	1	04/11/02	<0.1		water
Arsenic	IMAC=	1	1	09/18/00	<0.001	no no	
Barium	0.025			00/19/00			
Boron	IMAC=	1	1	09/18/00 09/18/00	0.18	no	
	5.0					no	
Classics (Table)	0.005	1		09/18/00	<0.0001	no	
Chromium (Total) Copper	0.05	1	1	09/18/00	<0.01	no	
Iron	0.3	1	1	09/18/00 01/28/02	0.004 <0.01	no	·
Lead	0.01	1	1	09/18/00	<0.001	no no	
Manganese	0.05	1	$-\frac{1}{1}$	09/18/00	<0.01	no	
Mercury	0.001	1	$-\frac{1}{1}$	09/18/00	<0.0001	no	
Selenium	0.01	1		09/18/00	<0.001		
Uranium	0.1		1	09/18/00	0.001	no no	
Sodium	200	1	1	01/28/02	23-26	no	
				-02/13/02			
Fluoride	2.4	1	1	01/28/02	0.15	no	
Volatile Organics (ug/l)	MAC	# of	#of	Sampling	Range	Exceedence?	Typical Source of
	Or DAAC	Samples	Detectable	Dates			Contaminant
Trihalomethanes - Plant	IMAC 100	1	Results	(m/d/y) 04/11/02	4.5		
Trihalomethanes - Dist.	100	1	1	04/11/02	3.2	no	
Benzene	5	1	1	04/11/02	<0.5	no no	
Carbon Tetrachloride	5	i	1	04/11/02	<0.9	no	

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

Dichloromethane	50	1	1	04/11/02	<4		
1,2 - Dichlorobenzene	200	1	<u> </u>	04/11/02	<0.4	no	
1, 4 - Dichlorobenzene	5	1	1	04/11/02	<0.4	no	
1,2 - Dichloroethane	IMAC=	1	1	04/11/02	<0.7	no	<u> </u>
1,1 - Dichloroethylene	14	1		<u> </u>		no	
Ethylbenzene	24	1	1	04/11/02	<0.5	no	
Volatile Organics (ug/l)	MAC	# of		04/11/02	<0.5	no	
(191)	or	8 or Samples	# of	Sampling	Range	Exceedence?	Typical Source of
	IMAC	panipics	Detectable Results	Dates			Contaminant
Monochlorobenzene	80	1	Results	(m/d/y)			
Tetrachloroethylene	30	1	1	04/11/02	<0.2	no	
Toluene	24	1		04/11/02	<0.3	no	
Trichloroethlyene	50		1	04/11/02	<0.5	no	
Vinyl chloride	2	 	<u>-</u>	04/11/02	<0.3	no	
Xylene	300			04/11/02	<0.5	no	
Bromodichloromethane	n/a	1	1	04/11/02	<2.0	no	
Bromoform	n/a		1	04/11/02	1.6	no	
Chloroform	n/a	1	1	04/11/02	<0.4	no	
Dibromochloromethane	n/a	1		04/11/02	1.9	no	
Pesticides & PCB (ug/L)	MAC or	# of	# of	04/11/02	1	no	
- (-e-2)	IMAC	# 01 Samples		Sampling	Range	Exceeden	1 Typical Source 0
		Dailipies	Detectable				Contaminant
Alachlor	IMAC=5		Results 1	(m/d/y)			
Aldicarb	9	1 1		04/11/02	<0.5	no	
Aldrin+Dieldrin	0.7	+ - 1	1	04/11/02	<5.0	no	
Atrazine	IMAC=5	1	1 1	04/11/02	<0.07	no	
Azinphos-methyl	20	1		04/11/02	<1.0	no	
Bendiocarb	40	1 1	1	04/11/02	<2.0	no	
Bromoxynil	IMAC=5	1 1	1	04/11/02	<2.0	no	
Carbaryl	90	1	1	04/11/02	<0.5	no_	
Carbofuran	90	1 1	1 1	04/11/02	<5.0	no	
Chlordane	7	1 1	1 1	04/11/02	<5.0	no	
Chorpyrifos	90	1	1	04/11/02	<0.7	no	
Cyanazine	IMAC=10		1	04/11/02	<1.0	no	
Diaznon	20	1 1	1	04/11/02	<1.0	no	
Dicamba	120	1	1	04/11/02	<1.0	no	
2,4 Dichlorophenol	900	1		04/11/02	<1.0	no	
DDT + Metapolites	30	1	1	04/11/02	<0.5	no	
2,4 - Dichlorophenexy	IMAC=10	1	1	04/11/02	<3	no	
acid (2,4 -D)	0	1 1	1	04/11/02	<1.0	no	
Diclofop-methyl	9	1	1	04/11/02		 	
Dimethoate	IMAC=20	1	<u></u>	04/11/02	<0.9	no	
Dinoseb	10	1	1	04/11/02	<2.5	no	
Diquat	70	1	1	04/11/02	<1.0	no	
Diuron	150	1	1	04/11/02	<7	no	
Glyphosate	IMAC=28		1	04/11/02	<10	no	
	0	-		0-7/11/02	<10	no	
leprachlor + Heptachlor	3	1	i	04/11/02	<0.3	+	
poxide			-	0-1/11/02	~0.3	no	
indane	4	11	1	04/11/02	<0.4	+	
falathion	190	1	1	04/11/02	<5.0	no	+
lethoxychlor	900	1	1	04/11/02	<90	no	
<u>letolachlor</u>	IMAC=50	1	1	04/11/02	<0.5	no	
letribuzin	80	1	i	04/11/02	<5.0	no	
araquat	IMAC=10	1	i	04/11/02	<1.0	no	
arathion	50	1	i	04/11/02	<1.0	no	
entachlorophenol	60	1	1	04/11/02	<0.5	no	
horate	IMAC=2	1	1	04/11/02	<0.5	no no	
icloram	IMAC=19						

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

	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	Excondence?	Typical Source of Contaminant
Colour	5	1	1	01/28/02	<2	no	
рН	6.8-8.5	1	1	01/28/02	7.93	no	
Alkalinity	30-500	_1	11	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 (CaCO₃) 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?

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.

Division of Caduceon Enterprises Inc.

Client:

tario Clean Water Agency

Industrial Dr. Chesterville, ON **K0C 1H0**

Attention:

Dave Markell

Certificate of Analysis

Report:

220002966

Project:

Chesterville WTP April 2, 2002

Date Sampled: Date Received:

April 3, 2002

Date Printed:

April 05, 2002

Matrix:

Drinking Water

Michael Ziebell, General Manager

Parameter	E. coli	Free Ci2	нрс	TC	Total Ci2
Unit	/100mL	mg/L	/mL	/100mL	mg/L
MDL	1	0.05	2	1	0.05
					
	absent		200	absent	
	absent	1,10	absent	absent	1.10
	absent	1.10	absent	ahsent	1.10
				abount	1.10
	aheant	1.00			1.00
	apsent	1.00		apsent	1.00
	absent	1.10		absent	1.10
	Unit	Unit /100mL MDL 1 absent absent absent	Unit /100mL mg/L MDL 1 0.05 absent 1.10 absent 1.00	Unit /100mL mg/L /mL MDL 1 0.05 2 absent 200 absent 1.10 absent absent 1.00	Unit /100mL mg/L /mL /100mL MDL 1 0.05 2 1 absent 200 absent absent 1.10 absent absent absent 1.10 absent absent absent 1.00 absent

Division of Caduceon Enterprises Inc.

Client:

ntario Clean Water Agency

Industrial Dr. Chesterville, ON K0C 1H0

Attention:

Dave Markell

Certificate of Analysis

Report:

220003201

Project:

Chesterville WTP

Date Sampled:

Date Received:

April 8, 2002 April 9, 2002

Date Printed:

April 11, 2002

Matrix:

_							
	Para	meter	E. coli	Free CI2	HPC	тс	Total CI2
		Unit	/100mL	mg/L	/mL	/100mL	mg/L
	Sample ID	MDL	1	0.05	2	1	0.05
ŀ							
,	Well #5 Raw		absent		absent	absent	
l	Well #5 Treated		absent	0.90	absent	absent	1.00
ı							
	Dist. St. Mary's School		absent	0.90	absent	absent	0.90
	Dist. Public School		absent	0.90		absent	0.90
ı							
	Dist. 232 Queen St. West		absent	0.70		absent	0.70
	Jist. 202 Queen St. West		apacit	0.10		auseill	0.70

Division of Caduceon Enterprises Inc.

Client:

ntario Clean Water Agency

industrial Dr. Chesterville, ON **K0C 1H0**

Attention:

Dave Markell

Certificate of Analysis

Report:

Project:

Date Sampled: Date Received:

Date Printed:

220003478

Chesterville WTP April 15, 2002

April 16, 2002

April 18, 2002

Matrix:

-							
	Param	neter	E. coli	Free CI2	НРС	тс	Total CI2
		Unit	/100mL	mg/L	/mL	/100mL	mg/L
l	Sample ID	MDL	1	0.05	2	1	0.05
	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
	Dist. 5 Industrial		absent		•	absent	

Division of Caduceon Enterprises Inc.

ario Clean Water Agency

5 Industrial Dr. Chesterville, ON

K0C 1H0

Attention: **Dave Markell**

Certificate of Analysis

Report:

220003770

Project:

Chesterville WTP

Date Sampled:

April 22, 2002

Date Received: Date Printed:

April 23, 2002 April 25, 2002

Matrix:

Drinking Water

Par	ameter	E. coli	Free CI2	НРС	тс	Total CI2
	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
ist. M & T Advertizing		absent	1.00		absent	1.10

of 1

Division of Caduceon Enterprises Inc.

Certificate of Analysis

Client:

tario Clean Water Agency

o Industrial Dr. Chesterville, ON K0C 1H0

Attention:

Dave Markell

Report:

220004027

Project: Date Sampled:

Date Received:
Date Printed:

Chesterville WTP April 29, 2002 April 30, 2002 May 02, 2002

Matrix:

		Parameter	E. coli	Free CI2	HPC	тс	Total Cl2
		Unit	/100mL	mg/L	/mL	/100mL	mg/L
	Sample ID	MDL	1	0.05	2	1	0.05
							
	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
•	_						

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

				Wall IX.		_ Supply wate	r
		LAB ID:					T
		ple Date:					1
•	Sa	ample ID:	CW-02			T	
			}				1
						1	
PARAMETER	UNITS	MDL				†	
BTEX / 624 / PURGEABLE HYD		ONS				†	
Benzene	ug/L	0.5	<0.5		}	1	\
Toluene	ug/L	0.5	<0.5		1	1	
Ethylbenzene	ug/L	0.5	<0.5		1	}	
m/p-xylene	ug/L	1.0	<1.0		}	}	
o-xylene	ug/L	0.5	<0.5		{	1	}
Bromodichloromethane	ug/L	0.3	1.6 🗸		1	Į.	1
Bromoform	ug/L	0.4	<0.4		ŀ		1
bon Tetrachloride	ug/L	0.9	<0.9 🗸		ļ		1
nochlorobenzene	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	
1,4-dichlorobenzene	ug/L	0.4	<0.4		ì		
1,2-dichloroethane	ug/L	0.7	<0.7 ✓		j	1	}
1,1-dichloroethylene	ug/L	0.5	<0.5		1	1	
Dichloromethane	ug/L	4.0	<4.0				-
Tetrachloroethylene	ug/L	0.3	<0.3		l		ļ
Trichloroethylene	ug/L	0.3	<0.3		1		1
Vinyl Chloride	ug/L	0.5	<0.5			Ì	
TOTALS					}	}	
Trihalomethanes (total)	ug/L	2.0	4.5		(1
Xylene; total	ug/L	2.0	<2.0		{		1
BTEX / 624 Surrogate Recoveri	es l	1					l
Toluene-d8	%	1	99	ı			
1,2-dichloroethane-d4	%	}	86]
4-bromofluorobenzene	%	1	102				
		1					
1451							I

MDL = Method Detection Limit

INC = Incomplete

Comment:

APPROVAL:

608 Norris Court, Kingston, ON, K7P 2R9

REPORT OF ANALYSIS

Client: Chesterville Well Supply

Report Number:

Date Submitted:

2204290

Date:

2002-05-02

ATT: Mr. Blair Henderson

2002-04-12

Project:

Chesterville - Quarterly

Chem

Sample Matrix:

Supply Water

				Sample Watri	<u>^.</u>	Supply Water	
	_	LAB ID:					
		ple Date:	2002-04-11				
	S	ample ID:	CW-02				
				1	}	1	
DADAMETER	1 111170	T		<u> </u>			
PARAMETER PARAMETER	UNITS	MDL					
PESTICIDES & PCB's Alachlor]					}	
i ·	mg/L	0.0005	<0.0005			i	1
Aldicarb	mg/L	0.0050	<0.0050				
Aldrin + Dieldrin	mg/L	0.00007	<0.000 <u>0</u> 7			1	
Atrazine	mg/L	0.001	<0.001			1)
Azinphos-methyl	mg/L	0.002	<0.002		ļ	Ì	l
Bendiocarb	mg/L	0.0020	<0.0020		_		l
Bromoxynil	mg/L	0.0005	<0.0005				
Carbaryl	mg/L	0.0050	<0.0050		/		
rbofuran	mg/L	0.0050	<0.0050	. /	610		
ordane (Total)	mg/L	0.0007	<0.0007		1,0°C		ł
Chloropyrifos	mg/L	0.0010	<0.0010	1/.0.4) ~		
Cyanazine	mg/L	0.0010	<0.0010	000	Jucked	}	
Diazinon	mg/L	0.0010	<0.0010			}	
Dicamba	mg/L	0.0010	<0.0010	1		1	
Diquat	mg/L	0.0070	<0.0070				
2,4-Dichlorophenol	mg/L	0.0005	<0.0005			1	
DDT	mg/L	0.0030	<0.0030			j	
2,4-D	mg/L	0.0010	<0.0010	1			
Diclofop-methyl	mg/L	0.0009	<0.0009	l			
Dimethoate	mg/L	0.0025	<0.0025	1			
Dinoseb	mg/L	0.0010	<0.0010	ļ			
Diuron	mg/L	0.010	<0.010	1			
Glyphosate	mg/L	0.010	<0.010	ł			}
Heptachlor + Hept. Epoxide	mg/L	0.0003	<0.0003	}			1
Lindane (Total)	mg/L	0.0004	<0.0004	İ			ĺ
Malathion	mg/L	0.0050	<0.0050	}			
Methoxychlor	mg/L	0.0900	<0.0900	ĺ			
Metolachlor	mg/L	0.0005	<0.0005	1			
ND = Not Detected (< MDL)				Detection Limit			

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

REPORT OF ANALYSIS

Client: Chesterville Well Supply

Report Number:

2204290

Date:
Date Submitted:

2002-05-02 2002-04-12

ATT: Mr. Blair Henderson

Project:

Chesterville - Quarterly

Chem

Sample Matrix: Supply Water

LAB ID:			176575		1	Juppiy Hutor	
Ì	Sam	ple Date:	2002-04-11	<u> </u>	 		
		ample ID:	CW-02	 	 	 	
1	•	ampio ibi		}			1
1					}		1
PARAMETER	UNITS	MDL			<u> </u>	 	
Metribuzin	mg/L	0.005	<0.005			 	
Paraquat	mg/L	0.0010	<0.0010		1		
Parathion	mg/L	0.0010	<0.0010		ł		
Pentachlorophenol	mg/L	0.0005	<0.0005	į	1	}	j
Phorate	mg/L	0.0005	<0.0005		V	1]
Picloram	mg/L	0.0050	<0.0050	/	,		}
PCB's (total)	mg/L	0.0003	< 0.0003		lland	Į.	
Prometryne	mg/L	0.00025	<0.00025	Louch	rlan	1	}
Simazine	mg/L	0.0010	<0.0010		1~	1	
mephos	mg/L	0.010	<0.010		1		
bufos	mg/L	0.0007	<0.0007		į	1	
2,3,4,6-Tetrachlorophenol	mg/L	0.0005	<0.0005				
Triallate	mg/L	0.0010	<0.0010		Ì		j
2,4,6-Trichlorophenol	mg/L	0.0005	< 0.0005				}
Trifluralin	mg/L	0.0010	< 0.0010]	ł
2,4,5-T	mg/L	0.0010	<0.0010				ŀ
		1					į
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		1	į				1
		}					į

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

REPORT OF ANALYSIS

Client: CHESTERVILLE WELL SUPPLY

Report Number:

2204290

Date: **Date Submitted:** 2002-04-19 2002-04-12

ATT: Mr. Blair Henderson

Project:

Chesterville -Quarterly Chem

P.O. Number:

Matrix: Supply Water

			matrix		Cuppiy Trucci	
	LAB ID	176575				
1	Sample Date	2002-04-11				
	Sample Date Sample ID): CW-02				
1			ļ			
PARAMETER	UNITS MDI	L TREATEDWATER	-			
		CO 10 L				
N-NO2		0.10 0 <0.10				ļ
N-NO3	mg/L 0.10	0.10				
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MDL = Method Detection Limit

INC = Incomplete

Comment:

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

i roject.

P.O. Number:

Supply Water

				Matrix:		Supply Water	
		LAB ID:	176593				
	Sam	ple Date:	2002-04-11				
		imple ID:					1
T		•		j	İ	ļ	
, (}		ļ	4	
PARAMETER	UNITS	MDL			1		
BTEX / 624 / PURGEAB	LE HYDROCARBO	ONS					
Bromodichloromethane	ug/L	0.3	1.0]
Bromoform	ug/L	0.4	<0.4		j	l	
Chloroform	ug/L	0.5	1.4		l	ļ	•
Dibromochloromethane	ug/L	0.3	0.8		(•	į
TOTALS					}	{)
Trihalomethanes (total)	ug/L	2.0	3.2 🗸				1
BTEX / 624 Surrogate R					1	Ì]
vene-d8	%	Í	98		}		
	}				[l	
• -	j	}			Į.		1
• 1	j]				}	}
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MDL = Method Detection Limit

INC = Incomplete

Comment:

APPROVAL:

608 Norris Court, Kingston, ON, K7P 2R9

Division of Caduceon Enterprises Inc.

Client:

tario Clean Water Agency

Industrial Dr. Chesterville, ON **K0C 1H0**

Attention:

Dave Markell

Certificate of Analysis

Report:

Project:

Date Sampled: **Date Received:**

Date Printed:

220004304

Chesterville WTP

May 6, 2002 May 7, 2002

May 09, 2002

Matrix:

		Parameter Unit	E. coli /100mL	Free CI2	HPC /mL	TC /100mL	Total Cl2
5 }	Sample ID	MDL	1	0.05	2	1	0.05
) 	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

Division of Caduceon Enterprises Inc.

Client:

ntario Clean Water Agency

Industrial Dr. Chesterville, ON

K0C 1H0

Attention: Dave Markell

Certificate of Analysis

Report:

220004610

Project:

Project;

Date Sampled: Date Received:

Date Printed:

Chesterville WTP May 13, 2002

May 13, 2002 May 14, 2002 May 16, 2002

Matrix:

Samula ID	Parameter Unit MDL	E. coli /100mL	Free Cl2 mg/L 0.05	HPC /mL 2	TC /100mL 1	Total CI2 mg/L 0.05	
Sample ID Well #5 Rav	v	absent			absent		-
Well #5 Trea	ated	absent	1.10	absent	absent	1.10	
Dist. MacEw	van 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	

Division of Caduceon Enterprises Inc.

Client:

itario Clean Water Agency

5 Industrial Dr. Chesterville, ON K0C 1H0

Attention:

Dave Markell

Certificate of Analysis

Report:

220004901

Project:

Chesterville WTP

Date Sampled:

May 21, 2002

Date Received:
Date Printed:

May 22, 2002 May 24, 2002

Matrix:

	Parameter	E. coli	Free Cl2	HPC	TC	Total CI2
	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	ce	absent	0.90		absent	0.90
Dist. 5 Industrial		absent	1.20		absent	1.20

Division of Caduceon Enterprises Inc.

Certificate of Analysis

htario Clean Water Agency

o Industrial Dr. Chesterville, ON

K0C 1H0

Attention: **Dave Markell** Report:

220005175

Chesterville WTP

Project:

Date Sampled:

Date Received: Date Printed:

May 27, 2002 May 28, 2002

May 30, 2002

Matrix:

_						
	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

Dave Markell

Attention: KOC 1금

Chesterville, ON 5 Industrial Dr.

Parameter

ริ

ᅙ

Dist. Public School

Dist. Stinson

Dist. 5 Industrial

Well #5 Treated

Well #5 Raw

Sample 10

2378 Holly Lane, Ottawa, Onfario, K1V 7P1, Canada Tel: (613)528-0123, Fax: (613)528-1244 Caduceon Environmental Laboratories

p. 1

Mael Zhebell, General Manager

Page

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Division of Caduceon Enterprises Inc.

Certificate of Analysis

Client:

tario Clean Water Agency

Industrial Dr. Chesterville, ON **K0C 1H0**

Attention:

Dave Markell

Report:

220005851

Project:

Chesterville WTP June 10, 2002

Date Sampled: Date Received: **Date Printed:**

June 11, 2002 June 13, 2002

Matrix:

	Parameter	E. coli	Free CI2	НРС	тс	Total CI2
	Unit	/100mL	mg/L	/mL	/100mL	mg/L
Sample ID	MDL	1	0.05	2	1	0.05
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 Sto	re (Queen)	absent	1.10		absent	1.20

Division of Caduceon Enterprises Inc.

Client:

Ontario Clean Water Agency

5 Industrial Dr. Chesterville, ON K0C 1H0

Total Coliforms

Attention:

Dave Markell

/100mL

1

Certificate of Analysis

Report:

220006126

Project:

Chesterville WTP

Date Sampled: Date Received: June 17, 2002

Date Printed:

June 18, 2002 June 20, 2002

Matrix:

absent

Drinking Water

Parameter	Unit MDL		Sample Ide	entification			
			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				

absent

absent

absent

absent

Division of Caduceon Enterprises Inc.

Client:

Ontario Clean Water Agency

5 Industrial Dr. Chesterville, ON K0C 1H0

Attention:

Dave Markell

Certificate of Analysis

Report:

220006431

Project:

Chesterville WTP

Date Sampled:

June 24, 2002

Date Received: Date Printed: June 25, 2002 June 27, 2002

Matrix:

_								
		Parameter	Background	E. coli	Free CI2	HPC	тс	Total Cl2
		Unit	/100mL	/100mL	mg/L	/mL	/100mL	mg/L
	Sample ID	MDL	1	1	0.05	2	1	0.05
•						 	 	
	Well #5 Raw		1	absent			absent	
	Well #5 Treated			absent	1.10	absent	absent	1.20
	Dist. MacEwen Pe	etro		absent	1.20	absent	absent	1.30
	Dist. Canada Post	t		absent	1.10		absent	1.10
	Dist. 5 Industrial			absent	1.00		absent	1.10





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



Web site at www.ocwa.com

Client Services Representative: John Kingsbury

Henderson

Phone: (613) 774-3663

E-mail Address: jkingsbury@ocwa.com

Operations Manager: Blair

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: <u>info@northdundas.com</u>

Free copies of this report are available at the Township office in Winchester or their website @ www.northdundas.com



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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.

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

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 excedances were experienced.

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Definitions & Terms

 m^3 - Cubic Meter, $1m^3 = 1000$ litres

TCU - True Colour Units

CaCO₃ - 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 July-September 2002, Chesterville Water Plant - Serving the Village of Chesterville

Microbiological Parameters	MAC	# of	# of	Sampling	n		
	or	Samples	Detectable	Dates	Range	Exceedence?	Typical Source of Contaminant
	IMAC		Results	(m/d)			Contaminant
Total Coliform (counts/100ml)	0	57	0	07/01-09/30	n/a	no	Indicate possible
Escherichia Coliform	0	57	0	07/01-09/30			presence of coliform
(counts/100 ml)		37		07/01-09/30	n/a	no	Definite indicator of fecal contamination
Heterotrophic Plate Count	500	29	10	07/01-09/30	<2-84	no	Indicator of
(count/100 ml)		1]				deteriorating water
			1				quality if greater than
Parameters related to	MAC	# of	# of	Sampling	Range	Exceedence?	500
Microbiological	or	Samples	Detectable	Dates			Typical Source of Contaminant
Quality Turbidity (NTU)	IMAC	Continuous	Results	(m/d)		18743	
Turbidity (NTO)	1	Continuous	Continuous	07/01-09/30	0.07-0.69	no	Turbidity is a measure
Free Chlorine -	1 -	Continuous	continuous	07/01-09/30	0.79-1.48	no	of particles in water Chlorine added for
Plant Effluent (mg/l)					0.77 1.10	110	Disinfection
Free Chlorine- Distribution (mg/l min 0.05	-	Grab	Weekly	07/01-09/30	0.7-1.8	no	Objective is 0.20 mg/l
& max. 4.0)		Sample weekly	1		}	İ	in the Distribution
,	ļ						System (min. 0.05 mg/l
	(C)						required)
Inorganic Parameters (mg/l)	MAC or	# of Samples	# of	Sampling	Range	Exceedence?	Typical Source of
	IMAC	Samples	Detectable Results	Dates (m/d/y)			Contaminant
Lead - Distribution	0.01	1	1	01/21/02	<0.001	no	Leached from lead
		,			0.001	""	solder or brass plumbing
Nitrate	10	1		0.0100100			fixtures
Made	10	1	1	08/08/02	<0.1	no	Natural component of
Nitrite	1	1	1	08/08/02	<0.1	no	water
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	l	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 Iron	1	1	1	09/18/00	0.004	no	
Lead	0.3	1	1	01/28/02 09/18/00	<0.01	no	
Manganaga					<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 Sodium	0.1	1	1	09/18/00	0.001	no	
Soutuili	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	# of	# of	Sampling		Exceedence?	Typical Source of
Maria and the state of	INAC	Samples	Detectable	Dates			Contaminant
Trihalomethanes - Plant	IMAC 100	1	Results	(m/d/y)	41		
Trihalomethanes - Dist.	100	1	1	08/08/02 08/08/02	2.6	no no	
Benzene	5	1	i	08/08/02	<0.5	no	
Carbon Tetrachloride	5	1	1	08/08/02	<0.9	no	
Dichloromethane 1,2 - Dichlorobenzene	50 200	1	1	08/08/02	<4	no	
1, 4 - Dichlorobenzene	5	1	1	08/08/02 08/08/02	<0.4 <0.4	no	
1,2 - Dichloroethane	IMAC=	1	1	08/08/02	<0.4	no	
1,1 - Dichloroethylene	14	1	1	08/08/02	<0.5		
Volatile Organics (ug/l)	MAC or	# of	# of	Sampling		no xceedence?	Typical Source of
		Samples	Detectable	Dates		TO PARTY OF	Contaminant
Ethylbenzene	IMAC 24	1	Results	(m/d/y)	20 T		SALES TO SEE
Monochlorobenzene	80	1	1	08/08/02 08/08/02	<0.5	no	
	00	<u> </u>	1	06/08/02	<0.2	no	

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Tetrachloroethylene	30	1	1	08/08/02	-0.2 1		
Toluene	24		1	08/08/02	<0.3	no	
Trichloroethlyene	50	- i	1	08/08/02	<0.5	no	
Vinyl chloride	2	- i		08/08/02	< 0.3	no	
Xylene	300	1	1	08/08/02	<0.5	no	
Bromodichloromethane	n/a	1		08/08/02	<2.0	no	
Bromoform	n/a	1 +		08/08/02	1.4	no	
Chloroform	n/a		1	08/08/02	<0.4	no	
Dibromochloromethane	n/a	1	1	08/08/02	1.7	no	
Pesticides & PCB (ug/L)	MAC or	# of	-	08/08/02	1	no	
	IMAC	Samples	# of Detectable	Sampling Dates	Range	Exceedence?	Typical Source of Contaminant
Alachior	IMAC=5		Results	(m/d/y)	35.00		Contaminant
Aldicarb	IMAC=5	1	1	08/08/02	< 0.5	no	
Aldrin+Dieldrin	0.7	1	1	08/08/02	<5.0	no	
Atrazine		1 1	1	08/08/02	< 0.012	no	
Azinphos-methyl	IMAC=5	1 1	1	08/08/02	< 0.5	no	
Bendiocarb	20	1	1	08/08/02	<2.0	no	
Bromoxynil	40 IMAC-5	1	11	08/08/02	<2.0	no	
Carbaryl	IMAC=5	1	1	08/08/02	< 0.5	no	
Carbofuran	90	1	1	08/08/02	<5.0	no	
Chlordane	7	1	11	08/08/02	<5.0	no	
Chorpyrifos		1	1	08/08/02	< 0.012	no	
Cyanazine	90 IMAC=10	1	1	08/08/02	<1.0	no	
Diaznon		1	1	08/08/02	<1.0	no	
Dicamba	20	1	1	08/08/02	<1.0	no	
2,4 Dichlorophenol	120	1	1	08/08/02	<1.0	no	
DDT + Metapolites	900	1	1	08/08/02	< 0.5	no	
2,4 - Dichlorophenexy acid	30	1	1	08/08/02	< 0.024	no	
(2,4 -D)	IMAC=100	1	1	08/08/02	<1.0	no	
Diclofop-methyl	9	1	1	08/08/02	<0.9		
Dimethoate	IMAC=20	1	1	08/08/02	<2.5	no no	
Dinoseb	10	1	1	08/08/02	<1.0	no	
Diquat	70	1	1	08/08/02	<7		
Diuron	150	1	1	08/08/02	<10	no no	
Glyphosate	IMAC=280	1	ī	08/08/02	<10		
Heprachlor + Heptachlor epoxide	3	1	1	08/08/02	<0.012	no no	
Lindane	4	1	1	08/08/02	< 0.006	n.	
Malathion	190	1	1	08/08/02	<5.0	no	
Methoxychlor	900	1	1	08/08/02	<0.024	no	
Metolachlor	IMAC=50	1	ī	08/08/02	<0.024	no	
Metribuzin	80	ı	1	08/08/02	<5.0	no	
Paraquat	IMAC=10	1	i +	08/08/02	<1.0	no	
Parathion	50	1	1	08/08/02	<1.0	no	
entachlorophenol	60	1	1	08/08/02	<0.5	no	
horate	IMAC=2	1	i	08/08/02	<0.5	no	···
ricloram	IMAC=190	1	1	08/08/02	<5.0	no	
olychlorinated Biphenyls	IMAC=3	1	i	08/08/02	<0.05	no	
rometryne	IMAC=1	1	1	08/08/02	<0.05	no	
imazine	IMAC=10	1	1	08/08/02	<1.0	no	
emephos	IMAC=280	1	1 +	08/08/02	<10	no	
erbufos	IMAC=1	1	1	08/08/02	<0.7	no	
3,4,6 Tetrachlorophenol	100	1	i	08/08/02	<0.7	no	
riallate	230	1	ī	08/08/02	<1.0	no	
4,6-Trichlorophenol	5	1	1	08/08/02		no	
4,5 - trichlorophenoxy edic acid	IMAC=280	1	1	08/08/02	<0.5	no	
rifluralin						-	
we will!	45	1	1	08/08/02	<1.0		

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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	
рН	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	<u> </u>
Chloride	250	1	1	01/28/02	39	no	T
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	1
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 (CaCO₃) 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?

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- 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

Table	В	&	D
NO28	٨	Ю	3

Treated Treated

System THM Flouride

Treated Treated

Samples	1	Date Results	
Collected	Initials	Received	Initials

pm	
DM	
Am	
 /3//	

Bacti Parameters

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

JULY 1	Bacti's	
JULY 8	Bacti's	
JULY 15	Bacti's	1
JULY 22	Bacti's	~
JULY 29	Bacti's	

annual

AUG. 5	Bacti's	
AUG. 12	Bacti's	1
AUG. 19	Bacti's	
AUG. 26	Bacti's	

SEPT. 2	Bacti's	V
SEPT. 9	Bacti's	V
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)

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Division of Caduceon Enterprises Inc.

Client:

Ontario Clean Water Agency

5 Industrial Dr. Chesterville, ON **K0C 1H0**

Attention: Parameter

E. coli

Background bacteria

Total Coliforms

HPC

Dave Markell

Unit

MDL

/100mL

/100mL

/100mL

/mL

1

2

Certificate of Analysis

Report:

220006762

Project:

Dist. D & D

1.30

1.10

absent

Performance

Chesterville WTP

Date Sampled:

July 2, 2002

Date Received:

July 3, 2002

Date Printed: Matrix:

July 05, 2002

Drinking Water

				-	
			Well #5 Raw	Well #5 Treated	Dist. St. Mary's
Total Chlorine	mg/L	0.05		1.10	1.10
Free Chlorine	mg/L	0.05		1.10	0.90

0.05 1.10 0.90 absent absent absent

absent

Sample Identification

absent

absent

absent absent absent

absent

Dist. Public

School

0.90

0.90

absent

absent







Division of Caduceon Enterprises Inc.

Certificate of Analysis

elient:

itario Clean Water Agency

o Industrial Dr. Chesterville, ON **K0C 1H0**

Report:

220007055

Project:

Chesterville WTP

Date Sampled:

July 8, 2002

Date Received: Date Printed:

July 9, 2002 July 11, 2002

Attention:	Dave Markell				Matrix:	Drinki	ng Water
	Parameter	Background	E. coli	Free CI2	НРС	тс	Total Cl2
	Unit	/100mL	/100mL	mg/L	/mL	/100mL	mg/L
	MDL	1	1	0.05	2	1	0.05
Sample ID							
Well #5 Ra	aw	absent	absent			absent	
Well #5 Tr	eated		absent	1.10	absent	absent	1.30
Dist. Wate	r Tower		absent	1.10	. 2	absent	1.30
Dist. Kick I	Boxing		absent	1.00		absent	1.30
Dist. 5 Ind	ustrial		absent	1.10		absent	1.40
· · · · · · · · · · · · · · · · ·				••••			

Division of Caduceon Enterprises Inc.

⊈lient:

ntario Clean Water Agency

Industrial Dr. Chesterville, ON

K0C 1H0

Attention: **Dave Markell** **Certificate of Analysis**

Report:

220007197

Project:

Chesterville WTP

Date Sampled:

July 10, 2002

Date Received:

July 11, 2002

Date Printed:

July 17, 2002

Matrix:

Drinking Water

Michael Ziebell, General Manager

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

Division of Caduceon Enterprises Inc.

Certificate of Analysis

Client:

itario Clean Water Agency

o Industrial Dr. Chesterville, ON K0C 1H0

Attention:

Dave Markell

Report:

220007321

Project:

Chesterville WTP

Date Sampled:

July 15, 2002

Date Received:
Date Printed:

July 16, 2002 July 18, 2002

Matrix:

 _	Autermore. Dave in	Markell					Drin	king vvater	
		Parameter	Background	E. coli	Free CI2	HPC	тс	Total CI2	_
l		Unit	/100mL	/100mL	mg/L	/mL	/100mL	mg/L	
l	e	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. 00.11				0.00				
	Dist. 38 Howard			absent	0.90	absent	absent	1.00	
	Dist. 17 Steeter Peter	e		absent	1.10		absent	1.10	
	Dist. Swimming Poo	ol		absent	1.10		absent	1.10	

Division of Caduceon Enterprises Inc.

Certificate of Analysis

Client:

tario Clean Water Agency

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:

_								
		Parameter	Background	E. coli	Free Cl2	НРС	тс	Total CI2
1		Unit	/100mL	/100mL	mg/L	/mL	/100mL	mg/L
l	Sample ID	MDL	1	1	0.05	2	1	0.05
		-						
	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
	2.5t. 00111 011100			2200111			GEOGIA	1.50

Environmental Laboratories

Division of Caduceon Enterprises Inc.

Client:

Ontario Clean Water Agency

5 Industrial Dr. Chesterville, ON K0C 1H0

Attention:

Dave Markell

Certificate of Analys

Report:

220007874

Chesterville WTP

Project:

Date Sampled:

Date Received:

Date Printed:

July 30, 2002 July 31, 2002

August 02, 2002

Matrix:

Drinking Water

	Parameter	Background	E. coli	Free Cl2	HPC	тс	Total CI2	
	Unit	/100mL	/100mL	mg/L	/mL	/100mL	mg/L	
Sample ID	MDL	1	1	0.05	2	1	0.05	
Jampie ID								
Well #5 Raw		9	absent			absent		
Well #5 Treated	I		absent	1.00	absent	absent	1.10	
Dist. Lannins Ga	arage		absent	1.00	6.	absent	1.00	
Dist. Well #1			absent	0.70		absent	0.70	
Dist. McEwen G	Gas Bar		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

Michael Ziebell, General Manager

Division of Caduceon Enterprises Inc.

Certificate of Analysis

Elient:

itario Clean Water Agency

Industrial Dr.
Chesterville, ON
K0C 1H0

Attention:

Dave Markell

Report:

220008073

Project:

Date Sampled:

Date Received:
Date Printed:

Chesterville WTP August 6, 2002

August 7, 2002 August 09, 2002

Matrix:

_								
		Parameter	Background	E. coli	Free CI2	HPC	тс	Total Cl2
		Unit	/100mL	/100mL	mg/L	/mL	/100mL	mg/L
	Samuela ID	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

Division of Caduceon Enterprises Inc.

Client:

Ontario Clean Water Agency

5 Industrial Dr. Chesterville, ON

Free Chlorine

E. coli

HPC

K0C 1H0

Dave Markell Attention:

Certificate of Analysis

Report:

220008330

Project:

Chesterville WTP

Date Sampled:

August 12, 2002

Date Received:

August 13, 2002

Date Printed: Matrix:

Dist. D&D

1.30

August 15, 2002

		Drinking	Water	

Parameter	Unit	MDL		Sample		
				Welli #5 Raw	Welll #5 Treated	Dist. Co-op
Total Chlorine	mg/	/L	0.05		1.30	1.23

0.05

Dist.

LCBO

1.60

/mL	2	absent	absent

Background bacteria	/100mL 1	7

mg/L

/100mL

Total Coliforms	/100mL 1	absent	absent	absent	absent	absent

Environmental Laboratories

Division of Caduceon Enterprises Inc.

Client:

Ontario Clean Water Agency

5 Industrial Dr. Chesterville, ON

K0C 1H0

Attention:

Dave Markell

Certificate of Analysi

Report:

220008614 Chesterville WTP

Project:

Date Sampled:

Date Received:

Date Printed:

Matrix:

August 19, 2002 August 20, 2002 August 22, 2002

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

Division of Caduceon Enterprises Inc.

Certificate of Analysis

Client:

Intario Clean Water Agency

ndustrial Dr. Chesterville, ON **K0C 1H0**

Attention:

Dave Markell

Report:

220008936

Project:

Chesterville WTP

Date Sampled:

August 26, 2002

Date Received: Date Printed:

August 27, 2002 August 29, 2002

Matrix:

_								King Water	
		Parameter	Background	E. coli	Free CI2	HPC	тс	Total Cl2	_
		Unit	/100mL	/100mL	mg/L	/mL	/100mL	mg/L	
	Sample ID	MDL	1	1	0.05	2	1	0.05	
									_
	Well #5 Raw		21	absent			absent		
	Well #5 Treated			absent	1.10	absent	absent	1.20	
								0	
	Dist. Nestles Lagoon I	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	

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

		ivia	Trix;	Supply Water	
	LAB ID:	198037			
1	Sample Date:	2002-08-08			
	Sample ID:	CW-05			
l .	•	1	•	1	j
ĺ					
PARAMETER	UNITS MDL	TREATEDWATER			
N-NO2	mg/L 0.10	<0.10			
N-NO3	mg/L 0.10	<0.10			ľ
	1				
·		1		1	1
	1	}			1
]	1			
	1 1				
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	1		Ì		
	1 1				
	1 1				

MDL = Method Detection Limit

Comment:

REPORT OF ANALYSIS

Client: CHESTERVILLE WELL SUPPLY

Report Number:

2210849

Date:

2002-08-16

Date Submitted:

2002-08-09

ATT: Mr. Blair Henderson

Project:

Chesterville Wells

P.O. Number:

Matrix: Supply Water

LAB ID:		198037					
	Sam	ple Date:	2002-08-08				
	Sa	mple ID:	CW-05				
		!					
1							
PARAMETER	UNITS	MDL					
BTEX / 624 / PURGEABLE HYD	ROCARBO	DNS					
Benzene	ug/L	0.5	<0.5	;		ļ	
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 🗸 ,				
bon Tetrachloride	ug/L	0.9	<0.9 🗸				
nochlorobenzene	ug/L	0.2	<0.2				
Chloroform	ug/L	0.5	1.7				1
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

Comment:

INC = Incomplete



REPORT OF ANALYSIS

Client: CHESTERVILLE WELL SUPPLY

Report Number:

2210849

Date:

2002-08-29

ATT: Mr. Blair Henderson

Date Submitted:

2002-08-09

Project:

Chesterville Wells

				Sample Matri	x:	Supply Water	
		LAB ID:	198037 8/8/02				
	Sample Date:						
	Sa	mple ID:	CW-05				
DADAMETER	1111170						
PARAMETER PERIODES & DODG	UNITS	MDL					
PESTICIDES & PCB's		٥٠	<0.5 🗸				
Alachlor	ug/L	0.5	<0.5 V	,		<u> </u>	
Aldicarb	ug/L	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 <u>/</u>		:	ļ	
Azinphos-methyl	ug/L	2	<2 /				
diocarb	ug/L	2	<2 /				
moxynil	ug/L	0.5	<0.5				
Carbaryl	ug/L	5	<5			ļ	
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 ✓ /		1:		
Diazinon	ug/L	1	<1 🗸				
Dicamba	ug/L	1	<1 🗸	/			
Dieldrin	ug/L	0.006	<0.006 🗸				
Diquat	ug/L	7	<7 V				
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				li

NOTE: mg/L=1000xug/L

MDL = Method Detection Limit

Comment:

MV APPROVAL:

146 Colonnade Road, Unit 8, Nepean, Ontario K2E 7Y1 Tel:(£13)727-5692 Fax:(613)727-5222

REPORT OF ANALYSIS

Client: CHESTERVILLE WELL SUPPLY

Report Number:

2210849

Date:

2002-08-29

Date Submitted:

2002-08-09

ATT: Mr. Blair Henderson

Project:

Chesterville Wells

				Sample Matri	x:	Supply Water	
]		LAB ID:	198037 8/8/02				
	Sample Date:						
1	Sa	mple 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				
Dìnoseb	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 🗸				
dane	ug/L	0.006	<0.006 🗸				
Ivialathion	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		1:	;	
Simazine	ug/L	1	<1 🗸				
Temephos	ug/L	10	<10				
Terbufos	ug/L	0.7	<0.7 √			ĺ	
2,3,4,6-Tetrachlorophenol	ug/L	0.5	<0.5 🗸				
Triallate	ug/L	1	<1 ✓ _/				ı
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

REPORT OF ANALYSIS

Client: CHESTERVILLE WELL SUPPLY

Report Number:

2210855

Date:

2002-08-16

Date Submitted:

2002-08-09

ATT: Mr. Blair Henderson

Project:

P.O. Number:

Matrix: Supply Water

			198043	 	
1	LAB ID:				
		ple Date:			
	Sa	mple ID:	CW System		
	·				
PARAMETER	UNITS	MDL			
BTEX / 624 / PURGEABLE HYD					
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 Recoveri	es				
uene-d8	%		97		
_					

MDL = Method Detection Limit

INC = Incomplete

Comment:

APPROVAL:

608 Norris Court, Kingston, ON, K7P 2R9

Division of Caduceon Enterprises Inc.

Cljant:

ario Clean Water Agency

dustrial Dr. Chesterville, ON

K0C 1H0

Attention:

Dave Markell

Certificate of Analysis

Report:

220009259

Project:

Date Sampled:

Chesterville WTP

Date Received:

September 3, 2002 September 4, 2002

Date Printed:

September 4, 2002 September 06, 2002

Matrix:

	Parameter	Background	E. coli	Free Cl2	НРС	тс	Total Cl2
	Unit	/100mL	/100mL	mg/L	/mL	/100mL	mg/L
Sample ID	MDL	1	1	0.05	2	1	0.05
oampie 10							
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
•					_	4500111	1.20
Public School			absent	1.00		chaont	1.40
- abile deficien			anseill	1.00		absent	1.10
D&D Performance			absent	1.20		absent	1.30

Division of Caduceon Enterprises Inc.

Client:

Ontario Clean Water Agency

5 Industrial Dr.

Chesterville, ON

K0C 1H0

Attention: **Parameter** Dave Markell

Unit

MDL

Certificate of Analys

Report:

220009544

Project:

Date Sampled:

Date Received: Date Printed:

September 9, 2002 September 10, 2002

Chesterville WTP

September 12, 2002

Matrix:

Drinking Water

			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

Sample Identification

h Environmental Laboratories

Division of Caduceon Enterprises Inc.

Client:

Ontario Clean Water Agency

5 Industrial Dr. Chesterville, ON K0C 1H0

Attention:

Dave Markell

Certificate of Analy

Report:

220009885

Chesterville WTP

Project:

Date Sampled:

Date Received: **Date Printed:**

September 16, 2002 September 17, 2002 September 19, 2002

Matrix:

		Parameter	Background	E. coli	Free CI2	HPC	тс	Total CI2	
		Unit	/100mL	/100mL	mg/L	/mL	/100mL	mg/L	
;	Sample ID	MDL	1	1	0.05	2	1	0.05	
•	Well #5 Raw		absent	absent			absent	34-34-4-54-4-4-4-4-4-4-4-4-4-4-4-4-4-4-4	
	Well #5 Treated			absent	1.42	absent	absent	1.56	
	Dist. MT Advertizi	ng		absent	1.40	absent	absent	1.40	
	Dist. D&D Automo	otive		absent	1.80		absent	1.80	
	Dist. Marc's School	ol		absent	1.50		absent	1.50	

Division of Caduceon Enterprises Inc.

Client:

Ontario Clean Water Agency

5 Industrial Dr. Chesterville, ON K0C 1H0

Attention:

Parameter

Background bacteria

Total Coliforms

Dave Markell

Unit

MDL

/100mL

/100mL 1

Certificate of Analysis

Report:

220010229

Project:

Chesterville WTP

Date Sampled:

September 23, 2002

Date Received:

September 24, 2002

Date Printed: Matrix: September 26, 2002

Drinking Water

			Well #5 Raw	Well #5 Treated	Dist. Public School	Dist. McEwen Convenie nce	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
нрс	/mL	2		22	absent		

absent

absent

Sample Identification

absent

absent

absent

absent

Michael Ziebell,

Division of Caduceon Enterprises inc.

Client:

Ontario Clean Water Agency

5 Industrial Dr. Chesterville, ON **KOC 1H0**

Attention:

E. coli

Dave Markeli

Certificate of Analysis

Report:

220010466

Project:

Chesterville WTP September 30, 2002

Date Received: Date Printed:

Date Sampled:

October 1, 2002

October 03, 2002

Matrix:

Drinking Water

Parameter	Unit N	RDL	Sampi		
			Well #5 Raw	Well #6 Treated	Dist. Canada Post
Total Chlorine	mg/L	0.05		1.05	1.10
Free Chlorine	mg/L	0.05		1.05	1.10

HPC	/mL

Background bacteria

Total Coliforms

/100mL

/100mL

1

1		2

absent

absent

absent	

absent

absent

sent	
sent	

absent

absent



Dist.

Chest SPS

0.40

0.40



Dist. **LCBO**

1.10

1.10



absent

Michael Ziebell,

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



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: <u>bhenderson@ocwa.com</u>

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

Drinking Water Regulations 4 - 4			100	a_{i} . The second i
Where To Contact Us.				44. 1
Plant Description & Treatment Processing	and the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second s		100	2
Quality Control and Compilance wit	in ProvincialsRegu	lations		5 6 6
Definitions & Terms				5
Required Testing			and the second	
Water Chality Test Results				6
Questions & Auswers				10

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.

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

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

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

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.

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

CaCO₃ - 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.

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)

<u>Comments</u>: 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.

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	ı	10/15/02	9.3	no	
Benzene	5	1	1	10/15/02	<0.5	no	1
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=	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	I	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	i	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	

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

Pesticides & PCB (ug/L)	MAC or IMAC	# of Samples	# of Detectable	Sampling Dates	Range	Exceedence	Typical Source of Contaminant
Alachlor	IMAC=5	1	Results	(m/d/y) 10/15/02	<0.5	no	Containmant
Aldicarb	9	1	1	10/15/02	<5.0	no	
Aldrin+Dieldrin	0.7	1	1	10/15/02	<0.012	-	
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		no	
					<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	ı	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

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

(cont'd) (ug/L)	IMAC	Samples	Detectable Results	Dates (m/d/y)	and the second		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	l	1	01/28/02	<2	no	
pН	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	ì	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	***	I	1	01/28/02	24	no	
Ammonia Unionized		1	ı	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 (CaCO₃) 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.

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

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

Table B & D NO2&NO3

Treated Treated Od 15 Davi Odna Dave

Initials

Date

Results

Received

Initials

Date

Samples

Collected

System THM Flouride

annual

Treated 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%

/		
V	Bacti's	Oct.6
1	Bacti's	Oct.13
11	Bacti's	Oct.20
	Bacti's	Oct.27

Nov.3	Bacti's	
Nov.10	Bacti's	
Nov.17	Bacti's	./
Nov.24	Bacti's	1

Dec.1	Bacti's	
Dec.8	Bacti's	
Dec.15	Bacti's	1
Dec.22	Bacti's	
Dec.29	Bacti's	/

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

017	02.	oct 10	
15/10	0	18/10	Herre
0.1 21	1 1	- 4 3./	10mm
27 28	70	00171	Som
1	1/84	OCH	1) cure
NOU 4	A13	NOV 7	Day
1) +1-	1.1	11	1000

Nov 4	ASIS	NOV 7	Dove
12th	11/	1516	Dave
75	me	28	Dare

Der 2	Dew	Doc's	() ave
Dec9	Dune	1)0012	JJ
nea 16	ZV	Ne 19	コリ
Ner 23	AJB	Dee 27	Dam
Dec 30	Dav.	Jon 2	Dune
	1) and		

	Dave
	Dave
[

Division of Caduceon Enterprises Inc.

Ontario Clean Water Agency

5 Industrial Dr. Chesterville, ON

60 1 등

Attention: Dave Markell

Parameter **™** Sample Identification

Certificate of Analysis

Project: Report:

220010886

Date Sampled:

Date Received:

October 7, 2002 Chesterville WTP

October 8, 2002 October 10, 2002

Date Printed: Matrix:

Drinking Water

absent (DNDY(MA) ANCESE ANCESE

Total Coliforms

/100mL

absent

absent

absent

absent

absent

absent

absent

å

Background bacteria

/100mL

HPC

į

E. coli

Total Chlorine

1/ba

0.05

Well #5 Raw

Well #5 Treated

Nestle Lagoons

St-Mary's School

37 Joseph St.

Free Chlorine

mg/L

0.05

1.30

0.80

1.20

1.10

1.40

0.80

1.20

1.10

/100mL

absent

absent

absent

absent

OG - Overgrown

Page 1 c.

Division of Caduceon Enterprises Inc.

Client

entario Clean Water Agency

ndustrial Dr. Chesterville, ON K0C 1H0

Attention:

Dave Markell

Certificate of Analysis

Report:

220011076

Project:

Chesterville WTP

Date Sampled:

October 10, 2002

Date Received:

October 11, 2002

Date Printed:

October 15, 2002

Matrix:

	Parameter	Unit	MDL	Sample identification		
				Nestle's Lagoon Lab CW-03	61 Emma St. CW-04	Curran's Esso CW-05
T	Cotal Chlorine	mg/L	0.05	0.96	1.14	1.09
F	ree Chlorine	mg/L	0.05	0.82	1.01	0.96
E	. coli	/100mL	1	absent	absent	absent
Н	eterotrophic Plate Count	/mL	2	absent	absent	absent
T	otal Coliforms	/100mL	1	absent	absent	absent

Unit

MDL

Division of Caduceon Enterprises Inc.

Antario Clean Water Agency

ndustrial Dr.

Chesterville, ON

K0C 1H0 Attention:

Parameter

Dave Markell

Certificate of Analysis

Report:

220011077

Project:

Chesterville WTP

October 11, 2002

Date Sampled: Date Received:

October 11, 2002

Date Printed:

October 15, 2002

Matrix:

Drinking Water

			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

Sample Identification

Division of Caduceon Enterprises Inc.

Certificate of Analysis

Client:

ntario Clean Water Agency

industrial Dr. Chesterville, ON

K0C 1H0

Attention:

Dave Markell

Report:

220011201

Project:

Chesterville WTP
October 15, 2002

Date Sampled: Date Received: Date Printed:

October 16, 2002 October 18, 2002

Matrix:

7 44-0-14-0-14;	Dave marken				West IA.		g 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 Ra	aw	absent	absent			absent		
Well #5 Tr	reated		absent	1.04	absent	absent	1.10	
Dist. D&D	Performance		absent	1.01	absent	absent	1.10	
Dist. Ches	terville SPS		absent	0.60		absent	0.65	
Dist. 5 Ind	ustrial		absent	1.01		absent	1.03	

Division of Caduceon Enterprises Inc.

Client:

Ontario Clean Water Agency

ndustrial Dr.

Chesterville, ON K0C 1H0

Attention:

Dave Markell

Certificate of Analysis

Report:

220011474

Project:

Chesterville WTP

Date Sampled:

October 21, 2002

Date Received: Date Printed: October 22, 2002 October 24, 2002

Matrix:

-								, vvaco
		Parameter	Background	E. coli	Free Cl2	HPC	TC	Total CI2
1		Unit	/100mL	/100mL	mg/L	/mL	/100mL	mg/L
•	Sample ID	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. 7 abile delilor			absent	0.90	2	absent	1.00
	Dist. MacEwen Gas B	sar		absent	1.10		absent	1.20
	Dist. 5 Industrial Dr.			absent	1.20		absent	1.30



Division of Caduceon Enterprises Inc.

ptario Clean Water Agency

ndustrial Dr. Chesterville, ON **KOC 1HO**

Attention:

Dave Markell

Certificate of Analysis

Report:

220011742

Project:

Chesterville WTP

Date Sampled:

October 24, 2002

Date Received: Date Printed:

October 25, 2002

October 28, 2002

	Matrix:

Drinking Water

Michael Ziebell, General Manager

	Parameter	Unit	MDL	Sample Identifica	ition	
				Well #5 Raw	Well #5 Treated	Dist. 5 Industrial
ן י	Total Chlorine	mg/L	0.05		1.11	1.06
1	Free Chlorine	mg/L	0.05		1.02	1.00
ı	. coli	/100mL	1	absent	absent	absent
H	Meterotrophic Plate Count	/mL	2	absent	absent	absent
1	Cotal Coliforms	/100mL	1	absent	absent	absent

Division of Caduceon Enterprises Inc.

Çilent:

ntario Clean Water Agency

ndustrial Dr. Chesterville, ON

K0C 1H0

Attention: Dave Markell

Certificate of Analysis

Report:

220011741

Project:

Chesterville WTP

Project: Date Sampled:

October 25, 2002

Date Received:

October 25, 2002

Date Printed:

October 28, 2002

Matrix:

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

Division of Caduceon Enterprises Inc.

Client:

Antario Clean Water Agency

ndustrial Dr. Chesterville, ON

K0C 1H0

Attention: Dave Markell

Certificate of Analysis

Report:

220011848

Project:
Date Sampled:

Chesterville WTP October 28, 2002

Date Received: Date Printed: October 28, 2002 October 29, 2002 October 31, 2002

Matrix:

						-	many rrator
	Parameter	Background	E. coli	Free Cl2	HPC	TC	Total Cl2
	Unit	/100mL	/100mL	mg/L	/mL	/100mL	mg/L
Sample ID	MDL	1	1	0.05	2	1	0.05
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. 20 (tivelside			ansent	1.00	absent	absent	1.00
Dist. Public School			absent	0.90		absent	1.00
Dist. Liquor Store			absent	1.00		absent	1.10

REPORT OF ANALYSIS

Client: CHESTERVILLE WELL SUPPLY

Report Number:

2214339

Date:

2002-10-22

ATT: Mr. Blair Henderson

Date Submitted:

2002-10-16

Project:

Quarterly Chemicals

P.O. Number:

Matrix: Supply Water

		LAB ID:		Matrix:		Supply Water	
li	Samp	le Date:	2002-10-15				
	Sar	nple ID:	CW-01 Treated		7		
			Water Well #5	i		1	
			(ĺ	1	1	
PARAMETER	UNITS	MDL	TREATEDWATER			 	
N-NO2	mg/L	0.10	→ <0.10		 	+	
N-NO3	mg/L	0.10	→ <0.10		1	1	
1					1	}	
	1	ł	ł		ļ		1
1						}	
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1	i .				ľ	1	1
}						ĺ	1
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	1				1	}	1
j						1	
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	1	ľ	1				1
	1	i					[]
	1 1	1	ĺ				
	1	- 1	1				
	1		ĺ				
MBL Mail 18							1

MDL = Method Detection Limit

INC = Incomplete

Comment:

APPROVAL:

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

					Supply Water
LAB ID:				210873	
	<u> </u>			2002-10-15	
1	Sample ID:		CW-01	CW-001	
			Treated		
			Water Well		
PARAMETER	UNITS	MDL			
BTEX / 624 / PURGEABLE HYD	ROCARBO	ONS			
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		
iochlorobenzene	ug/L	0.2	√ <0.2		
Chiloroform	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 Recoveri					
Toluene-d8	%		97	97	
1,2-dichloroethane-d4	%		99		
4-bromofluorobenzene	%		100		
				<u> </u>	

MDL = Method Detection Limit

INC = Incomplete

Comment:

REPORT OF ANALYSIS

Client: CHESTERVILLE WELL SUPPLY

Report Number:

2214339

Date:

2002-10-31

ATT: Mr. Blair Henderson

Date Submitted:

2002-10-16

Project:

Quarterly Chemicals

				Sample Matr	ix:	Supply Water	
Į.		LAB ID:					
	Sample Date:						<u> </u>
	Sa	ample ID:					
			Water Well #5		į		1
PARAMETER	UNITS	MDL				ļ	
PESTICIDES & PCB's	UNITS	MIDE			 	ļ	
Alachlor	ug/L	0.5	→ < 0.5			1	ľ
Aldicarb	ug/L	5	√ ~ 0.5		ľ		4
Aldrin	ug/L	0.006	<0.006				
Aldrin + Dieldrin	ug/L ug/L	0.000	~0.000 ~<0.012				[
Atrazine	ug/L ug/L	0.012	~<0.5				
Desethyl-atrazine	ug/L ug/L	0.5	~0.5 <0.5		:		1
Atrazine+Desethyl-atrazine	ug/L ug/L	0.5	<0.5 <1				
Azinphos-methyl	ug/L ug/L	2	~<2				}
Bendiocarb	ug/L ug/L	2	/ <2 /<2			1	
moxynil	ug/L ug/L	0.5	<0.5			ļ	
arbaryl	ug/L ug/L	5	~<0.5 ~<5			[
Carbofuran	ug/L ug/L	5	<5 <5				
Chlordane (Total)	ug/L ug/L	0.012	<0.012		!		
a-Chlorodane	ug/L ug/L	0.012	<0.012			1	
g-Chlorodane	ug/L ug/L	0.006	<0.006			1	
Oxychlorodane	ug/L ug/L	0.006	<0.006			ł	
Chloropyrifos	ug/L ug/L	1 1	~0.006 ~<1			İ	
Cyanazine	ug/L ug/L	1 1	~<1				ı
Diazinon	ug/L		·<1			į.	
Dicamba	ug/L	1	<1				
Dieldrin	ug/L ug/L	0.006	<0.006				
Diquat	- 1	7	√ <7				
2,4-Dichlorophenol	ug/L ug/L	0.5					
DDT + Metabolites	ug/L ug/L	0.5	→ < 0.5 → < 0.024				
o,p'-DDT	ug/L ug/L	0.024	-<0.024				
p,p'-DDT	ug/L ug/L	0.006	<0.006				
2,4-D	ug/L ug/L	1					
p,p'-DDE	- 1		<1 <1				
p,p -00L	ug/L	0.006	<0.006				
NOTE: mall (npm)=1000;			MD1 M-41	Detection		L	

NOTE: mg/L (ppm)=1000xug/L (ppb)

MDL = Method Detection Limit

Comment:

APPROVAL:

~~ ·~

REPORT OF ANALYSIS

Client: CHESTERVILLE WELL SUPPLY

Report Number:

2214339

Date:

2002-10-31

ATT: Mr. Blair Henderson

Date Submitted:

2002-10-16

Project:

Quarterly Chemicals

				Sample Matr	ix:	Supply Water	
		LAB ID:	210872		T	Cappiy Water	I
1	Sample Date:						
	Sa	ample ID:	2002-10-15 CW-01		 		
		•	Treated				
į			Water Well	1	1	1	
PARAMETER	UNITS	MDL				 	
p,p'-DDD	ug/L	0.006	<0.006		 		
Diclofop-methyl	ug/L	0.9	√< 0.9		1	1	1
Dimethoate	ug/L	2.5	√<2.5				
Dinoseb	ug/L	1 1	⊸ <1]		
Diuron	ug/L	10	√<10		}	Ì	1
Glyphosate	ug/L	10	√<10		ļ		}
Heptachlor	ug/L	0.006	< 0.006				l
Heptachlor epoxide	ug/L	0.006	<0.006		}		Ì
Heptachlor + Hept. Epoxide	ug/L	0.012	→< 0.012			ĺ	.
Lindane	ug/L	0.006	√ <0.006				
lathion	ug/L	5	、< 5	!]
wethoxychlor	ug/L	0.024	~< 0.024				
Metolachlor	ug/L	0.5	→ <0.5		<u> </u>		
Metribuzin	ug/L	5	√ < 5	•	}		
Paraquat	ug/L	1	√ <1				ļ
Parathion	ug/L	1	√ <1				
Pentachlorophenol	ug/L	0.5	√< 0.5	ı			
Phorate	ug/L	0.5	~ < 0.5		ļ		ļ
Picloram	ug/L	5	~ <5				
PCB's (total)	ug/L	0.05	∀< 0.05				
Prometryne	ug/L	0.25	> <0.25		ļ		,
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	_y <1				
2,4,6-Trichlorophenol	ug/L	0.5	√√< 0.5		i		
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:

		A CONTRACT OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE
APPROVAL:	(M

Division of Caduceon Enterprises Inc.

Client:

Ontario Clean Water Agency

5 Industrial Dr. Chesterville, ON **K0C 1H0**

Attention: **Parameter** **Dave Markell**

Unit

MDL

Certificate of Analysi

Report:

220012191

Project:

Chesterville WTP

Date Sampled: **Date Received: Date Printed:**

November 4, 2002 November 5, 2002

November 07, 2002

Matrix:

Drinking Water

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

Sample Identification

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

Michael Ziebell, General Manager

Division of Caduceon Enterprises Inc.

Certificate of Analysis

Client:

ntario Clean Water Agency

Industrial Dr. Chesterville, ON **K0C 1H0**

Attention:

Dave Markeli

Report:

220012676

Project:

Date Sampled: Date Received: Date Printed:

Chesterville WTP November 12, 2002

November 13, 2002 November 15, 2002

Matrix:

_	Attention. Dave	Marken				matrix:	Drinkin,	g Water
		Parameter	Background	E. coli	Free Cl2	HPC	TC	Total Cl2
		Unit	/100mL	/100mL	mg/L	/mL	/100mL	mg/L
	Sample ID	MDL	1	1	0.05	2	1	0.05
	Well #5 Raw		absent	absent			absent	
	Well #5 Treated			absent	1.06	absent	absent	1.19
	Dist. McEwen Depo	ot		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

Division of Caduceon Enterprises inc.

Client:

Ontario Clean Water Agency

5 Industrial Dr. Chesterville, ON K0C 1H0

Attention:

Dave Markell

Certificate of Analysis

Report:

220012900

Project:

Chesterville WTP

Date Sampled:

November 18, 2012

Date Received:

November 19, 2002

Date Printed: Matrix: November 21, 2002 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

Division of Caduceon Enterprises Inc.

Certificate of Analysis

Client:

ntario Clean Water Agency ndustrial Dr.

Chesterville, ON **K0C 1H0**

Report:

Project:

Date Sampled:

Date Received:

Date Printed:

220013268

Chesterville WTP November 25, 2002

November 26, 2002

November 28, 2002 Drinking Wet

Attention:	Dave Markell				Matrix:	Drink	ing Water
	Parameter	Background	E. coli	Free Cl2	НРС	тс	Total Cl2
	Unit	/100mL	/100mL	mg/L	/mL	/100mL	mg/L
Sample ID	MDL.	1	1	0.05	2	1	0.05
Well #5 Ra	w	absent	absent			absent	
Well #5 Tre	eated		absent	1.08	absent	absent	1.18
Dist. LCBC			absent	1.04	absent	absent	1.13
Dist. St. Ma	ary's Catholic School		absent	1.04		absent	1.12
Dist. D&D	Performance		absent	0.98		absent	0.99

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

Division of Caduceon Enterprises Inc.

ario Clean Water Agency

o-industrial Dr. Chesterville, ON K0C 1H0

Attention:

Dave Markell

Certificate of Analysis

Report:

220013594

Project:

Cl

Date Sampled:

Chesterville WTP
December 2, 2002

Date Received:
Date Printed:

December 3, 2002 December 05, 2002

Matrix:

Attention. Da	AC Marken				MGSHA.	ווט	iking vvater	
	Paramet er	Background	E. coli	Free CI2	HPC	тс	Total CI2	
	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	I		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	l Dr.		absent	1.08		absent	1.12	

Division of Caduceon Enterprises inc.

Client:

Ontario Clean Water Agency

5 Industrial Dr. Chesterville, ON **K0C 1H0**

Attention: **Parameter**

Dave Markell

Certificate of Analys

Report:

220013982

Chesterville WTP

Project: Date Sampled:

December 9, 2002

Date Received: Date Printed:

December 10, 2002

Matrix:

December 12, 2002 **Drinking Water**

I Init	MOI	Canada	Identification

			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	

Division of Caduceon Enterprises Inc.

Certificate of Analysis

Client:

antario Clean Water Agency

Industrial Dr. Chesterville, ON

K0C 1H0
Attention:

Dave Markell

Report:

220014312

Project:

Date Sampled:

Chesterville WTP

Date Received:

December 16, 2002 December 17, 2002

Date Printed:

December 19, 2002

Matrix:

-								
	Para	ameter	Background	E. coli	Free CI2	HPC	TC	Total CI2
		Unit	/100mL	/100mL	mg/L	/mL	/100mL	mg/L
	Sample ID	MDL	1	1	0.05	2	1	0.05
								
	Weli #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 \ St.	/ictoria		absent	1.03		absent	1.08
	Dist. D & D Main St. N.			absent	1.13		absent	1.18

Division of Caduceon Enterprises Inc.

Certificate of Analysis

Client:

Ontario Clean Water Agency

ndustrial Dr. Chesterville, ON

K0C 1H0
Attention:

Dave Markell

Report:

220014628

Project:

Date Sampled:

Date Received:

Date Printed:

Chesterville WTP

December 23, 2002 December 23, 2002

December 27, 2002

Matrix:

							ang water	
	Parameter	Background	E. coli	Free CI2	HPC	тс	Total CI2	
	Unit	/100mL	/100mL	mg/L	/mL	/100mL	mg/L	
Sample ID	MDL	1	1	0.05	2	1	0.05	
Well #5 Raw		absent	absent			absent		•
Well #5 Treated			absent	1.10	absent	absent	1.20	
Dist. MacEwen Petr	o		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	

Division of Caduceon Enterprises Inc.

Client:

atario Clean Water Agency

ndustrial Dr.

Chesterville, ON

K0C 1H0

Attention: Dave Markell

Certificate of Analysis

Report:

220014782

Project:

Date Sampled:

Date Received: Date Printed:

December 30, 2002 December 30, 2002

Chesterville WTP

January 02, 2003

Matrix:

, atomion. Bave i	nai keli				Matrix.	Drinki	ing vvater
	Parameter	Background	E. coli	Free Cl2	НРС	тс	Total Cl2
}	Unit	/100mL	/100mL	mg/L	/mL	/100mL	mg/L
Sample ID	MDL	1	1	0.05	2	1	0.05
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 Perform	ance		absent	1.10		absent	1.20
Dist. MacEwen Gas			absent	1.00		absent	1.10