



# **Birr Drinking Water System**

## **2023 Annual Performance & Summary Report**

**Date: January 30, 2024**

*Alternative Formats: If you require this document in an alternative format please contact the Municipality of Middlesex Centre at 519-666-0190 or [customerservice@middlesexcentre.on.ca](mailto:customerservice@middlesexcentre.on.ca)*

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## Introduction

The Municipality of Middlesex Centre has prepared a report summarizing system operation and water quality for the Birr Drinking Water System. The reports detail the latest water quality testing results, water quantity statistics and any adverse conditions that may have occurred for the previous year. They are available for review by the end of February on the Municipality of Middlesex Centre website at [www.middlesexcentre.on.ca/services/residents/water](http://www.middlesexcentre.on.ca/services/residents/water) or by contacting the Public Works & Engineering Department.

All efforts have been made to ensure the information presented in this report is accurate. If you have any questions or comments concerning the report, please contact the Municipality of Middlesex Centre.

**Table 1 – Plant Information**

Drinking Water System	Birr Well Supply System
Drinking Water System Number	220005492
Drinking Water System Owner & Contact Information	Municipality of Middlesex Centre Small Municipal Residential System 10227 Ilderton Road, RR #2 Ilderton, Ontario N0M 2A0
Reporting Period	January 1, 2023 to December 31, 2023

## Section A – System Description

The Birr Drinking Water System, owned and operated by the Municipality of Middlesex Centre, is a ground water supply system serving the Village of Birr that presently services 18 lots on Gwendolyn Street with an estimated population of 53 residents. This system consists of one (1) drilled well, rated at 88m<sup>3</sup>/day operating under the *Permit to Take Water* # 3415-A3JHTY. Raw well water is pumped into a concrete reservoir. The raw water is disinfected using a 6% sodium hypochlorite disinfection system, consisting of one storage tank and two chemical metering pumps (one duty and one standby) with a feed line discharging into the underground reservoir. Two submersible high lift pumps, then pump the water through a 150mm water main to the distribution system. The system operates under Municipal Drinking Water License Number 052-104 and Drinking Water Works Permit Number 052-204.

MECP licensed water drinking water operators maintain the system and its operations and collect regulated samples. In the event of failure of critical operational requirements automated alarms are relayed through a third-party system to operators for prompt response.

## Section B – Significant Modifications & Replacements

Modifications & Replacements		
Installed new Sample Station	April 18	\$4,667.00
Installed new Turbidity Analyzer	November 16	\$6,321.90

## Section C – Microbiological Testing

### *(I) E. coli & Total Coliform*

Bacteriological tests for E. coli and total coliforms are collected from the raw water at the facility monthly and treated water from the distribution system weekly. Extra samples are taken after major repairs or maintenance work. Any E. coli or total coliform results above 0 cfu/100 mL in the treated distribution water must be reported to the Ministry of the Environment, Conservation and Parks (MECP) and Medical Officer of Health (MOH). Resamples and any other required actions are taken as quickly as possible. The results from the 2023 sampling program are shown on the table below. One reportable incident occurred and can be found in **Section G – Non-Compliance Findings & Adverse Results (II) Summary or Reporting Test Results and Other Problems (Schedule 16)**.

**Table 2 – E. Coli & Total Coliform Samples**

	Number of Samples	Range of E. coli Results Min – Max	Range of Total Coliform Results Min – Max
<b>Raw</b>	12	0 - 0	0 - 0
<b>Distribution</b>	26	0 - NDOGN	0 - NDOGN

### *(II) Heterotrophic Plate Count (HPC)*

HPC analyses are required from the distribution water on a bi-weekly basis. HPC should be less than 500 colonies per 1 mL. Results over 500 colonies per 1 mL may indicate a change in water quality but it is not considered an indicator of unsafe water. The 2023 results are shown in Table 3 below.

**Table 3 – Heterotrophic Plate Count (HPC) Samples**

Parameters	Number of Samples	Range of HPC Results Min-Max
<b>Distribution</b>	29	<10 -180

## Section D – Chemical Testing

The Safe Drinking Water Act requires periodic testing of the water for chemical parameters. The sampling frequency varies for different types and sizes of water systems. If the concentration of a parameter is above half of the Maximum Allowable

Concentration (MAC) under the Ontario Drinking Water Quality Standards, an increased testing frequency of once every three months is required by the Regulation. Where concerns regarding a parameter exist, the MECP can also require additional sampling be undertaken.

### Nitrate and nitrite

Nitrate and nitrite samples are required every 3 months in normal operation. Results of testing can be seen in Table 4.

**Table 4 – Quarterly Nitrate & Nitrite**

Parameter & Sample Date	Result (mg/l)	MAC (mg/l)	Exceedance
<b>Nitrate</b>			
1st Quarter	0.012	10	No
2nd Quarter	0.013	10	No
3rd Quarter	0.011	10	No
4th Quarter	0.012	10	No
<b>Nitrite</b>			
1st Quarter	0.003 <MDL	1	No
2nd Quarter	0.003 <MDL	1	No
3rd Quarter	0.003 <MDL	1	No
4th Quarter	0.003 <MDL	1	No

\*MDL = Minimum Detection Limit

### Trihalomethanes (THM) and total Haloacetic Acids (HAA)

THM and HAA are by-products of the disinfection process. Sampling for these parameters, within the distribution system, is required every 3 months. The results are calculated as an annual running average, which is summarized in Table 5. There were no exceedances in the last four quarters.

**Table 5 – Quarterly Trihalomethane & Haloacetic Acid**

Parameter & Sample Date	Result (mg/l)	Annual Rolling Average (mg/l)	MAC (mg/l)	Exceedance
<b>Trihalomethane</b>				
1st Quarter	50	48.25	100	No
2nd Quarter	54	48.75	100	No
3rd Quarter	52	52.00	100	No
4th Quarter	69	56.25	100	No
<b>Haloacetic Acid (HAA)</b>				
1st Quarter	29.4	23.25	80	No
2nd Quarter	33.5	23.53	80	No
3rd Quarter	32.3	30.28	80	No

Parameter & Sample Date	Result (mg/l)	Annual Rolling Average (mg/l)	MAC (mg/l)	Exceedance
4th Quarter	27.8	30.75	80	No

### Sodium and Fluoride

Samples are analyzed every five (5) years as required. Sodium levels greater than 20 mg/L are to be reported to the MECP and MLHU. Regulated actions are as directed by the medical officer of health. Table 6 shows the results of testing that was completed in this 5-year cycle. Sodium and Fluoride samples are scheduled to be collected in January 2027.

**Table 6 – Sodium & Fluoride**

Parameter	Sample Date	Result Value (mg/L)	MAC (mg/L)
Sodium	January 17, 2022	40.9	20
Sodium	February 1, 2022	47.6	20
Fluoride	January 17, 2022	1.28	1.5

### Lead Testing Program

Lead sampling occurs twice a year in winter and summer months. As per Schedule D of the Birr Municipal Drinking Water Licence (MDWL) # 052-104, Issue 8 sampling requirement is reduced to 1 distribution sample during each period. This reduction remains in effect until the end of the winter sample period in 2027.

Samples that are found to contain lead greater than the Maximum Acceptable Concentration (MAC) of 10 micrograms per liter (µg/l) are required to be reported to the MLHU and MECP.

Distribution alkalinity is an aesthetic objective / Operational Guideline with a range between 30 mg/l to 500 mg/l.

Table 7 summarizes the sampling period results for 2023. There were no exceedances for the reporting period.

**Table 7 – Lead Sampling**

Parameter	Result Value	MAC	Exceedance
<b>Winter Sample (Dec. 15 – April 15)</b>			
Lead (µg/l)	0.18	10	No
Distribution Alkalinity (mg/l)	200	*30 - 500	No
Distribution pH	7.90	--	--
<b>Summer Sample (June 15 – Oct. 15)</b>			
Lead (µg/l)	0.04	10	No
Distribution Alkalinity	201	*30 - 500	No
Distribution pH	7.78	--	--

## Ontario Regulation 170/03, Schedules 23 & 24

Sampling for Inorganic and Organic parameters is required every 5 years for secure groundwater wells. Previous sampling occurred in 2022 and results of the present year's sampling is similar. Table 8 summarizes the results. No exceedances were reported. The inorganic and organic samples are scheduled to be collected in January 2027.

**Table 8 – Schedule 23 & 24**

Sample Date: 17-Jan-22		
Parameter	Treated Water Value	Exceedance
Antimony [ug/L]	0.6 <MDL	No
Arsenic [ug/L]	0.2 <MDL	No
Barium [ug/L]	479	No
Boron [ug/L]	216	No
Cadmium [ug/L]	0.018	No
Chromium [ug/L]	0.1	No
Mercury [ug/L]	0.01 <MDL	No
Selenium [ug/L]	0.04 <MDL	No
Uranium [ug/L]	0.011	No
Benzene [ug/L]	0.32 <MDL	No
Carbon tetrachloride [ug/L]	0.17 <MDL	No
1,2-Dichlorobenzene [ug/L]	0.41 <MDL	No
1,4-Dichlorobenzene [ug/L]	0.36 <MDL	No
1,1-Dichloroethylene (vinylidene chloride) [ug/L]	0.33 <MDL	No
1,2-Dichloroethane [ug/L]	0.35 <MDL	No
Dichloromethane [ug/L]	0.35 <MDL	No
Monochlorobenzene [ug/L]	0.3 <MDL	No
Tetrachloroethylene (perchloroethylene) [ug/L]	0.35 <MDL	No
Trichloroethylene [ug/L]	0.44 <MDL	No
Vinyl Chloride [ug/L]	0.17 <MDL	No
Diquat [ug/L]	1 <MDL	No
Paraquat [ug/L]	1 <MDL	No
Glyphosate [ug/L]	1 <MDL	No
Polychlorinated Biphenyls (PCBs) - Total [ug/L]	0.04 <MDL	No
Benzo(a)pyrene [ug/L]	0.004 <MDL	No
Alachlor [ug/L]	0.02 <MDL	No
Atrazine + N-dealkylated metabolites [ug/L]	0.01 <MDL	No
Atrazine [ug/L]	0.01 <MDL	No
Desethyl atrazine [ug/L]	0.01 <MDL	No
Azinphos-methyl [ug/L]	0.05 <MDL	No
Carbaryl [ug/L]	0.05 <MDL	No
Carbofuran [ug/L]	0.01 <MDL	No
Chlorpyrifos [ug/L]	0.02 <MDL	No
Diazinon [ug/L]	0.02 <MDL	No
Dimethoate [ug/L]	0.06 <MDL	No

Sample Date: 17-Jan-22		
Parameter	Treated Water Value	Exceedance
Diuron [ug/L]	0.03 <MDL	No
Malathion [ug/L]	0.02 <MDL	No
Metolachlor [ug/L]	0.01 <MDL	No
Metribuzin [ug/L]	0.02 <MDL	No
Phorate [ug/L]	0.01 <MDL	No
Prometryne [ug/L]	0.03 <MDL	No
Simazine [ug/L]	0.01 <MDL	No
Terbufos [ug/L]	0.01 <MDL	No
Triallate [ug/L]	0.01 <MDL	No
Trifluralin [ug/L]	0.02 <MDL	No
2,4-dichlorophenoxyacetic acid (2,4-D) [ug/L]	0.19 <MDL	No
Bromoxynil [ug/L]	0.33 <MDL	No
Dicamba [ug/L]	0.20 <MDL	No
Diclofop-methyl [ug/L]	0.40 <MDL	No
MCPA [mg/L]	0.00012 <MDL	No
Picloram [ug/L]	1 <MDL	No
2,4-dichlorophenol [ug/L]	0.15 <MDL	No
2,4,6-trichlorophenol [ug/L]	0.25 <MDL	No
2,3,4,6-tetrachlorophenol [ug/L]	0.20 <MDL	No
Pentachlorophenol [ug/L]	0.15 <MDL	No

## Section E – Operational Monitoring

### *(I) Chlorine Residual*

Free chlorine levels of the treated water are monitored continuously at the discharge point of the Water Treatment Facility. Residual chlorine, providing disinfection within the distribution system, is monitored twice weekly at a minimum. A target of 0.20 mg/L has been established as a minimum target. A free chlorine level lower than 0.05 mg/L must be reported and corrective action taken.

There were two reportable incidents in 2023. A description of that incident can be found in Appendix B. A summary of the chlorine residual readings is provided in Table 9.

**Table 9 – Chlorine Residuals**

Parameter	Number of Tests or Monitoring Frequency	Range of Results (Min – Max)
Chlorine residual in distribution (mg/l)	127	0.29 - 1.26
Chlorine residual after treatment (mg/L)	Continuous	0.05 - 3.59



## ***(II) Turbidity***

Turbidity of treated water is continuously monitored at the treatment facility, as a change in turbidity can indicate an operational problem. Turbidity of the raw well water is checked monthly. This parameter is measured in nephelometric turbidity units (NTU) and under Regulation 170/03 turbidity in groundwater is not reportable however, turbidity should be < 1 NTU at the treatment plant and < 5 NTU in the distribution system. A summary of the monitoring results for 2023 is provided in the table below.

**Table 10 – Turbidity**

<b>Parameter</b>	<b>Number of Tests or Monitoring Frequency</b>	<b>Range of Results (Min – Max)</b>
<b>Turbidity after treatment (NTU)</b>	Continuous	0.00 – 5.01

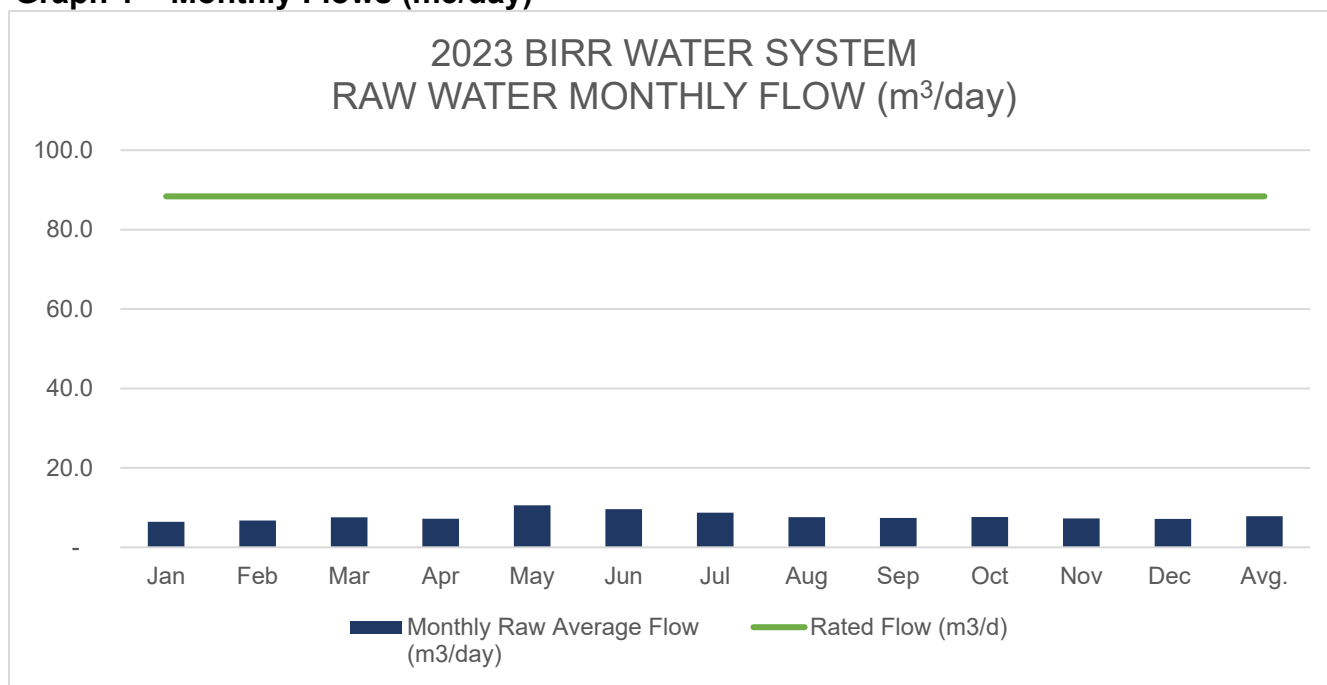
## **Section F – Water Quantity**

Continuous monitoring of flowrates from supply wells into the treatment system and from the facility into the distribution system is required by Regulation 170/03. The Municipal Drinking Water License and Permit to Take Water issued by the MECP regulate the amount of water that can be utilized over a given time period, as shown in Table 11. A summary of the 2023 flows are provided in Table 12.

**Table 11 – Rated Capacity**

<b>Flow summary</b>	
<b>Permit to Take Water Limits</b>	<b>88.376 m<sup>3</sup>/d</b>
	<b>82 L/min</b>

**Graph 1 – Monthly Flows (m<sup>3</sup>/day)**



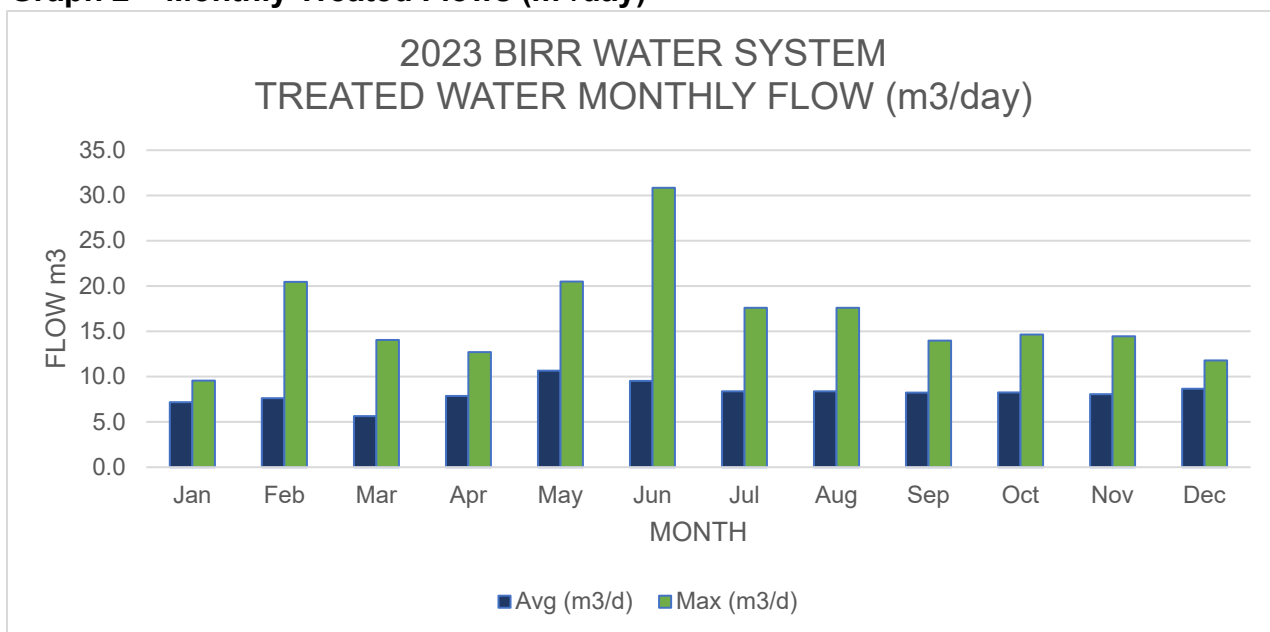
**Table 12 – Monthly Raw Water Flows (m<sup>3</sup>/day)**

		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg.
<b>Flow Limit</b>	m <sup>3</sup> /d	88.4	88.4	88.4	88.4	88.4	88.4	88.4	88.4	88.4	88.4	88.4	88.4	88.4
<b>Raw Average</b>	m <sup>3</sup> /d	7.2	7.6	5.6	7.9	10.7	9.5	8.4	8.4	8.2	8.3	8.1	8.7	8.2
<b>Raw Max</b>	m <sup>3</sup> /d	9.6	20.5	14.0	12.7	20.5	30.9	17.6	17.6	14.0	14.6	14.5	11.8	16.5

**Table 13 – Treated Water Monthly Flow Summary**

	Flow Summary
<b>2023 Average Daily Treated Water Flow</b>	8 m <sup>3</sup> /d
<b>2023 Maximum Daily Treated Water Flow</b>	11 m <sup>3</sup> /d
<b>2023 Average Monthly Treated Water Flow</b>	255 m <sup>3</sup>
<b>2023 Total Annual Treated Water Supplied</b>	3,064 m <sup>3</sup>

**Graph 2 – Monthly Treated Flows (m<sup>3</sup>/day)**



***(I) Rated capacity assessment***

The table below illustrates the water supplied to the distribution system and the capacity of the system.

<b>System Capability Assessment</b>				
<b>Comparison of Treated Water Rates: Birr Well Supply System</b>				
<b>Month</b>	<b>Total Flow (m<sup>3</sup>)</b>	<b>Monthly Raw Average Flow (m<sup>3</sup>/day)</b>	<b>Max Raw Flow (m<sup>3</sup>/day)</b>	<b>Avg. Flow / Rated Capacity (%)</b>
<b>January</b>	199	6.41	9.33	7%
<b>February</b>	189	6.73	21.16	8%
<b>March</b>	214	7.57	14.04	9%
<b>April</b>	216	7.19	9.80	8%
<b>May</b>	328	10.59	30.90	12%
<b>June</b>	289	9.62	19.14	11%
<b>July</b>	270	8.72	31.68	10%
<b>August</b>	235	7.58	20.09	9%
<b>September</b>	222	7.40	14.10	8%
<b>October</b>	237	7.65	20.94	9%
<b>November</b>	218	7.26	16.23	8%
<b>December</b>	221	7.14	10.41	8%
<b>Average Flow</b>	<b>236</b>	<b>7.82</b>	<b>18.2</b>	<b>9%</b>
<b>Maximum Flow</b>	<b>328</b>	<b>10.59</b>	<b>31.7</b>	<b>12%</b>
<b>Rated Capacity</b>	<b>88.4 (m<sup>3</sup>/day)</b>			

## **Section G – Non-Compliance Findings & Adverse Results**

Non-compliance issues are typically identified by either the Operating Authority or the MECP Drinking Water Inspectors. All non-compliance issues are investigated, corrective actions taken and documented using the Municipalities Drinking Water Quality Management System (DWQMS) procedures.

### ***(I) Non-Compliance Findings***

The MECP conducted an announced routine inspection of the Birr Drinking Water System on May 4, 2023. The system was given a 100% rating for the inspection with zero non-compliance findings

### ***(II) Summary or Reporting Test Results and Other Problems (Schedule 16)***

The following are Adverse Water Quality Indicators (AWQI) that are reportable to the MECP and local Health Unit (MLHU). Written reporting records can be found in Appendix B.

#### **AWQI # 161979**

A sample taken from the sample station on May 15<sup>th</sup> had a result of NDOGN (No Data: Overgrown with Non-Target Bacteria). Resampling and flushing was conducted immediately upon receipt of results and a BWA (Boil Water Advisory) was put in place as per Ontario Regulation 179/03 Schedule 18. The BWA was rescinded on May 21<sup>st</sup> when resampling results were received and showed no indication of adverse effects.

#### **AWQI # 162389**

On July 2<sup>nd</sup> disinfection residuals went below the CT (Contact Time) value of 0.04 mg/L with a minimum of 0.02 mg/L. Flushing protocols were initiated to bring the residual up to normal operating levels, above the CT level. Sampling was conducted and the results indicate there were no adverse effects.

# **Appendix A**

## ***Analytical Data***

**SGS Canada Inc.**

P.O. Box 4300 - 185 Concession St.  
 Lakefield - Ontario - KOL 2H0  
 Phone: 705-652-2000 FAX: 705-652-6365

25-July-2023

**Mun of Middlesex Centre (Birr)**

Attn : Brian Watson

Date Rec. : 19 July 2023  
 LR Report: CA30409-JUL23

10227 Ilderton Rd.  
 Ilderton, ON  
 N0M 2A0, Canada

Copy: #1

Phone: 519-666-0190 ext 255  
 Fax:519-666-0271

## CERTIFICATE OF ANALYSIS

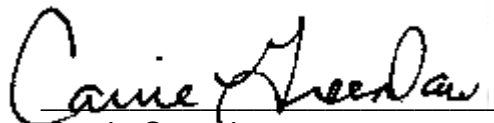
### Final Report

Sample ID	Sample Date & Time	Temperature Upon Receipt at London Lab °C	Temperature Upon Receipt at Lakefield Lab °C	Field pH	Alkalinity mg/L as CaCO3	Lead ug/L
1: Analysis Start Date		---	---	---	21-Jul-23	24-Jul-23
2: Analysis Start Time		---	---	---	15:17	08:26
3: Analysis Completed Date		---	---	---	24-Jul-23	24-Jul-23
4: Analysis Completed Time		---	---	---	13:58	10:02
5: MAC		---	---	---	---	10
6: AO/OG		---	---	6.5-8.5	30-500	---
7: MDL		---	---	---	2	0.01
8: DW Sample Station-Gwendolyn Street 1st	18-Jul-23 10:55	7.9	7.0	7.78	---	0.04
9: DW Sample Station-Gwendolyn Street 2nd	18-Jul-23 10:55	7.9	7.0	7.78	201	---

MAC - Maximum Acceptable Concentration  
 AO/OG - Aesthetic Objective / Operational Guideline  
 MDL - SGS Method Detection Limit

#### Method Descriptions

Units	Description	SGS Method Code
mg/L as CaCO3	Alkalinity by Titration	ME-CA-[ENV]EWL-LAK-AN-006
ug/L	Lead by ICP-MS Drinking Water	ME-CA-[ENV]SPE-LAK-AN-006

  
 Carrie Greenlaw  
 Project Specialist,  
 Environment, Health & Safety

**SGS Canada Inc.**

P.O. Box 4300 - 185 Concession St.  
 Lakefield - Ontario - K0L 2H0  
 Phone: 705-652-2000 FAX: 705-652-6365

06-March-2023

**Mun of Middlesex Centre (Birr)**

Attn : Brian Watson

Date Rec. : 24 February 2023  
 LR Report: CA30396-FEB23

10227 Ilderton Rd.  
 Ilderton, ON  
 N0M 2A0, Canada

Copy: #1

Phone: 519-666-0190 ext 255  
 Fax:519-666-0271

## CERTIFICATE OF ANALYSIS

### Final Report

Sample ID	Sample Date & Time	Temperature Upon Receipt at London Lab °C	Temperature Upon Receipt at Lakefield Lab °C	Field pH no unit	Alkalinity mg/L as CaCO3	Lead ug/L
1: Analysis Start Date		---	---	---	27-Feb-23	06-Mar-23
2: Analysis Start Time		---	---	---	10:51	09:27
3: Analysis Completed Date		---	---	---	28-Feb-23	06-Mar-23
4: Analysis Completed Time		---	---	---	10:11	12:44
5: MAC		---	---	---	---	10
6: AO/OG		---	---	6.5-8.5	30-500	---
7: MDL		---	---	---	2	0.01
8: DW Blow-Off Gwendolyn Street Blow-Off 1st	22-Feb-23 13:19	6.8	4.0	7.9	---	0.18
9: DW Blow-Off Gwendolyn Street Blow-Off 2nd	22-Feb-23 13:19	6.8	4.0	7.9	200	---

MAC - Maximum Acceptable Concentration  
 AO/OG - Aesthetic Objective / Operational Guideline  
 MDL - SGS Method Detection Limit

#### Method Descriptions

Parameter	Description	SGS Method Code
Alkalinity	Alkalinity by Titration	ME-CA-[ENV]EWL-LAK-AN-006
Lead	Lead by ICP-MS Drinking Water	ME-CA-[ENV]SPE-LAK-AN-006

**Hawley Anderson, Hon.B.Sc**  
 Project Specialist,  
 Environment, Health & Safety

**SGS Canada Inc.**

P.O. Box 4300 - 185 Concession St.  
 Lakefield - Ontario - KOL 2H0  
 Phone: 705-652-2000 FAX: 705-652-6365

12-January-2023

**Mun of Middlesex Centre (Birr)**

Attn : Brian Watson

Date Rec. : 04 January 2023  
 LR Report: CA30100-JAN23

10227 Ilderton Rd.  
 Ilderton, ON  
 N0M 2A0, Canada

Copy: #1

Phone: 519-666-0190 ext 255  
 Fax:519-666-0271

## CERTIFICATE OF ANALYSIS

### Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: AO/OG	6: MDL	7: RW 35E33 Well #2
Sample Date & Time							03-Jan-23 10:55
Temperature Upon Receipt [at London Lab °C]	---	---	---	---	---	---	7.7
Temperature Upon Receipt [at Lakefield Lab °C]	---	---	---	---	---	---	6.0
Bicarbonate [mg/L as CaCO3]	06-Jan-23	15:28	11-Jan-23	09:54	---	2	205
Carbonate [mg/L as CaCO3]	06-Jan-23	15:28	11-Jan-23	09:54	---	2	2 <MDL
Total Suspended Solids [mg/L]	09-Jan-23	08:13	10-Jan-23	13:11	---	2	2 <MDL
Sulphide [ug/L]	10-Jan-23	07:41	10-Jan-23	14:47	0.5	6	6 <MDL
Iron [ug/L]	11-Jan-23	20:40	12-Jan-23	15:20	300	7	474
Manganese [ug/L]	11-Jan-23	20:40	12-Jan-23	15:20	50	0.01	8.73

AO/OG - Aesthetic Objective / Operational Guideline  
 MDL - SGS Method Detection Limit

#### Method Descriptions

Units	Description	SGS Method Code
mg/L as CaCO3	Bicarbonate by Titration	ME-CA-[ENV]EWL-LAK-AN-006
mg/L as CaCO3	Carbonate by Titration	ME-CA-[ENV]EWL-LAK-AN-006
ug/L	Iron by ICP-MS drinking water	ME-CA-[ENV]SPE-LAK-AN-006
ug/L	Manganese by ICP-MS Drinking Water	ME-CA-[ENV]SPE-LAK-AN-006
ug/L	Sulphide by Skalar	ME-CA-[ENV]SFA-LAK-AN-008
mg/L	Total Suspended Solids	ME-CA-[ENV]EWL-LAK-AN-004

  
 Carrie Greenlaw  
 Project Specialist,  
 Environment, Health & Safety





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Phone: 705-652-2000 FAX: 705-652-6365

**Mun of Middlesex Centre (Birr)**

Attn : Brian Watson

10227 Ilderton Rd.  
Ilderton, ON  
N0M 2A0, Canada

Phone: 519-666-0190 ext 255  
Fax:519-666-0271

Works #: 220005492

12-January-2023

Date Rec. : 04 January 2023  
LR Report: CA30099-JAN23

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# CERTIFICATE OF ANALYSIS

## Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: MAC	8: MDL	9: 1A0E6 DW 1A0E6 Blow-Off	10: 35E35 TW 35E35 Water Treatment Facility
Sample Date & Time							03-Jan-23 10:37	03-Jan-23 10:50
Temperature Upon Receipt [at London Lab °C]	---	---	---	---	---	---	9.6	9.6
Temperature Upon Receipt [at Lakefield Lab °C]	---	---	---	---	---	---	6.0	6.0
Field Free Chlorine [mg/L]	---	---	---	---	---	---	0.79	---
Nitrite (as N) [mg/L]	06-Jan-23	15:28	11-Jan-23	15:04	1.0	0.003	---	0.003 <MDL
Nitrate (as N) [mg/L]	06-Jan-23	15:28	11-Jan-23	15:04	10	0.006	---	0.012
Nitrate + Nitrite (as N) [mg/L]	06-Jan-23	15:28	11-Jan-23	15:04	---	0.006	---	0.012
Trihalomethanes (total) [ug/L]	06-Jan-23	21:53	09-Jan-23	14:18	100 (RAA)	0.37	50	---
Bromodichloromethane [ug/L]	06-Jan-23	21:53	09-Jan-23	14:18	--	0.26	6.3	---
Bromoform [ug/L]	06-Jan-23	21:53	09-Jan-23	14:18	--	0.34	0.34 <MDL	---
Chloroform [ug/L]	06-Jan-23	21:53	09-Jan-23	14:18	--	0.29	43	---
Dibromochloromethane [ug/L]	06-Jan-23	21:53	09-Jan-23	14:18	--	0.37	0.74	---
Total Haloacetic Acids (HAA5) [ug/L]	11-Jan-23	07:48	12-Jan-23	09:16	80 (RAA)	5.3	29.4	---
Chloroacetic Acid [ug/L]	11-Jan-23	07:48	12-Jan-23	09:16	---	4.7	4.7 <MDL	---
Bromoacetic Acid [ug/L]	11-Jan-23	07:48	12-Jan-23	09:16	---	2.9	2.9 <MDL	---
Dichloroacetic Acid [ug/L]	11-Jan-23	07:48	12-Jan-23	09:16	---	2.6	12.9	---
Dibromoacetic Acid [ug/L]	11-Jan-23	07:48	12-Jan-23	09:16	---	2.0	2.0 <MDL	---
Trichloroacetic Acid [ug/L]	11-Jan-23	07:48	12-Jan-23	09:16	---	5.3	16.5	---

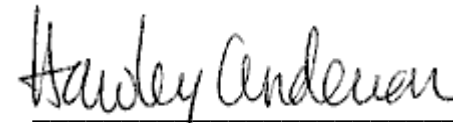
OnLine LIMS

0003190432

MAC - Maximum Acceptable Concentration  
MDL - SGS Method Detection Limit

### Method Descriptions

Parameter	Description	SGS Method Code
Bromoacetic Acid	HAA wtr - DW	ME-CA-[ENV]GC-LAK-AN-013
Bromodichloromethane	VOC wtr - THM	ME-CA-[ENV]GC-LAK-AN-004
Bromoform	VOC wtr - THM	ME-CA-[ENV]GC-LAK-AN-004
Chloroacetic Acid	HAA wtr - DW	ME-CA-[ENV]GC-LAK-AN-013
Chloroform	VOC wtr - THM	ME-CA-[ENV]GC-LAK-AN-004
Dibromoacetic Acid	HAA wtr - DW	ME-CA-[ENV]GC-LAK-AN-013
Dibromochloromethane	VOC wtr - THM	ME-CA-[ENV]GC-LAK-AN-004
Dichloroacetic Acid	HAA wtr - DW	ME-CA-[ENV]GC-LAK-AN-013
Nitrate (as N)	Nitrate by Ion Chromatography	ME-CA-[ENV]IC-LAK-AN-001
Nitrate + Nitrite (as N)	Total Nitrate/Nitrite by Ion Chromatography	ME-CA-[ENV]IC-LAK-AN-001
Nitrite (as N)	Nitrite by Ion Chromatography	ME-CA-[ENV]IC-LAK-AN-001
Total Haloacetic Acids (HAA5)	HAA wtr - DW	ME-CA-[ENV]GC-LAK-AN-013
Trichloroacetic Acid	HAA wtr - DW	ME-CA-[ENV]GC-LAK-AN-013
Trihalomethanes (total)	VOC wtr - THM	ME-CA-[ENV]GC-LAK-AN-004



*Hawley Anderson, Hon.B.Sc*  
**Project Specialist,**  
**Environment, Health & Safety**

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 London - Ontario - N6E 2S8  
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13-February-2023

**Mun of Middlesex Centre (Birr)**

Attn : Brian Watson

**Date Rec. :** 08 February 2023  
**LR Report:** CA20362-FEB23

10227 Ilderton Rd., Ilderton  
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## CERTIFICATE OF ANALYSIS

### Final Report

Sample ID	Sample Date & Time	Temperature Upon Receipt °C	Field ResCl Free mg/L	Total Coliform cfu/100mL	E.Coli cfu/100mL	Heterotrophic Plate Count (HPC) cfu/1mL
1: Analysis Start Date		---	---	08-Feb-23	08-Feb-23	08-Feb-23
2: Analysis Start Time		---	---	15:30	15:30	15:00
3: Analysis Completed Date		---	---	10-Feb-23	10-Feb-23	10-Feb-23
4: Analysis Completed Time		---	---	16:58	16:58	16:58
5: MAC		---	---	0	0	---
6: 35E33 RW 35E33 Well #2	07-Feb-23 10:32	5.6	---	0	0	---
7: 1A0E6 DW 1A0E6 Sample Station	07-Feb-23 10:43	5.6	0.90	0	0	< 10

MAC - Maximum Acceptable Concentration

#### Method Descriptions

Units	Description	SGS Method Code
cfu/100mL	E.Coli by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001
cfu/1mL	Heterotrophic Plate Count (HPC) by SP (using SPCA)	ME-CA-[ENV]MIC-LAK-AN-002
cfu/100mL	Total Coliform by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001

**Angela Stott, B.Sc.**  
 Branch Manager-London  
 Environment, Health & Safety

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 London - Ontario - N6E 2S8  
 Phone: 519-672-4500 FAX: 519-672-0361

16-January-2023

**Mun of Middlesex Centre (Birr)**

Attn : Brian Watson

**Date Rec. :** 11 January 2023  
**LR Report:** CA20516-JAN23

10227 Ilderton Rd.  
 Ilderton, ON  
 N0M 2A0, Canada

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## CERTIFICATE OF ANALYSIS

### Final Report

Sample ID	Sample Date & Time	Temperature Upon Receipt °C	Field ResCl Free mg/L	Total Coliform cfu/100mL	E.Coli cfu/100mL	Heterotrophic Plate Count (HPC) cfu/1mL
1: Analysis Start Date		---	---	11-Jan-23	11-Jan-23	11-Jan-23
2: Analysis Start Time		---	---	16:05	16:05	15:50
3: Analysis Completed Date		---	---	13-Jan-23	13-Jan-23	13-Jan-23
4: Analysis Completed Time		---	---	17:00	17:00	17:00
5: MAC		---	---	0	0	---
6: DW Birr Blowoff	10-Jan-23 10:25	6.0	0.77	0	0	< 10

MAC - Maximum Acceptable Concentration

#### Method Descriptions

Units	Description	SGS Method Code
cfu/100mL	E.Coli by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001
cfu/1mL	Heterotrophic Plate Count (HPC) by SP (using SPCA)	ME-CA-[ENV]MIC-LAK-AN-002
cfu/100mL	Total Coliform by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001



**Cristal Schuster**  
 Project Specialist-London,  
 Environment, Health & Safety

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 Phone: 519-672-4500 FAX: 519-672-0361

30-January-2023

**Mun of Middlesex Centre (Birr)**

Attn : Brian Watson

**Date Rec. :** 25 January 2023  
**LR Report:** CA21126-JAN23

10227 Ilderton Rd.  
 Ilderton, ON  
 N0M 2A0, Canada

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 Fax:519-666-0271

## CERTIFICATE OF ANALYSIS

### Final Report

Sample ID	Sample Date & Time	Temperature Upon Receipt °C	Field ResCl Free mg/L	Total Coliform cfu/100mL	E.Coli cfu/100mL	Heterotrophic Plate Count (HPC) cfu/1mL
1: Analysis Start Date		---	---	25-Jan-23	25-Jan-23	25-Jan-23
2: Analysis Start Time		---	---	17:25	17:25	16:50
3: Analysis Completed Date		---	---	27-Jan-23	27-Jan-23	27-Jan-23
4: Analysis Completed Time		---	---	15:26	15:26	15:26
5: MAC		---	---	0	0	---
6: 1A0E6 DW 1A0E6 Sample Station	24-Jan-23 13:49	12.3	0.90	0	0	< 10

MAC - Maximum Acceptable Concentration

#### Method Descriptions

Units	Description	SGS Method Code
cfu/100mL	E.Coli by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001
cfu/1mL	Heterotrophic Plate Count (HPC) by SP (using SPCA)	ME-CA-[ENV]MIC-LAK-AN-002
cfu/100mL	Total Coliform by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001

*Angela Stott, B.Sc.*  
 Branch Manager-London  
 Environment, Health & Safety

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08-March-2023

**Mun of Middlesex Centre (Birr)**

Attn : Brian Watson

**Date Rec. :** 04 January 2023  
**LR Report:** CA20175-JAN23

10227 Ilderton Rd.  
 Ilderton, ON  
 N0M 2A0, Canada

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## CERTIFICATE OF ANALYSIS

### Final Report

Sample ID	Sample Date & Time	Temperature Upon Receipt °C	Total Coliform cfu/100mL	E.Coli cfu/100mL
1: Analysis Start Date		---	05-Jan-23	05-Jan-23
2: Analysis Start Time		---	09:30	09:30
3: Analysis Completed Date		---	09-Jan-23	09-Jan-23
4: Analysis Completed Time		---	09:08	09:08
5: MAC		---	0	0
6: 35E33 RW 35E33 Well #2	03-Jan-23 10:53	6.8	0	0

MAC - Maximum Acceptable Concentration

#### Method Descriptions

Units	Description	SGS Method Code
cfu/100mL	E.Coli by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001
cfu/100mL	Total Coliform by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001

**Cristal Schuster**  
 Project Specialist-London,  
 Environment, Health & Safety

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27-February-2023

**Mun of Middlesex Centre (Birr)**

Attn : Brian Watson

**Date Rec. :** 22 February 2023  
**LR Report:** CA20863-FEB23

10227 Ilderton Rd.  
 Ilderton, ON  
 N0M 2A0, Canada

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## CERTIFICATE OF ANALYSIS

### Final Report

Sample ID	Sample Date & Time	Temperature Upon Receipt °C	Field ResCl Free mg/L	Total Coliform cfu/100mL	E.Coli cfu/100mL	Heterotrophic Plate Count (HPC) cfu/1mL
1: Analysis Start Date		---	---	22-Feb-23	22-Feb-23	22-Feb-23
2: Analysis Start Time		---	---	13:05	13:05	12:35
3: Analysis Completed Date		---	---	24-Feb-23	24-Feb-23	24-Feb-23
4: Analysis Completed Time		---	---	14:37	14:37	14:37
5: MAC		---	---	0	0	---
6: 1A0E6 DW 1A0E6 Sample Station	21-Feb-23 10:30	4.6	0.51	0	0	< 10

MAC - Maximum Acceptable Concentration

#### Method Descriptions

Units	Description	SGS Method Code
cfu/100mL	E.Coli by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001
cfu/1mL	Heterotrophic Plate Count (HPC) by SP (using SPCA)	ME-CA-[ENV]MIC-LAK-AN-002
cfu/100mL	Total Coliform by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001

**Angela Stott, B.Sc.**  
 Branch Manager-London  
 Environment, Health & Safety

**SGS Canada Inc.**  
 657 Consortium Court  
 London - Ontario - N6E 2S8  
 Phone: 519-672-4500 FAX: 519-672-0361

13-March-2023

**Mun of Middlesex Centre (Birr)**

Attn : Brian Watson

**Date Rec. :** 08 March 2023  
**LR Report:** CA20392-MAR23

10227 Ilderton Rd.  
 Ilderton, ON  
 N0M 2A0, Canada

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Phone: 519-666-0190 ext 255  
 Fax:519-666-0271

## CERTIFICATE OF ANALYSIS

### Final Report

Sample ID	Sample Date & Time	Temperature Upon Receipt °C	Field ResCl Free mg/L	Total Coliform cfu/100mL	E.Coli cfu/100mL	Heterotrophic Plate Count (HPC) cfu/1mL
1: Analysis Start Date		---	---	08-Mar-23	08-Mar-23	08-Mar-23
2: Analysis Start Time		---	---	16:30	16:30	15:55
3: Analysis Completed Date		---	---	10-Mar-23	10-Mar-23	10-Mar-23
4: Analysis Completed Time		---	---	16:10	16:10	16:10
5: MAC		---	---	0	0	---
6: 35E33 RW 35E33 Well #2	07-Mar-23 12:36	10.1	---	0	0	---
7: 1A0E6 DW 1A0E6 Sample Station	07-Mar-23 12:52	10.1	1.01	0	0	< 10

MAC - Maximum Acceptable Concentration

#### Method Descriptions

Units	Description	SGS Method Code
cfu/100mL	E.Coli by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001
cfu/1mL	Heterotrophic Plate Count (HPC) by SP (using SPCA)	ME-CA-[ENV]MIC-LAK-AN-002
cfu/100mL	Total Coliform by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001

**Angela Stott, B.Sc.**  
 Branch Manager-London  
 Environment, Health & Safety



**SGS Canada Inc.**  
 657 Consortium Court  
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 Phone: 519-672-4500 FAX: 519-672-0361

24-March-2023

**Mun of Middlesex Centre (Birr)**

Attn : Brian Watson

Date Rec. : 22 March 2023  
 LR Report: CA20944-MAR23

10227 Ilderton Rd.  
 Ilderton, ON  
 N0M 2A0, Canada

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Phone: 519-666-0190 ext 255  
 Fax:519-666-0271

## CERTIFICATE OF ANALYSIS

### Final Report

Sample ID	Sample Date & Time	Temperature Upon Receipt °C	Field ResCl Free mg/L	Total Coliform cfu/100mL	E.Coli cfu/100mL	Heterotrophic Plate Count (HPC) cfu/1mL
1: Analysis Start Date		---	---	22-Mar-23	22-Mar-23	22-Mar-23
2: Analysis Start Time		---	---	11:55	11:55	11:20
3: Analysis Completed Date		---	---	24-Mar-23	24-Mar-23	24-Mar-23
4: Analysis Completed Time		---	---	13:02	13:02	13:02
5: MAC		---	---	0	0	---
6: 1A0E6 DW 1A0E6 Blow Off	21-Mar-23 10:54	6.8	0.66	0	0	< 10

MAC - Maximum Acceptable Concentration

#### Method Descriptions

Units	Description	SGS Method Code
cfu/100mL	E.Coli by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001
cfu/1mL	Heterotrophic Plate Count (HPC) by SP (using SPCA)	ME-CA-[ENV]MIC-LAK-AN-002
cfu/100mL	Total Coliform by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001



**Cristal Schuster**  
 Project Specialist-London,  
 Environment, Health & Safety

**SGS Canada Inc.**

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 Lakefield - Ontario - K0L 2H0  
 Phone: 705-652-2000 FAX: 705-652-6365

18-April-2023

**Mun of Middlesex Centre (Birr)**

Attn : Brian Watson

Date Rec. : 05 April 2023  
 LR Report: CA30170-APR23

10227 Ilderton Rd.  
 Ilderton, ON  
 N0M 2A0, Canada

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Phone: 519-666-0190 ext 255  
 Fax:519-666-0271

## CERTIFICATE OF ANALYSIS

### Final Report

Sample ID	Sample Date & Time	Temperature Upon Receipt at London Lab °C	Temperature Upon Receipt at Lakefield Lab °C	Nitrite (as N) mg/L	Nitrate (as N) mg/L	Nitrate + Nitrite (as N) mg/L
1: Analysis Start Date		---	---	11-Apr-23	11-Apr-23	11-Apr-23
2: Analysis Start Time		---	---	07:06	07:06	07:06
3: Analysis Completed Date		---	---	18-Apr-23	18-Apr-23	18-Apr-23
4: Analysis Completed Time		---	---	11:49	11:49	11:49
5: MAC		---	---	1	10	---
6: MDL		---	---	0.003	0.006	0.006
7: 35E35 TW 35E35 Water Treatment Facility	04-Apr-23 11:02	7.4	7.0	0.003 <MDL	0.013	0.013

MAC - Maximum Acceptable Concentration  
 MDL - SGS Method Detection Limit

#### Method Descriptions

Parameter	Description	SGS Method Code
Nitrate (as N)	Nitrate by Ion Chromatography	ME-CA-[ENV]IC-LAK-AN-001
Nitrate + Nitrite (as N)	Total Nitrate/Nitrite by Ion Chromatography	ME-CA-[ENV]IC-LAK-AN-001
Nitrite (as N)	Nitrite by Ion Chromatography	ME-CA-[ENV]IC-LAK-AN-001

*Hawley Anderson, Hon.B.Sc*  
 Project Specialist,  
 Environment, Health & Safety

**SGS Canada Inc.**  
 657 Consortium Court  
 London - Ontario - N6E 2S8  
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10-April-2023

**Mun of Middlesex Centre (Birr)**

Attn : Brian Watson

**Date Rec. :** 05 April 2023  
**LR Report:** CA20275-APR23

10227 Ilderton Rd.  
 Ilderton, ON  
 N0M 2A0, Canada

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Phone: 519-666-0190 ext 255  
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## CERTIFICATE OF ANALYSIS

### Final Report

Sample ID	Sample Date & Time	Temperature Upon Receipt °C	Total Coliform cfu/100mL	E.Coli cfu/100mL
1: Analysis Start Date		---	06-Apr-23	06-Apr-23
2: Analysis Start Time		---	10:00	10:00
3: Analysis Completed Date		---	10-Apr-23	10-Apr-23
4: Analysis Completed Time		---	11:59	11:59
5: MAC		---	0	0
6: 35E33 RW 35E33 Well #2	04-Apr-23 11:04	7.4	0	0

MAC - Maximum Acceptable Concentration

#### Method Descriptions

Units	Description	SGS Method Code
cfu/100mL	E.Coli by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001
cfu/100mL	Total Coliform by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001

**Angela Stott, B.Sc.**  
 Branch Manager-London  
 Environment, Health & Safety

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 London - Ontario - N6E 2S8  
 Phone: 519-672-4500 FAX: 519-672-0361

10-April-2023

**Mun of Middlesex Centre (Birr)**

Attn : Brian Watson

Date Rec. : 05 April 2023  
 LR Report: CA20278-APR23

10227 Ilderton Rd.  
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## CERTIFICATE OF ANALYSIS

### Final Report

Sample ID	Sample Date & Time	Temperature Upon Receipt °C	Field ResCl Free mg/L	Total Coliform cfu/100mL	E.Coli cfu/100mL	Heterotrophic Plate Count (HPC) cfu/1mL
1: Analysis Start Date		---	---	06-Apr-23	06-Apr-23	06-Apr-23
2: Analysis Start Time		---	---	10:00	10:00	09:40
3: Analysis Completed Date		---	---	10-Apr-23	10-Apr-23	10-Apr-23
4: Analysis Completed Time		---	---	12:00	12:00	12:00
5: MAC		---	---	0	0	---
6: 1A0E6 DW Birr Blowoff	05-Apr-23 12:26	7.4	0.94	0	0	< 10

MAC - Maximum Acceptable Concentration

#### Method Descriptions

Units	Description	SGS Method Code
cfu/100mL	E.Coli by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001
cfu/1mL	Heterotrophic Plate Count (HPC) by SP (using SPCA)	ME-CA-[ENV]MIC-LAK-AN-002
cfu/100mL	Total Coliform by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001

Angela Stott, B.Sc.  
 Branch Manager-London  
 Environment, Health & Safety



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - K0L 2H0
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24-April-2023

Mun of Middlesex Centre (Birr)

Attn : Brian Watson

Date Rec. : 12 April 2023
LR Report: CA30305-APR23

10227 Ilderton Rd.
Ilderton, ON
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Phone: 519-666-0190 ext 255
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CERTIFICATE OF ANALYSIS
Final Report

Table with 8 columns: Analysis, 1: Analysis Start Date, 2: Analysis Start Time, 3: Analysis Completed Date, 4: Analysis Completed Time, 5: MAC, 6: MDL, 7: DW Blowoff. Rows include Sample Date & Time, Temperature Upon Receipt, and various chemical analyses like Trihalomethanes and Haloacetic Acids.

MAC - Maximum Acceptable Concentration
MDL - SGS Method Detection Limit

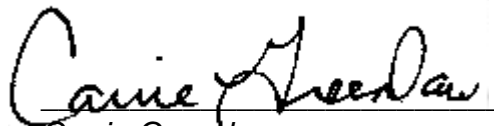
Method Descriptions

Table with 3 columns: Units, Description, SGS Method Code. Lists various units (ug/L) and descriptions (HAA wtr - DW, VOC wtr - THM) with their corresponding method codes.

**SGS Canada Inc.**

P.O. Box 4300 - 185 Concession St.  
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LR Report : CA30305-APR23



*Carrie Greenlaw*  
Carrie Greenlaw  
Project Specialist,  
Environment, Health & Safety

**SGS Canada Inc.**  
 657 Consortium Court  
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 Phone: 519-672-4500 FAX: 519-672-0361

17-April-2023

**Mun of Middlesex Centre (Birr)**

Attn : Brian Watson

Date Rec. : 12 April 2023  
 LR Report: CA20521-APR23

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## CERTIFICATE OF ANALYSIS

### Final Report

Sample ID	Sample Date & Time	Temperature Upon Receipt °C	Field ResCl Free mg/L	Total Coliform cfu/100mL	E.Coli cfu/100mL	Heterotrophic Plate Count (HPC) cfu/1mL
1: Analysis Start Date		---	---	12-Apr-23	12-Apr-23	12-Apr-23
2: Analysis Start Time		---	---	15:10	15:10	14:45
3: Analysis Completed Date		---	---	14-Apr-23	14-Apr-23	14-Apr-23
4: Analysis Completed Time		---	---	17:10	17:10	17:10
5: MAC		---	---	0	0	---
6: DW Blowoff	11-Apr-23 09:15	6.6	0.83	0	0	10

MAC - Maximum Acceptable Concentration

#### Method Descriptions

Units	Description	SGS Method Code
cfu/100mL	E.Coli by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001
cfu/1mL	Heterotrophic Plate Count (HPC) by SP (using SPCA)	ME-CA-[ENV]MIC-LAK-AN-002
cfu/100mL	Total Coliform by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001



**Cristal Schuster**  
 Project Specialist-London,  
 Environment, Health & Safety

**SGS Canada Inc.**  
 657 Consortium Court  
 London - Ontario - N6E 2S8  
 Phone: 519-672-4500 FAX: 519-672-0361

21-April-2023

**Mun of Middlesex Centre (Birr)**

Attn : Brian Watson

Date Rec. : 19 April 2023  
 LR Report: CA20914-APR23

10227 Ilderton Rd.  
 Ilderton, ON  
 N0M 2A0, Canada

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Phone: 519-666-0190 ext 255  
 Fax:519-666-0271

# CERTIFICATE OF ANALYSIS

## Final Report - Revised

Sample ID	Temperature Upon Receipt °C	Field ResCl Free mg/L	Total Coliform cfu/100mL	E.Coli cfu/100mL	Heterotrophic Plate Count (HPC) cfu/1mL
1: Analysis Start Date	---	---	19-Apr-23	19-Apr-23	19-Apr-23
2: Analysis Start Time	---	---	15:00	15:00	14:25
3: Analysis Completed Date	---	---	21-Apr-23	21-Apr-23	21-Apr-23
4: Analysis Completed Time	---	---	12:16	12:16	12:16
5: MAC	---	---	0	0	---
6: 1A0E6 DW 1A0E6 Sample Station	4.3	0.84	0	0	< 10

MAC - Maximum Acceptable Concentration  
 C2-Final -REVISED-Cl res changed from 0.24 to 0.84 as per client revision - 04/21/23 CS

### Method Descriptions

Units	Description	SGS Method Code
cfu/100mL	E.Coli by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001
cfu/1mL	Heterotrophic Plate Count (HPC) by SP (using SPCA)	ME-CA-[ENV]MIC-LAK-AN-002
cfu/100mL	Total Coliform by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001

**Cristal Schuster**  
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 London - Ontario - N6E 2S8  
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05-May-2023

**Mun of Middlesex Centre (Birr)**

Attn : Brian Watson

**Date Rec. :** 03 May 2023  
**LR Report:** CA20283-MAY23

10227 Ilderton Rd.  
 Ilderton, ON  
 N0M 2A0, Canada

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## CERTIFICATE OF ANALYSIS

### Final Report

Sample ID	Sample Date & Time	Temperature Upon Receipt °C	Field ResCl Free mg/L	Total Coliform cfu/100mL	E.Coli cfu/100mL	Heterotrophic Plate Count (HPC) cfu/1mL
1: Analysis Start Date		---	---	03-May-23	03-May-23	03-May-23
2: Analysis Start Time		---	---	13:05	13:05	12:25
3: Analysis Completed Date		---	---	05-May-23	05-May-23	05-May-23
4: Analysis Completed Time		---	---	14:16	14:16	14:16
5: MAC		---	---	0	0	---
6: 35E33 RW 35E33 Well #2	02-May-23 10:45	7.4	---	0	0	---
7: 1A0E6 DW 1A0E6 Sample Station	02-May-23 10:59	7.4	0.88	0	0	< 10

MAC - Maximum Acceptable Concentration

#### Method Descriptions

Units	Description	SGS Method Code
cfu/100mL	E.Coli by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001
cfu/1mL	Heterotrophic Plate Count (HPC) by SP (using SPCA)	ME-CA-[ENV]MIC-LAK-AN-002
cfu/100mL	Total Coliform by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001



**Cristal Schuster**  
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23-May-2023

**Mun of Middlesex Centre (Birr)**

Attn : Brian Watson

Date Rec. : 17 May 2023  
 LR Report: CA21052-MAY23

10227 Ilderton Rd.  
 Ilderton, ON  
 N0M 2A0, Canada

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## CERTIFICATE OF ANALYSIS

### Final Report

Sample ID	Sample Date & Time	Temperature Upon Receipt °C	Field ResCl Free mg/L	Total Coliform cfu/100mL	E.Coli cfu/100mL	Heterotrophic Plate Count (HPC) cfu/1mL
1: Analysis Start Date		---	---	17-May-23	17-May-23	17-May-23
2: Analysis Start Time		---	---	15:45	15:45	15:05
3: Analysis Completed Date		---	---	19-May-23	19-May-23	19-May-23
4: Analysis Completed Time		---	---	17:08	17:08	17:08
5: MAC		---	---	0	0	---
6: 1A0E6 DW 1A0E6 Sample Station	16-May-23 09:48	2.6	0.74	NDOGN MAC	NDOGN MAC	180

MAC - Maximum Acceptable Concentration

MAC - (ADVERSE) Above Maximum Acceptable Concentration

NDOGN - No Data: Overgrown with Non Target Bacteria

The AWQI # assigned by the MOECP for the adverse result is: 161979

#### Method Descriptions

Units	Description	SGS Method Code
cfu/100mL	E.Coli by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001
cfu/1mL	Heterotrophic Plate Count (HPC) by SP (using SPCA)	ME-CA-[ENV]MIC-LAK-AN-002
cfu/100mL	Total Coliform by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001



**Crista Schuster**  
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02-June-2023

**Mun of Middlesex Centre (Birr)**

Attn : Brian Watson

Date Rec. : 31 May 2023  
 LR Report: CA21715-MAY23

10227 Ilderton Rd.  
 Ilderton, ON  
 N0M 2A0, Canada

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Phone: 519-666-0190 ext 255  
 Fax:519-666-0271

## CERTIFICATE OF ANALYSIS

### Final Report

Sample ID	Sample Date & Time	Temperature Upon Receipt °C	Field ResCl Free mg/L	Total Coliform cfu/100mL	E.Coli cfu/100mL	Heterotrophic Plate Count (HPC) cfu/1mL
1: Analysis Start Date		---	---	31-May-23	31-May-23	31-May-23
2: Analysis Start Time		---	---	14:15	14:15	13:35
3: Analysis Completed Date		---	---	02-Jun-23	02-Jun-23	02-Jun-23
4: Analysis Completed Time		---	---	13:44	13:44	13:44
5: MAC		---	---	0	0	---
6: 1A0E6 DW 1A0E6 Sample Station	30-May-23 11:55	10.7	0.73	0	0	< 10

MAC - Maximum Acceptable Concentration

#### Method Descriptions

Units	Description	SGS Method Code
cfu/100mL	E.Coli by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001
cfu/1mL	Heterotrophic Plate Count (HPC) by SP (using SPCA)	ME-CA-[ENV]MIC-LAK-AN-002
cfu/100mL	Total Coliform by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001



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12-June-2023

**Mun of Middlesex Centre (Birr)**

Attn : Brian Watson

**Date Rec. :** 07 June 2023  
**LR Report:** CA20414-JUN23

10227 Ilderton Rd.  
 Ilderton, ON  
 N0M 2A0, Canada

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## CERTIFICATE OF ANALYSIS

### Final Report

Sample ID	Sample Date & Time	Temperature Upon Receipt °C	Total Coliform cfu/100mL	E.Coli cfu/100mL
1: Analysis Start Date		---	07-Jun-23	07-Jun-23
2: Analysis Start Time		---	15:25	15:25
3: Analysis Completed Date		---	09-Jun-23	09-Jun-23
4: Analysis Completed Time		---	14:22	14:22
5: MAC		---	0	0
6: 35E33 RW 35E33 Well #2	06-Jun-23 10:05	6.5	0	0

MAC - Maximum Acceptable Concentration

#### Method Descriptions

Units	Description	SGS Method Code
cfu/100mL	E.Coli by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001
cfu/100mL	Total Coliform by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001



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16-June-2023

**Mun of Middlesex Centre (Birr)**

Attn : Brian Watson

**Date Rec. :** 14 June 2023  
**LR Report:** CA20795-JUN23

10227 Ilderton Rd.  
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## CERTIFICATE OF ANALYSIS

### Final Report

Sample ID	Sample Date & Time	Temperature Upon Receipt °C	Field ResCl Free mg/L	Total Coliform cfu/100mL	E.Coli cfu/100mL	Heterotrophic Plate Count (HPC) cfu/1mL
1: Analysis Start Date		---	---	14-Jun-23	14-Jun-23	14-Jun-23
2: Analysis Start Time		---	---	14:45	14:45	14:20
3: Analysis Completed Date		---	---	16-Jun-23	16-Jun-23	16-Jun-23
4: Analysis Completed Time		---	---	13:55	13:55	13:55
5: MAC		---	---	0	0	---
6: 1A0E6 DW 1A0E6 Sample Station	13-Jun-23 11:17	5.8	0.65	0	0	< 10

MAC - Maximum Acceptable Concentration

#### Method Descriptions

Units	Description	SGS Method Code
cfu/100mL	E.Coli by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001
cfu/1mL	Heterotrophic Plate Count (HPC) by SP (using SPCA)	ME-CA-[ENV]MIC-LAK-AN-002
cfu/100mL	Total Coliform by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001

**Angela Stott, B.Sc.**  
 Branch Manager-London  
 Environment, Health & Safety

**SGS Canada Inc.**  
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23-June-2023

**Mun of Middlesex Centre (Birr)**

Attn : Brian Watson

**Date Rec. :** 21 June 2023  
**LR Report:** CA21244-JUN23

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 N0M 2A0, Canada

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## CERTIFICATE OF ANALYSIS

### Final Report

Sample ID	Sample Date & Time	Temperature Upon Receipt °C	Field ResCl Free mg/L	Total Coliform cfu/100mL	E.Coli cfu/100mL	Heterotrophic Plate Count (HPC) cfu/1mL
1: Analysis Start Date		---	---	21-Jun-23	21-Jun-23	21-Jun-23
2: Analysis Start Time		---	---	16:30	16:30	16:00
3: Analysis Completed Date		---	---	23-Jun-23	23-Jun-23	23-Jun-23
4: Analysis Completed Time		---	---	15:12	15:12	15:12
5: MAC		---	---	0	0	---
6: 1A0E6 DW 1A0E6 Sample Station	20-Jun-23 12:00	8.9	0.61	0	0	< 10

MAC - Maximum Acceptable Concentration

#### Method Descriptions

Units	Description	SGS Method Code
cfu/100mL	E.Coli by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001
cfu/1mL	Heterotrophic Plate Count (HPC) by SP (using SPCA)	ME-CA-[ENV]MIC-LAK-AN-002
cfu/100mL	Total Coliform by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001



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30-June-2023

**Mun of Middlesex Centre (Birr)**

Attn : Brian Watson

**Date Rec. :** 28 June 2023  
**LR Report:** CA21595-JUN23

10227 Ilderton Rd.  
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## CERTIFICATE OF ANALYSIS

### Final Report

Sample ID	Sample Date & Time	Temperature Upon Receipt °C	Field ResCl Free mg/L	Total Coliform cfu/100mL	E.Coli cfu/100mL	Heterotrophic Plate Count (HPC) cfu/1mL
1: Analysis Start Date		---	---	28-Jun-23	28-Jun-23	28-Jun-23
2: Analysis Start Time		---	---	16:00	16:00	15:20
3: Analysis Completed Date		---	---	30-Jun-23	30-Jun-23	30-Jun-23
4: Analysis Completed Time		---	---	13:13	13:13	13:13
5: MAC		---	---	0	0	---
6: 1A0E6 DW 1A0E6 Sample Station	28-Jun-23 10:40	8.4	0.48	0	0	< 10

MAC - Maximum Acceptable Concentration

#### Method Descriptions

Units	Description	SGS Method Code
cfu/100mL	E.Coli by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001
cfu/1mL	Heterotrophic Plate Count (HPC) by SP (using SPCA)	ME-CA-[ENV]MIC-LAK-AN-002
cfu/100mL	Total Coliform by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001



**Cristal Schuster**  
 Project Specialist-London,  
 Environment, Health & Safety

**SGS Canada Inc.**  
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 London - Ontario - N6E 2S8  
 Phone: 519-672-4500 FAX: 519-672-0361

05-July-2023

**Mun of Middlesex Centre (Birr)**

Attn : Brian Watson

Date Rec. : 03 July 2023  
 LR Report: CA20007-JUL23

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 Canada, N0M 2A0  
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## CERTIFICATE OF ANALYSIS

### Final Report

Sample ID	Sample Date & Time	Temperature Upon Receipt °C	Field ResCl Free mg/L	Total Coliform cfu/100mL	E.Coli cfu/100mL
1: Analysis Start Date		---	---	03-Jul-23	03-Jul-23
2: Analysis Start Time		---	---	14:45	14:45
3: Analysis Completed Date		---	---	05-Jul-23	05-Jul-23
4: Analysis Completed Time		---	---	11:34	11:34
5: MAC		---	---	0	0
6: 1A0E6 DW 1A0E6 Sample Station	02-Jul-23 14:03	6.7	0.86	0	0
7: DW Blow Off	02-Jul-23 14:25	6.1	0.73	0	0

MAC - Maximum Acceptable Concentration

#### Method Descriptions

Units	Description	SGS Method Code
cfu/100mL	E.Coli by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001
cfu/100mL	Total Coliform by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001

*Angela Stott, B.Sc.*  
 Branch Manager-London  
 Environment, Health & Safety



**SGS Canada Inc.**

P.O. Box 4300 - 185 Concession St.  
 Lakefield - Ontario - KOL 2H0  
 Phone: 705-652-2000 FAX: 705-652-6365

17-July-2023

**Mun of Middlesex Centre (Birr)**

Attn : Brian Watson

Date Rec. : 05 July 2023  
 LR Report: CA30083-JUL23

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# CERTIFICATE OF ANALYSIS

## Final Report

Analysis	1:	2:	3:	4:	5:	6:	7:		8:
	Analysis Start Date	Analysis Start Time	Analysis Completed Date	Analysis Completed Time	MAC	MDL	1A0E6 DW Sample Station	1A0E6 35E35 TW Water Treatment Facility	35E35
Sample Date & Time							04-Jul-23 09:15	04-Jul-23 08:48	
Temperature Upon Receipt [at London Lab °C]	---	---	---	---	---	---	4.1	4.1	
Temperature Upon Receipt [at Lakefield Lab °C]	---	---	---	---	---	---	9.0	9.0	
Field Free Chlorine [mg/L]	---	---	---	---	---	---	0.58	---	---
Nitrite (as N) [mg/L]	07-Jul-23	18:02	10-Jul-23	19:42	1.0	0.003	---	---	0.003 <MDL
Nitrate (as N) [mg/L]	07-Jul-23	18:02	10-Jul-23	19:42	10	0.006	---	---	0.011
Nitrate + Nitrite (as N) [mg/L]	07-Jul-23	18:02	10-Jul-23	19:42	---	0.006	---	---	0.011
Trihalomethanes (total) [ug/L]	12-Jul-23	16:28	17-Jul-23	11:05	100 (RAA)	0.37	52	---	---
Bromodichloromethane [ug/L]	12-Jul-23	16:28	17-Jul-23	11:05	--	0.26	5.0	---	---
Bromoform [ug/L]	12-Jul-23	16:28	17-Jul-23	11:05	--	0.34	0.34 <MDL	---	---
Chloroform [ug/L]	12-Jul-23	16:28	17-Jul-23	11:05	--	0.29	47	---	---
Dibromochloromethane [ug/L]	12-Jul-23	16:28	17-Jul-23	11:05	--	0.37	0.47	---	---
Total Haloacetic Acids (HAA5) [ug/L]	13-Jul-23	06:50	14-Jul-23	09:22	80 (RAA)	5.3	32.3	---	---
Chloroacetic Acid [ug/L]	13-Jul-23	06:50	14-Jul-23	09:22	---	4.7	4.7 <MDL	---	---
Bromoacetic Acid [ug/L]	13-Jul-23	06:50	14-Jul-23	09:22	---	2.9	2.9 <MDL	---	---
Dichloroacetic Acid [ug/L]	13-Jul-23	06:50	14-Jul-23	09:22	---	2.6	13.5	---	---
Dibromoacetic Acid [ug/L]	13-Jul-23	06:50	14-Jul-23	09:22	---	2.0	2.0 <MDL	---	---
Trichloroacetic Acid [ug/L]	13-Jul-23	06:50	14-Jul-23	09:22	---	5.3	18.8	---	---

MAC - Maximum Acceptable Concentration  
 MDL - SGS Method Detection Limit

### Method Descriptions

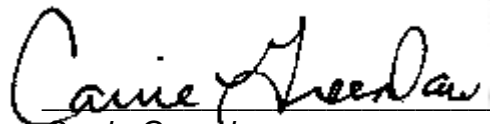
Units	Description	SGS Method Code
ug/L	HAA wtr - DW	ME-CA-[ENV]GC-LAK-AN-013
ug/L	VOC wtr - THM	ME-CA-[ENV]GC-LAK-AN-004
ug/L	VOC wtr - THM	ME-CA-[ENV]GC-LAK-AN-004
ug/L	HAA wtr - DW	ME-CA-[ENV]GC-LAK-AN-013
ug/L	VOC wtr - THM	ME-CA-[ENV]GC-LAK-AN-004
ug/L	HAA wtr - DW	ME-CA-[ENV]GC-LAK-AN-013
ug/L	VOC wtr - THM	ME-CA-[ENV]GC-LAK-AN-004
ug/L	HAA wtr - DW	ME-CA-[ENV]GC-LAK-AN-013
mg/L	Nitrate by Ion Chromatography	ME-CA-[ENV]IC-LAK-AN-001
mg/L	Total Nitrate/Nitrite by Ion Chromatography	ME-CA-[ENV]IC-LAK-AN-001
mg/L	Nitrite by Ion Chromatography	ME-CA-[ENV]IC-LAK-AN-001

**SGS Canada Inc.**

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LR Report : CA30083-JUL23

Units	Description	SGS Method Code
ug/L	HAA wtr - DW	ME-CA-[ENV]GC-LAK-AN-013
ug/L	HAA wtr - DW	ME-CA-[ENV]GC-LAK-AN-013
ug/L	VOC wtr - THM	ME-CA-[ENV]GC-LAK-AN-004

---

Carrie Greenlaw  
Project Specialist,  
Environment, Health & Safety

**SGS Canada Inc.**  
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07-July-2023

**Mun of Middlesex Centre (Birr)**

Attn : Brian Watson

Date Rec. : 05 July 2023  
 LR Report: CA20209-JUL23

10227 Ilderton Rd.  
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 N0M 2A0, Canada

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## CERTIFICATE OF ANALYSIS

### Final Report

Sample ID	Sample Date & Time	Temperature Upon Receipt °C	Total Coliform cfu/100mL	E.Coli cfu/100mL
1: Analysis Start Date		---	05-Jul-23	05-Jul-23
2: Analysis Start Time		---	15:50	15:50
3: Analysis Completed Date		---	07-Jul-23	07-Jul-23
4: Analysis Completed Time		---	14:22	14:22
5: MAC		---	0	0
6: 35E33 RW 35E33 Well #2	04-Jul-23 08:52	4.1	0	0

MAC - Maximum Acceptable Concentration

#### Method Descriptions

Units	Description	SGS Method Code
cfu/100mL	E.Coli by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001
cfu/100mL	Total Coliform by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001

*Angela Stott, B.Sc.*  
 Branch Manager-London  
 Environment, Health & Safety

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 London - Ontario - N6E 2S8  
 Phone: 519-672-4500 FAX: 519-672-0361

07-July-2023

**Mun of Middlesex Centre (Birr)**

Attn : Brian Watson

Date Rec. : 05 July 2023  
 LR Report: CA20207-JUL23

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Phone: 519-666-0190 ext 255  
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## CERTIFICATE OF ANALYSIS

### Draft Report

Sample ID	Sample Date & Time	Temperature Upon Receipt °C	Field ResCl Free mg/L	Total Coliform cfu/100mL	E.Coli cfu/100mL	Heterotrophic Plate Count (HPC) cfu/1mL
1: Analysis Start Date		---	---	05-Jul-23	05-Jul-23	05-Jul-23
2: Analysis Start Time		---	---	13:20	13:20	12:50
3: Analysis Completed Date		---	---	07-Jul-23	07-Jul-23	07-Jul-23
4: Analysis Completed Time		---	---	10:47	10:47	10:47
5: MAC		---	---	0	0	---
6: 1A0E6 DW 1A0E6 Sample Station	04-Jul-23 09:06	4.1	0.58	0	0	< 10

MAC - Maximum Acceptable Concentration

### Method Descriptions

Units	Description	SGS Method Code
cfu/100mL	E.Coli by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001
cfu/1mL	Heterotrophic Plate Count (HPC) by SP (using SPCA)	ME-CA-[ENV]MIC-LAK-AN-002
cfu/100mL	Total Coliform by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001

Angela Stott, B.Sc.  
 Branch Manager-London  
 Environment, Health & Safety

**SGS Canada Inc.**  
 657 Consortium Court  
 London - Ontario - N6E 2S8  
 Phone: 519-672-4500 FAX: 519-672-0361

17-July-2023

**Mun of Middlesex Centre (Birr)**

Attn : Brian Watson

Date Rec. : 12 July 2023  
 LR Report: CA20677-JUL23

10227 Ilderton Rd.  
 Ilderton, ON  
 N0M 2A0, Canada

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Phone: 519-666-0190 ext 255  
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## CERTIFICATE OF ANALYSIS

### Final Report

Sample ID	Sample Date & Time	Temperature Upon Receipt °C	Field ResCl Free mg/L	Total Coliform cfu/100mL	E.Coli cfu/100mL	Heterotrophic Plate Count (HPC) cfu/1mL
1: Analysis Start Date		---	---	12-Jul-23	12-Jul-23	12-Jul-23
2: Analysis Start Time		---	---	16:40	16:40	15:45
3: Analysis Completed Date		---	---	14-Jul-23	14-Jul-23	14-Jul-23
4: Analysis Completed Time		---	---	15:44	15:44	15:44
5: MAC		---	---	0	0	---
6: 1A0E6 DW 1A0E6 Sample Station	11-Jul-23 10:00	9.9	0.68	0	0	< 10

MAC - Maximum Acceptable Concentration

#### Method Descriptions

Units	Description	SGS Method Code
cfu/100mL	E.Coli by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001
cfu/1mL	Heterotrophic Plate Count (HPC) by SP (using SPCA)	ME-CA-[ENV]MIC-LAK-AN-002
cfu/100mL	Total Coliform by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001



**Cristal Schuster**  
 Project Specialist-London,  
 Environment, Health & Safety

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28-July-2023

**Mun of Middlesex Centre (Birr)**

Attn : Brian Watson

Date Rec. : 26 July 2023  
 LR Report: CA21466-JUL23

10227 Ilderton Rd.  
 Ilderton, ON  
 N0M 2A0, Canada

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Phone: 519-666-0190 ext 255  
 Fax:519-666-0271

## CERTIFICATE OF ANALYSIS

### Final Report

Sample ID	Sample Date & Time	Temperature Upon Receipt °C	Field ResCl Free mg/L	Total Coliform cfu/100mL	E.Coli cfu/100mL	Heterotrophic Plate Count (HPC) cfu/1mL
1: Analysis Start Date		---	---	26-Jul-23	26-Jul-23	26-Jul-23
2: Analysis Start Time		---	---	15:50	15:50	15:25
3: Analysis Completed Date		---	---	28-Jul-23	28-Jul-23	28-Jul-23
4: Analysis Completed Time		---	---	15:23	15:23	15:23
5: MAC		---	---	0	0	---
6: 1A0E6 DW 1A0E6 Sample Station	25-Jul-23 14:14	14.1	0.47	0	0	< 10

MAC - Maximum Acceptable Concentration

#### Method Descriptions

Units	Description	SGS Method Code
cfu/100mL	E.Coli by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001
cfu/1mL	Heterotrophic Plate Count (HPC) by SP (using SPCA)	ME-CA-[ENV]MIC-LAK-AN-002
cfu/100mL	Total Coliform by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001



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08-August-2023

**Mun of Middlesex Centre (Birr)**

Attn : Brian Watson

**Date Rec. :** 02 August 2023  
**LR Report:** CA20216-AUG23

10227 Ilderton Rd.  
 Ilderton, ON  
 N0M 2A0, Canada

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Phone: 519-666-0190 ext 255  
 Fax:519-666-0271

## CERTIFICATE OF ANALYSIS

### Final Report

Sample ID	Sample Date & Time	Temperature Upon Receipt °C	Field ResCl Free mg/L	Total Coliform cfu/100mL	E.Coli cfu/100mL	Heterotrophic Plate Count (HPC) cfu/1mL
1: Analysis Start Date		---	---	02-Aug-23	02-Aug-23	02-Aug-23
2: Analysis Start Time		---	---	16:45	16:45	16:10
3: Analysis Completed Date		---	---	08-Aug-23	08-Aug-23	08-Aug-23
4: Analysis Completed Time		---	---	09:17	09:17	09:17
5: MAC		---	---	0	0	---
6: 35E33 RW 35E33 Well #2	01-Aug-23 10:03	8.4	---	0	0	---
7: 1A0E6 DW 1A0E6 Sample Station	01-Aug-23 10:20	8.6	0.64	0	0	< 10

MAC - Maximum Acceptable Concentration

#### Method Descriptions

Units	Description	SGS Method Code
cfu/100mL	E.Coli by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001
cfu/1mL	Heterotrophic Plate Count (HPC) by SP (using SPCA)	ME-CA-[ENV]MIC-LAK-AN-002
cfu/100mL	Total Coliform by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001



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11-August-2023

**Mun of Middlesex Centre (Birr)**

Attn : Brian Watson

**Date Rec. :** 09 August 2023  
**LR Report:** CA20485-AUG23

10227 Ilderton Rd.  
 Ilderton, ON  
 N0M 2A0, Canada

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Phone: 519-666-0190 ext 255  
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## CERTIFICATE OF ANALYSIS

### Final Report

Sample ID	Sample Date & Time	Temperature Upon Receipt °C	Field ResCl Free mg/L	Total Coliform cfu/100mL	E.Coli cfu/100mL	Heterotrophic Plate Count (HPC) cfu/1mL
1: Analysis Start Date		---	---	09-Aug-23	09-Aug-23	09-Aug-23
2: Analysis Start Time		---	---	14:00	14:00	13:25
3: Analysis Completed Date		---	---	11-Aug-23	11-Aug-23	11-Aug-23
4: Analysis Completed Time		---	---	14:34	14:34	14:34
5: MAC		---	---	0	0	---
6: 1A0E6 DW 1A0E6 Sample Station	08-Aug-23 16:41	8.1	0.61	0	0	< 10

MAC - Maximum Acceptable Concentration

#### Method Descriptions

Units	Description	SGS Method Code
cfu/100mL	E.Coli by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001
cfu/1mL	Heterotrophic Plate Count (HPC) by SP (using SPCA)	ME-CA-[ENV]MIC-LAK-AN-002
cfu/100mL	Total Coliform by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001

**Angela Stott, B.Sc.**  
 Branch Manager-London  
 Environment, Health & Safety



**SGS Canada Inc.**  
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25-August-2023

**Mun of Middlesex Centre (Birr)**

Attn : Brian Watson

**Date Rec. :** 23 August 2023  
**LR Report:** CA21337-AUG23

10227 Ilderton Rd.  
 Ilderton, ON  
 N0M 2A0, Canada

**Copy:** #1

Phone: 519-666-0190 ext 255  
 Fax:519-666-0271

## CERTIFICATE OF ANALYSIS

### Final Report

Sample ID	Sample Date & Time	Temperature Upon Receipt °C	Field ResCl Free mg/L	Total Coliform cfu/100mL	E.Coli cfu/100mL	Heterotrophic Plate Count (HPC) cfu/1mL
1: Analysis Start Date		---	---	23-Aug-23	23-Aug-23	23-Aug-23
2: Analysis Start Time		---	---	11:05	11:05	10:20
3: Analysis Completed Date		---	---	25-Aug-23	25-Aug-23	25-Aug-23
4: Analysis Completed Time		---	---	11:39	11:39	11:39
5: MAC		---	---	0	0	---
6: 1A0E6 DW 1A0E6 Sample Station	22-Aug-23 11:45	13.2	0.79	0	0	< 10

MAC - Maximum Acceptable Concentration

#### Method Descriptions

Units	Description	SGS Method Code
cfu/100mL	E.Coli by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001
cfu/1mL	Heterotrophic Plate Count (HPC) by SP (using SPCA)	ME-CA-[ENV]MIC-LAK-AN-002
cfu/100mL	Total Coliform by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001

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11-September-2023

**Mun of Middlesex Centre (Birr)**

Attn : Brian Watson

**Date Rec. :** 06 September 2023  
**LR Report:** CA20190-SEP23

10227 Ilderton Rd.  
 Ilderton, ON  
 N0M 2A0, Canada

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## CERTIFICATE OF ANALYSIS

### Final Report

Sample ID	Sample Date & Time	Temperature Upon Receipt °C	Field ResCl Free mg/L	Total Coliform cfu/100mL	E.Coli cfu/100mL	Heterotrophic Plate Count (HPC) cfu/1mL
1: Analysis Start Date		---	---	06-Sep-23	06-Sep-23	06-Sep-23
2: Analysis Start Time		---	---	14:35	14:35	14:00
3: Analysis Completed Date		---	---	08-Sep-23	08-Sep-23	08-Sep-23
4: Analysis Completed Time		---	---	13:27	13:27	13:27
5: MAC		---	---	0	0	---
6: 35E33 RW 35E33 Well #2	05-Sep-23 10:44	6.3	---	0	0	---
7: 1A0E6 DW 1A0E6 Sample Station	05-Sep-23 11:00	6.3	1.12	0	0	< 10

MAC - Maximum Acceptable Concentration

#### Method Descriptions

Units	Description	SGS Method Code
cfu/100mL	E.Coli by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001
cfu/1mL	Heterotrophic Plate Count (HPC) by SP (using SPCA)	ME-CA-[ENV]MIC-LAK-AN-002
cfu/100mL	Total Coliform by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001



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22-September-2023

**Mun of Middlesex Centre (Birr)**

Attn : Brian Watson

**Date Rec. :** 20 September 2023  
**LR Report:** CA21083-SEP23

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 Ilderton, ON  
 N0M 2A0, Canada

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## CERTIFICATE OF ANALYSIS

### Final Report

Sample ID	Sample Date & Time	Temperature Upon Receipt °C	Field ResCl Free mg/L	Total Coliform cfu/100mL	E.Coli cfu/100mL	Heterotrophic Plate Count (HPC) cfu/1mL
1: Analysis Start Date		---	---	20-Sep-23	20-Sep-23	20-Sep-23
2: Analysis Start Time		---	---	15:25	15:25	14:55
3: Analysis Completed Date		---	---	22-Sep-23	22-Sep-23	22-Sep-23
4: Analysis Completed Time		---	---	16:14	16:14	16:14
5: MAC		---	---	0	0	---
6: 1A0E6 DW 1A0E6 Sample Station	19-Sep-23 11:29	6.8	0.74	0	0	< 10

MAC - Maximum Acceptable Concentration

#### Method Descriptions

Units	Description	SGS Method Code
cfu/100mL	E.Coli by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001
cfu/1mL	Heterotrophic Plate Count (HPC) by SP (using SPCA)	ME-CA-[ENV]MIC-LAK-AN-002
cfu/100mL	Total Coliform by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001



**Cristal Schuster**  
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**Mun of Middlesex Centre (Birr)**

Attn : Brian Watson

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Phone: 519-666-0190 ext 255  
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Works #: 220005492

12-October-2023

Date Rec. : 04 October 2023  
LR Report: CA30084-OCT23

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# CERTIFICATE OF ANALYSIS

## Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: MAC	6: MDL	7: 1A0E6 DW 1A0E6 Sample Station	8: 35E35 TW 35E35 Water Treatment Facility
Sample Date & Time							03-Oct-23 13:32	03-Oct-23 13:53
Temperature Upon Receipt [at London Lab °C]	---	---	---	---	---	---	8.2	8.2
Temperature Upon Receipt [at Lakefield Lab °C]	---	---	---	---	---	---	9.0	9.0
Field Free Chlorine [mg/L]	---	---	---	---	---	---	0.83	---
Nitrite (as N) [mg/L]	06-Oct-23	14:28	10-Oct-23	14:36	1.0	0.003	---	0.003 <MDL
Nitrate (as N) [mg/L]	06-Oct-23	14:28	10-Oct-23	14:36	10	0.006	---	0.012
Nitrate + Nitrite (as N) [mg/L]	06-Oct-23	14:28	10-Oct-23	14:36	---	0.006	---	0.012
Trihalomethanes (total) [ug/L]	06-Oct-23	12:29	10-Oct-23	10:15	100 (RAA)	0.37	69	---
Bromodichloromethane [ug/L]	06-Oct-23	12:29	10-Oct-23	10:15	--	0.26	8.2	---
Bromoform [ug/L]	06-Oct-23	12:29	10-Oct-23	10:15	--	0.34	0.34 <MDL	---
Chloroform [ug/L]	06-Oct-23	12:29	10-Oct-23	10:15	--	0.29	60	---
Dibromochloromethane [ug/L]	06-Oct-23	12:29	10-Oct-23	10:15	--	0.37	1.0	---
Total Haloacetic Acids (HAA5) [ug/L]	10-Oct-23	08:27	12-Oct-23	11:30	80 (RAA)	5.3	27.8	---
Chloroacetic Acid [ug/L]	10-Oct-23	08:27	12-Oct-23	11:30	---	4.7	4.7 <MDL	---
Bromoacetic Acid [ug/L]	10-Oct-23	08:27	12-Oct-23	11:30	---	2.9	2.9 <MDL	---
Dichloroacetic Acid [ug/L]	10-Oct-23	08:27	12-Oct-23	11:30	---	2.6	12.6	---
Dibromoacetic Acid [ug/L]	10-Oct-23	08:27	12-Oct-23	11:30	---	2.0	2.0 <MDL	---
Trichloroacetic Acid [ug/L]	10-Oct-23	08:27	12-Oct-23	11:30	---	5.3	15.2	---

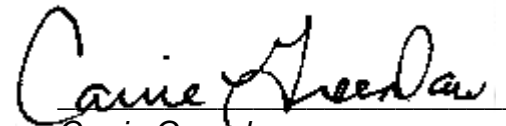
OnLine LIMS

0003496609

MAC - Maximum Acceptable Concentration  
MDL - SGS Method Detection Limit

### Method Descriptions

Units	Description	SGS Method Code
ug/L	HAA wtr - DW	ME-CA-[ENV]GC-LAK-AN-013
ug/L	VOC wtr - THM	ME-CA-[ENV]GC-LAK-AN-004
ug/L	VOC wtr - THM	ME-CA-[ENV]GC-LAK-AN-004
ug/L	HAA wtr - DW	ME-CA-[ENV]GC-LAK-AN-013
ug/L	VOC wtr - THM	ME-CA-[ENV]GC-LAK-AN-004
ug/L	HAA wtr - DW	ME-CA-[ENV]GC-LAK-AN-013
ug/L	VOC wtr - THM	ME-CA-[ENV]GC-LAK-AN-004
ug/L	HAA wtr - DW	ME-CA-[ENV]GC-LAK-AN-013
mg/L	Nitrate by Ion Chromatography	ME-CA-[ENV]IC-LAK-AN-001
mg/L	Total Nitrate/Nitrite by Ion Chromatography	ME-CA-[ENV]IC-LAK-AN-001
mg/L	Nitrite by Ion Chromatography	ME-CA-[ENV]IC-LAK-AN-001
ug/L	HAA wtr - DW	ME-CA-[ENV]GC-LAK-AN-013
ug/L	HAA wtr - DW	ME-CA-[ENV]GC-LAK-AN-013
ug/L	VOC wtr - THM	ME-CA-[ENV]GC-LAK-AN-004



Carrie Greenlaw  
Project Specialist,  
Environment, Health & Safety

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06-October-2023

**Mun of Middlesex Centre (Birr)**

Attn : Brian Watson

**Date Rec. :** 04 October 2023  
**LR Report:** CA20202-OCT23

10227 Ilderton Rd.  
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 N0M 2A0, Canada

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## CERTIFICATE OF ANALYSIS

### Final Report

Sample ID	Sample Date & Time	Temperature Upon Receipt °C	Field ResCl Free mg/L	Total Coliform cfu/100mL	E.Coli cfu/100mL	Heterotrophic Plate Count (HPC) cfu/1mL
1: Analysis Start Date		---	---	04-Oct-23	04-Oct-23	04-Oct-23
2: Analysis Start Time		---	---	11:15	11:15	10:55
3: Analysis Completed Date		---	---	06-Oct-23	06-Oct-23	06-Oct-23
4: Analysis Completed Time		---	---	12:57	12:57	12:57
5: MAC		---	---	0	0	---
6: 35E33 RW 35E33 Well #2	03-Oct-23 13:47	7.4	---	0	0	---
7: 1A0E6 DW 1A0E6 Sample Station	03-Oct-23 13:32	7.4	0.83	0	0	< 10

MAC - Maximum Acceptable Concentration

#### Method Descriptions

Units	Description	SGS Method Code
cfu/100mL	E.Coli by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001
cfu/1mL	Heterotrophic Plate Count (HPC) by SP (using SPCA)	ME-CA-[ENV]MIC-LAK-AN-002
cfu/100mL	Total Coliform by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001



**Cristal Schuster**  
 Project Specialist-London,  
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20-October-2023

**Mun of Middlesex Centre (Birr)**

Attn : Brian Watson

**Date Rec. :** 18 October 2023  
**LR Report:** CA20985-OCT23

10227 Ilderton Rd.  
 Ilderton, ON  
 N0M 2A0, Canada

**Copy:** #1

Phone: 519-666-0190 ext 255  
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## CERTIFICATE OF ANALYSIS

### Final Report

Sample ID	Sample Date & Time	Temperature Upon Receipt °C	Field ResCl Free mg/L	Total Coliform cfu/100mL	E.Coli cfu/100mL	Heterotrophic Plate Count (HPC) cfu/1mL
1: Analysis Start Date		---	---	18-Oct-23	18-Oct-23	18-Oct-23
2: Analysis Start Time		---	---	15:55	15:55	15:15
3: Analysis Completed Date		---	---	20-Oct-23	20-Oct-23	20-Oct-23
4: Analysis Completed Time		---	---	14:01	14:01	14:01
5: MAC		---	---	0	0	---
6: 1A0E6 DW 1A0E6 Sample Station	17-Oct-23 10:23	5.6	0.75	0	0	10

MAC - Maximum Acceptable Concentration

#### Method Descriptions

Units	Description	SGS Method Code
cfu/100mL	E.Coli by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001
cfu/1mL	Heterotrophic Plate Count (HPC) by SP (using SPCA)	ME-CA-[ENV]MIC-LAK-AN-002
cfu/100mL	Total Coliform by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001



**Cristal Schuster**  
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03-November-2023

**Mun of Middlesex Centre (Birr)**

Attn : Brian Watson

**Date Rec. :** 01 November 2023  
**LR Report:** CA20052-NOV23

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 Ilderton, ON  
 N0M 2A0, Canada

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## CERTIFICATE OF ANALYSIS

### Final Report

Sample ID	Sample Date & Time	Temperature Upon Receipt °C	Field ResCl Free mg/L	Total Coliform cfu/100mL	E.Coli cfu/100mL	Heterotrophic Plate Count (HPC) cfu/1mL
1: Analysis Start Date		---	---	01-Nov-23	01-Nov-23	01-Nov-23
2: Analysis Start Time		---	---	15:50	15:50	15:30
3: Analysis Completed Date		---	---	03-Nov-23	03-Nov-23	03-Nov-23
4: Analysis Completed Time		---	---	13:43	13:43	13:43
5: MAC		---	---	0	0	---
6: 1A0E6 DW 1A0E6 Sample Station	31-Oct-23 10:16	4.3	0.95	0	0	< 10

MAC - Maximum Acceptable Concentration

#### Method Descriptions

Units	Description	SGS Method Code
cfu/100mL	E.Coli by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001
cfu/1mL	Heterotrophic Plate Count (HPC) by SP (using SPCA)	ME-CA-[ENV]MIC-LAK-AN-002
cfu/100mL	Total Coliform by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001



**Cristal Schuster**  
 Project Specialist-London,  
 Environment, Health & Safety



SGS Canada Inc.  
657 Consortium Court  
London - Ontario - N6E 2S8  
Phone: 519-672-4500 FAX: 519-672-0361

10-November-2023

**Mun of Middlesex Centre (Birr)**

Attn : Brian Watson

Date Rec. : 08 November 2023  
LR Report: CA20413-NOV23

10227 Ilderton Rd.  
Ilderton, ON  
N0M 2A0, Canada

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Phone: 519-666-0190 ext 255  
Fax:519-666-0271

# CERTIFICATE OF ANALYSIS

## Final Report

Sample ID	Sample Date & Time	Temperature Upon Receipt °C	Total Coliform cfu/100mL	E.Coli cfu/100mL
1: Analysis Start Date		---	08-Nov-23	08-Nov-23
2: Analysis Start Time		---	15:55	15:55
3: Analysis Completed Date		---	10-Nov-23	10-Nov-23
4: Analysis Completed Time		---	13:03	13:03
5: MAC		---	0	0
6: 35E33 RW 35E33 Well #2	07-Nov-23 10:19	5.4	0	0

MAC - Maximum Acceptable Concentration

### Method Descriptions

Units	Description	SGS Method Code
cfu/100mL	E.Coli by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001
cfu/100mL	Total Coliform by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001



Cristal Schuster  
Project Specialist-London,  
Environment, Health & Safety

**SGS Canada Inc.**  
 657 Consortium Court  
 London - Ontario - N6E 2S8  
 Phone: 519-672-4500 FAX: 519-672-0361

17-November-2023

**Mun of Middlesex Centre (Birr)**

Attn : Brian Watson

**Date Rec. :** 15 November 2023  
**LR Report:** CA20661-NOV23

10227 Ilderton Rd.  
 Ilderton, ON  
 N0M 2A0, Canada

**Copy:** #1

Phone: 519-666-0190 ext 255  
 Fax:519-666-0271

## CERTIFICATE OF ANALYSIS

### Final Report

Sample ID	Sample Date & Time	Temperature Upon Receipt °C	Field ResCl Free mg/L	Total Coliform cfu/100mL	E.Coli cfu/100mL	Heterotrophic Plate Count (HPC) cfu/1mL
1: Analysis Start Date		---	---	15-Nov-23	15-Nov-23	15-Nov-23
2: Analysis Start Time		---	---	13:30	13:30	13:05
3: Analysis Completed Date		---	---	17-Nov-23	17-Nov-23	17-Nov-23
4: Analysis Completed Time		---	---	13:25	13:25	13:25
5: MAC		---	---	0	0	---
6: 1A0E6 DW 1A0E6 Sample Station	14-Nov-23 12:06	4.9	0.88	0	0	< 10

MAC - Maximum Acceptable Concentration

#### Method Descriptions

Units	Description	SGS Method Code
cfu/100mL	E.Coli by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001
cfu/1mL	Heterotrophic Plate Count (HPC) by SP (using SPCA)	ME-CA-[ENV]MIC-LAK-AN-002
cfu/100mL	Total Coliform by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001



**Cristal Schuster**  
 Project Specialist-London,  
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 657 Consortium Court  
 London - Ontario - N6E 2S8  
 Phone: 519-672-4500 FAX: 519-672-0361

01-December-2023

**Mun of Middlesex Centre (Birr)**

Attn : Brian Watson

**Date Rec. :** 29 November 2023  
**LR Report:** CA21291-NOV23

10227 Ilderton Rd.  
 Ilderton, ON  
 N0M 2A0, Canada

**Copy:** #1

Phone: 519-666-0190 ext 255  
 Fax:519-666-0271

## CERTIFICATE OF ANALYSIS

### Final Report

Sample ID	Sample Date & Time	Temperature Upon Receipt °C	Field ResCl Free mg/L	Total Coliform cfu/100mL	E.Coli cfu/100mL	Heterotrophic Plate Count (HPC) cfu/1mL
1: Analysis Start Date		---	---	29-Nov-23	29-Nov-23	29-Nov-23
2: Analysis Start Time		---	---	14:50	14:50	13:40
3: Analysis Completed Date		---	---	01-Dec-23	01-Dec-23	01-Dec-23
4: Analysis Completed Time		---	---	12:28	12:28	12:28
5: MAC		---	---	0	0	---
6: 1A0E6 DW 1A0E6 Blowoff	28-Nov-23 10:54	5.2	1.07	0	0	< 10

MAC - Maximum Acceptable Concentration

#### Method Descriptions

Units	Description	SGS Method Code
cfu/100mL	E.Coli by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001
cfu/1mL	Heterotrophic Plate Count (HPC) by SP (using SPCA)	ME-CA-[ENV]MIC-LAK-AN-002
cfu/100mL	Total Coliform by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001



**Cristal Schuster**  
 Project Specialist-London,  
 Environment, Health & Safety

**SGS Canada Inc.**  
 657 Consortium Court  
 London - Ontario - N6E 2S8  
 Phone: 519-672-4500 FAX: 519-672-0361

18-December-2023

**Mun of Middlesex Centre (Birr)**

Attn : Brian Watson

**Date Rec. :** 13 December 2023  
**LR Report:** CA20595-DEC23

10227 Ilderton Rd.  
 Ilderton, ON  
 N0M 2A0, Canada

**Copy:** #1

Phone: 519-666-0190 ext 255  
 Fax:519-666-0271

## CERTIFICATE OF ANALYSIS

### Final Report

Sample ID	Sample Date & Time	Temperature Upon Receipt °C	Field ResCl Free mg/L	Total Coliform cfu/100mL	E.Coli cfu/100mL	Heterotrophic Plate Count (HPC) cfu/1mL
1: Analysis Start Date		---	---	13-Dec-23	13-Dec-23	13-Dec-23
2: Analysis Start Time		---	---	17:05	17:05	16:30
3: Analysis Completed Date		---	---	15-Dec-23	15-Dec-23	15-Dec-23
4: Analysis Completed Time		---	---	17:39	17:39	17:39
5: MAC		---	---	0	0	---
6: 35E33 RW 35E33 Well #2	12-Dec-23 11:49	5.65	---	0	0	---
7: 1A0E6 DW 1A0E6 Sample Station	12-Dec-23 11:34	5.65	1.14	0	0	< 10

MAC - Maximum Acceptable Concentration

#### Method Descriptions

Units	Description	SGS Method Code
cfu/100mL	E.Coli by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001
cfu/1mL	Heterotrophic Plate Count (HPC) by SP (using SPCA)	ME-CA-[ENV]MIC-LAK-AN-002
cfu/100mL	Total Coliform by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001

  
**Cristal Schuster**  
 Project Specialist-London,  
 Environment, Health & Safety

**SGS Canada Inc.**  
 657 Consortium Court  
 London - Ontario - N6E 2S8  
 Phone: 519-672-4500 FAX: 519-672-0361

29-December-2023

**Mun of Middlesex Centre (Birr)**

Attn : Brian Watson

**Date Rec. :** 27 December 2023  
**LR Report:** CA21046-DEC23

10227 Ilderton Rd.  
 Ilderton, ON  
 N0M 2A0, Canada

**Copy:** #1

Phone: 519-666-0190 ext 255  
 Fax:519-666-0271

## CERTIFICATE OF ANALYSIS

### Final Report

Sample ID	Sample Date & Time	Temperature Upon Receipt °C	Field ResCl Free mg/L	Total Coliform cfu/100mL	E.Coli cfu/100mL	Heterotrophic Plate Count (HPC) cfu/1mL
1: Analysis Start Date		---	---	27-Dec-23	27-Dec-23	27-Dec-23
2: Analysis Start Time		---	---	14:00	14:00	13:30
3: Analysis Completed Date		---	---	29-Dec-23	29-Dec-23	29-Dec-23
4: Analysis Completed Time		---	---	12:33	12:33	12:33
5: MAC		---	---	0	0	---
6: 1A0E6 DW 1A0E6 Sample Station	26-Dec-23 12:51	8.9	0.88	0	0	< 10

MAC - Maximum Acceptable Concentration

#### Method Descriptions

Units	Description	SGS Method Code
cfu/100mL	E.Coli by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001
cfu/1mL	Heterotrophic Plate Count (HPC) by SP (using SPCA)	ME-CA-[ENV]MIC-LAK-AN-002
cfu/100mL	Total Coliform by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001



**Cristal Schuster**  
 Project Specialist-London,  
 Environment, Health & Safety

## **Appendix B**

### ***Notice Of Adverse Test Results And Other Problems with Notice Of Issue Resolution***

**SGS Canada Inc.**  
 657 Consortium Court  
 London - Ontario - N6E 2S8  
 Phone: 519-672-4500 FAX: 519-672-0361

19-May-2023

**Mun of Middlesex Centre (Birr)**

Attn : Brian Watson

Date Rec. : 17 May 2023  
 LR Report: CA21052-MAY23

10227 Ilderton Rd.  
 Ilderton, ON  
 N0M 2A0, Canada

Copy: #1

Phone: 519-666-0190 ext 255  
 Fax:519-666-0271

## CERTIFICATE OF ANALYSIS DRAFT

Sample ID	Sample Date & Time	Temperature Upon Receipt °C	Field ResCl Free mg/L	Total Coliform cfu/100mL	E.Coli cfu/100mL	Heterotrophic Plate Count (HPC) cfu/1mL
1: Analysis Start Date		---	---	17-May-23	17-May-23	17-May-23
2: Analysis Start Time		---	---	15:45	15:45	15:05
3: Analysis Completed Date		---	---			
4: Analysis Completed Time		---	---			
5: MAC		---	---	0	0	---
6: 1A0E6 DW 1A0E6 Sample Station	16-May-23 09:48	2.6	0.74	NDOGN MAC	NDOGN MAC	

MAC - Maximum Acceptable Concentration

MAC - (ADVERSE) Above Maximum Acceptable Concentration

NDOGN - No Data: Overgrown with Non Target Bacteria

---

*Angela Stott, B.Sc.*  
 Branch Manager-London  
 Environment, Health & Safety

### Method Descriptions

Units	Description	SGS Method Code
cfu/100mL	E.Coli by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001
cfu/1mL	Heterotrophic Plate Count (HPC) by SP (using SPCA)	ME-CA-[ENV]MIC-LAK-AN-002
cfu/100mL	Total Coliform by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001

DRAFT





MUNICIPALITY OF MIDDLESEX CENTRE  
10227 Ilderton Road, Ilderton, ON, N0M 2A0  
519-666-0190

## Attention: Birr Municipal Water Users

### Boil Water Advisory Friday, May 19, 2023

---

As a result of water sample results that were inclusive, your water may be unsafe to drink. Until results of recent water samples are received and have shown to be acceptable, the Medical Officer of Health has issued a Boil Water Advisory for homes serviced by the Birr water system. While this advisory is in effect, you are asked to **bring your water to a rolling boil for at least one minute or use bottled water for:**

- Drinking
- Cooking
- Brushing your teeth, gargling or rinsing dentures
- Washing fruits, vegetables and other foods
- Making ice, juices, hot beverages, puddings or other mixes
- Making baby food or formula (note: for babies only use separate bottled water or an alternate safe water source)

**Be sure:**

- If there are children in the home, ensure that they do not drink from the tap.
- Place the pot with the boiling water on the back burner so children cannot reach it.
- Boil only as much water as you can comfortably lift without spilling.
- Allow water to cool sufficiently before using.

Middlesex Centre is working with staff from the Ministry of the Environment, Conservation and Parks to resolve the current issue. You will be advised once the problem has been resolved. This situation is expected to be resolved by May 21, 2023. Please see the attached fact sheet from the Middlesex London Health Unit for more detailed information about how to use your water during this Boil Water Advisory. If you have any questions, please call the Middlesex Centre Public Works Department at 519-666-0190 ext. 5255, or if calling outside of business hours, our after-hours water emergency number (519-435-6434).

Sincerely,

Eric Joudrey, Manager of Water and Wastewater Operations

### Instructions

These Notice forms apply to drinking water system owners and operators (Owners/Operators) and Ministry of the Environment, Conservation and Parks (MECP) licensed laboratories (Licensed Laboratories) regulated by Drinking Water Systems Regulation, Ontario Regulation 170/03 (O. Reg. 170/03).

#### Immediate Report of Adverse Results

Section 16-3(3) of Schedule 16 of O. Reg. 170/03 sets out the requirements for Owners/Operators and Licensed Laboratories to make an immediate report of adverse test results under O. Reg. 170/03 by speaking in person or by telephone to the MECP's Spills Action Centre (SAC), at 1-800-268-6060 or 416-325-3000, the local Medical Officer of Health/Health Unit (Health Unit) and the Owner/Operator (Immediate Report).

[Adverse test results for trihalomethanes (THMs) or haloacetic acids (HAAs) do not require an Immediate Report; see section below.]

#### Written Notice within 24 hours of the Immediate Report

Within 24 hours of an Immediate Report, Section 16-7(3) of Schedule 16 requires that Owners/Operators and Licensed Laboratories also provide written notice to the MECP and the Health Unit, by fax or e-mail. Licensed Laboratories must complete and submit Sections 1 and 3 of this Notice. Owners/Operators must complete and submit Section 2A of this Notice. **Note:** Section 3 is not required to be completed for operational parameter incidents which have no correlating adverse results.

#### Notice Within 7 Days of Issue Resolution

Within 7 days after the issue has been resolved, Section 16-9(1) of Schedule 16 requires that Owners/Operators must provide a written notice, Section 2B of this Notice, to SAC and the Health Unit, summarizing the actions taken and the results achieved. This written notice must also be sent to the interested authority for any designated facility (if applicable) within 30 days.

Owners and Operators must follow any additional corrective actions required by the Health Unit.

#### Total Trihalomethanes (THMs) and Haloacetic Acids (HAAs)

As of January 2016 for THMs and January 2020 for HAAs, Sections 16-6 and 16-7 of Schedule 16 require that Owners/Operators and Licensed Laboratories calculate the running annual average (RAA) for THMs and HAAs and report any adverse test result in writing to the MECP and the Health Unit within 7 calendar days of the end of the calendar quarter that produced the adverse test result. The written notice is to be submitted using Section 2C of this Notice. RAA calculation is outlined in Schedule 13-6 of O. Reg. 170/03.

Immediate oral notification is no longer required for these parameters.

Licensed Laboratories that upload all the THM and HAA test results into the ministry's data system and provide the results to Owners/Operators within 48 hours of the test result being authorized at the laboratory, may be exempt from the RAA reporting requirements noted above.

**Note:** Small municipal residential systems and non-municipal year-round residential systems that serve designated facilities also must notify the operator of each designated facility served by their system.

The 'Trihalomethane and Haloacetic Acid Sampling and Reporting Requirements Technical Bulletin' provides full details on the changes to the reporting requirements and provides examples for calculating quarterly and running annual averages. The Technical Bulletin is available on the ministry's web page via the following link:

<https://www.ontario.ca/page/total-trihalomethane-thm-reporting-requirements-technical-bulletin>

Fields marked with an asterisk (\*) are mandatory.

SAC fax: 1-800-268-6061 or 416-325-3011

SAC e-mail: [AWQI.Reporting@ontario.ca](mailto:AWQI.Reporting@ontario.ca)

Provincial standards for water quality are set out in:

[Safe Drinking Water Act, 2002](#)

[Ontario Regulation 169/03 \(Water Quality Standards\)](#)

[Ontario Regulation 170/03 \(Drinking Water Systems\)](#)

Failure to notify these parties in accordance with the Regulation constitutes an offence under the *Safe Drinking Water Act*. A copy of this form may be acquired through the MECP public website ([www.ontario.ca/drinkingwater](http://www.ontario.ca/drinkingwater)) or by contacting any MECP office.

Collection of information on this form is done in accordance with the [Safe Drinking Water Act, 2002](#) and its Regulations. Information gathered herein, including personal information, is governed by the *Freedom of Information and Protection of Privacy Act* (FIPPA) and may be disclosed to other government agencies (including municipal health unit employees) pursuant to 'Section 42' of the FIPPA for the consistent purpose of administering any Act or program that pertains to drinking water safety. For questions and concerns, please contact the MECP at 1-866-793-2588.

---

Are you a \*

Licensed Laboratory  DWS

Which Section(s) of the Form do you need today?

Section 1 - Written Notice By Licensed Laboratory

Section 2A - Written Notice By Drinking Water System

Section 2B - Notice Of Issues Resolution

Section 2C - Written Notice By Drinking Water System Owner - Reporting RAA for THMs and HAAs

Section 3 - Adverse Analytical Results



## Notices of Adverse Test Results and Issue Resolution (Schedule 16)

Drinking Water Systems Regulation (O. Reg. 170/03)

Fields marked with an asterisk (\*) are mandatory.

### Section 2A – Written Notice By Drinking Water System (DWS) Owner (For THM and HAA reporting see Section 2C)

#### Indicators of Adverse Water Quality

AWQI Number \*  
161979

Is this a resample? \*  
 Yes  No  Unknown If Yes, then provide initial AWQI number

#### Indicator of Adverse Results

- Microbiological \*   
  Chemical \*   
  Radiological \*   
  Operational \*   
  Licence/Order/Certificate Authority \*
- Observations of Improperly disinfected water directed to water users
- Low Distribution Chlorine \_\_\_\_\_ mg/L
- High Turbidity \_\_\_\_\_ NTU
- Other \_\_\_\_\_

#### Details of Adverse Result \*

Sample taken at sample station on May 15th at 9:45 with a residual of 0.74 mg/L was NDOGN both E coli and TC

#### DWS Information

DWS Name * Birr Limited Groundwater		DWS Number * 220005492
Last Name * Tyler	First Name * Jocelyn	
Position * Compliance Coordinator / Maintenance Operator		
Email Address tyler@middlesexcentre.ca	Telephone Number (including area code) 519-854-7639 ext.	
Additional Comments		

#### Oral Notification to Health Unit - Person Contacted

Public Health Unit Name * Middlesex - London Health Unit			
Last Name * Walsh	First Name * Chris		
Position * Public Health Inspector			
Telephone Number (including area code) * 519-617-0518 ext.	Fax Number (including area code)	Date (yyyy/mm/dd) * 2023/05/18	Time (hh:mm) * 5:25 PM

Fields marked with an asterisk (\*) are mandatory.

Section 2A continued

DWS Person Providing Oral Notification * Jocelyn Tyler	Email Address tyler@middlesexcentre.ca
---	---

**Corrective Actions to be Taken by Owner/Operator**

Corrective Actions	Required *	Completed	Comments
Resample and Test (including upstream, downstream and at AWQI location)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Residuals at resample points: Sample station - 0.75 Blow off - 0.82 Distribution tap @ plant - 0.90
Disinfection Restored / Increased	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	residual was between 0.83 and 0.90 while on-site
Mains / Pipes Flushed	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Flushed three points in system
Signs Posted (Do Not Drink Water)	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Users Advised to Boil Water / Seek Alternate Source	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	

**Other** (Include any other Health Unit directions and any additional attachments)

Other:	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
--------	--	---	--


**Oral Notification to Spills Action Centre (SAC) - Person Contacted**

Last Name * Sutcliffe	First Name * Grace
--------------------------	-----------------------

Position \*  
Provincial Officer

DWS Person Providing Oral Notifying * Jocelyn Tyler	Date (yyyy/mm/dd) * 2023/05/18	Time (hh:mm)* 4:58 PM
--	-----------------------------------	--------------------------

Initial DWS Notification Prepared by \*  
Jocelyn Tyler

Signature 	Date (yyyy/mm/dd) * 2023/05/19
--	-----------------------------------

Additional Comments

Do you have another adverse to report? \*  Yes  No

---

**SGS Canada Inc.**  
 657 Consortium Court  
 London - Ontario - N6E 2S8  
 Phone: 519-672-4500 FAX: 519-672-0361

23-May-2023

**Mun of Middlesex Centre (Birr)**

Attn : Brian Watson

Date Rec. : 17 May 2023  
 LR Report: CA21052-MAY23

10227 Ilderton Rd.  
 Ilderton, ON  
 N0M 2A0, Canada

Copy: #1

Phone: 519-666-0190 ext 255  
 Fax:519-666-0271

## CERTIFICATE OF ANALYSIS

### Final Report

Sample ID	Sample Date & Time	Temperature Upon Receipt °C	Field ResCl Free mg/L	Total Coliform cfu/100mL	E.Coli cfu/100mL	Heterotrophic Plate Count (HPC) cfu/1mL
1: Analysis Start Date		---	---	17-May-23	17-May-23	17-May-23
2: Analysis Start Time		---	---	15:45	15:45	15:05
3: Analysis Completed Date		---	---	19-May-23	19-May-23	19-May-23
4: Analysis Completed Time		---	---	17:08	17:08	17:08
5: MAC		---	---	0	0	---
6: 1A0E6 DW 1A0E6 Sample Station	16-May-23 09:48	2.6	0.74	NDOGN MAC	NDOGN MAC	180

MAC - Maximum Acceptable Concentration

MAC - (ADVERSE) Above Maximum Acceptable Concentration

NDOGN - No Data: Overgrown with Non Target Bacteria

The AWQI # assigned by the MOECP for the adverse result is: 161979

#### Method Descriptions

Units	Description	SGS Method Code
cfu/100mL	E.Coli by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001
cfu/1mL	Heterotrophic Plate Count (HPC) by SP (using SPCA)	ME-CA-[ENV]MIC-LAK-AN-002
cfu/100mL	Total Coliform by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001



**Crista Schuster**  
 Project Specialist-London,  
 Environment, Health & Safety

### Instructions

These Notice forms apply to drinking water system owners and operators (Owners/Operators) and Ministry of the Environment, Conservation and Parks (MECP) licensed laboratories (Licensed Laboratories) regulated by Drinking Water Systems Regulation, Ontario Regulation 170/03 (O. Reg. 170/03).

#### Immediate Report of Adverse Results

Section 16-3(3) of Schedule 16 of O. Reg. 170/03 sets out the requirements for Owners/Operators and Licensed Laboratories to make an immediate report of adverse test results under O. Reg. 170/03 by speaking in person or by telephone to the MECP's Spills Action Centre (SAC), at 1-800-268-6060 or 416-325-3000, the local Medical Officer of Health/Health Unit (Health Unit) and the Owner/Operator (Immediate Report).

[Adverse test results for trihalomethanes (THMs) or haloacetic acids (HAAs) do not require an Immediate Report; see section below.]

#### Written Notice within 24 hours of the Immediate Report

Within 24 hours of an Immediate Report, Section 16-7(3) of Schedule 16 requires that Owners/Operators and Licensed Laboratories also provide written notice to the MECP and the Health Unit, by fax or e-mail. Licensed Laboratories must complete and submit Sections 1 and 3 of this Notice. Owners/Operators must complete and submit Section 2A of this Notice. **Note:** Section 3 is not required to be completed for operational parameter incidents which have no correlating adverse results.

#### Notice Within 7 Days of Issue Resolution

Within 7 days after the issue has been resolved, Section 16-9(1) of Schedule 16 requires that Owners/Operators must provide a written notice, Section 2B of this Notice, to SAC and the Health Unit, summarizing the actions taken and the results achieved. This written notice must also be sent to the interested authority for any designated facility (if applicable) within 30 days.

Owners and Operators must follow any additional corrective actions required by the Health Unit.

#### Total Trihalomethanes (THMs) and Haloacetic Acids (HAAs)

As of January 2016 for THMs and January 2020 for HAAs, Sections 16-6 and 16-7 of Schedule 16 require that Owners/Operators and Licensed Laboratories calculate the running annual average (RAA) for THMs and HAAs and report any adverse test result in writing to the MECP and the Health Unit within 7 calendar days of the end of the calendar quarter that produced the adverse test result. The written notice is to be submitted using Section 2C of this Notice. RAA calculation is outlined in Schedule 13-6 of O. Reg. 170/03.

Immediate oral notification is no longer required for these parameters.

Licensed Laboratories that upload all the THM and HAA test results into the ministry's data system and provide the results to Owners/Operators within 48 hours of the test result being authorized at the laboratory, may be exempt from the RAA reporting requirements noted above.

**Note:** Small municipal residential systems and non-municipal year-round residential systems that serve designated facilities also must notify the operator of each designated facility served by their system.

The 'Trihalomethane and Haloacetic Acid Sampling and Reporting Requirements Technical Bulletin' provides full details on the changes to the reporting requirements and provides examples for calculating quarterly and running annual averages. The Technical Bulletin is available on the ministry's web page via the following link:

<https://www.ontario.ca/page/total-trihalomethane-thm-reporting-requirements-technical-bulletin>



Fields marked with an asterisk (\*) are mandatory.

SAC fax: 1-800-268-6061 or 416-325-3011

SAC e-mail: [AWQI.Reporting@ontario.ca](mailto:AWQI.Reporting@ontario.ca)

Provincial standards for water quality are set out in:

[Safe Drinking Water Act, 2002](#)

[Ontario Regulation 169/03 \(Water Quality Standards\)](#)

[Ontario Regulation 170/03 \(Drinking Water Systems\)](#)

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Collection of information on this form is done in accordance with the [Safe Drinking Water Act, 2002](#) and its Regulations. Information gathered herein, including personal information, is governed by the *Freedom of Information and Protection of Privacy Act (FIPPA)* and may be disclosed to other government agencies (including municipal health unit employees) pursuant to 'Section 42' of the FIPPA for the consistent purpose of administering any Act or program that pertains to drinking water safety. For questions and concerns, please contact the MECP at 1-866-793-2588.

---

Are you a \*

Licensed Laboratory  DWS

Which Section(s) of the Form do you need today?

Section 1 - Written Notice By Licensed Laboratory

Section 2A - Written Notice By Drinking Water System

Section 2B - Notice Of Issues Resolution

Section 2C - Written Notice By Drinking Water System Owner - Reporting RAA for THMs and HAAs

Section 3 - Adverse Analytical Results

## Notices of Adverse Test Results and Issue Resolution (Schedule 16)

Drinking Water Systems Regulation (O. Reg. 170/03)

Fields marked with an asterisk (\*) are mandatory.

### Section 2B – Notice of Issue Resolution – Section 16-9 (O. Reg. 170/03)

#### DWS Information

DWS Name *	Birr Limited Groundwater System	DWS Number *	220005492
------------	---------------------------------	--------------	-----------

#### DWS Contact Name

Last Name *	Tyler	First Name *	Jocelyn
-------------	-------	--------------	---------

Telephone Number (including area code) *	Fax Number (including area code)	Email Address
519-854-7639 ext.		tyler@middlesexcentre.ca

Initial AWQI Number <sup>1</sup> *	Date Resolved (yyyy/mm/dd) *	Date Resolution Notice Provided (yyyy/mm/dd) *
161979	2023/05/21	

Are there previous resample AWQI numbers? \*

Yes  No

If known, please provide All Other Resample AWQI numbers<sup>2</sup>

Summary of action taken and results achieved (include test results showing water quality is no longer adverse) \*  
 Flushed original sample location and two others for 0.5 hour, residual at plant was 0.84, creased dosage  
 sampled all three locations with residuals ranging between 0.74 and 0.90 mg/L  
 handed out boil water advisory as per O. reg 170/03 schedule 18-5  
 resampled all three locations 24 hours later with residuals ranging between 0.65 and 1.26 mg/L

Was an advisory issued by the Health Unit? *	Advisory Type	Date Issued (yyyy/mm/dd)
<input type="checkbox"/> Yes		
<input checked="" type="checkbox"/> No <input type="checkbox"/> Self Imposed Advisory		


If rescinded, please select date the advisory was rescinded

Date Rescinded (yyyy/mm/dd)

Other (Include Health Unit directions and any additional attachments)

Attached File Name	Created	Modified	Size (MB)	Remove Selected File
				<input type="checkbox"/>
			Number of attachments	0

Notification/Report Provided By

Last Name *	Tyler	First Name *	Jocelyn
Position *	Compliance Coordinator / Maintenance Operator		
Signature			Date (yyyy/mm/dd) *
			2023/05/21

## Additional Comments

Boil water advisory required by O. Reg 170/03 schedule 18-5 lifted. Notice attached.  
First and second resample draft reports attached.

Do you have another adverse to report?  Yes  No

<sup>1</sup> The original adverse test result.

<sup>2</sup> When resolving an AWQI state all resample AWQI numbers associated with the initial AWQI. For example, an adverse test result of total coliform requires the corrective action of resampling. If any of the resamples come back adverse, then you must continue resampling until the test results for two consecutive sets of samples taken 24 to 48 hours apart are clear or as directed by the Health Unit. Submit the AWQI form and include all related AWQI numbers (Initial AWQI number and any Resample AWQI number) on the same Section 2B. This eliminates the requirement to submit a Section 2B form for every adverse test result associated with one incident. If the first resample test result is clear then this section does not apply. For THMs and HAAs drinking water system owners/operators are not required to take resamples as part of the prescribed corrective actions; unless directed by the Health Unit.



SGS Canada Inc.  
657 Consortium Court  
London - Ontario - N6E 2S8  
Phone: 519-672-4500 FAX: 519-672-0361

**Mun of Middlesex Centre (Birr)**  
Attn : Brian Watson

10227 Ilderton Rd., Ilderton  
Canada, N0M 2A0  
Phone: 519-666-0190 ext 255, Fax:519-666-0271

Works #: 220005492

21-May-2023

Date Rec. : 20 May 2023  
LR Report: CA21182-MAY23

Copy: #1

# CERTIFICATE OF ANALYSIS

## DRAFT

Sample ID	Sample Date & Temperature		Field ResCl		Total		E.Coli Heterotrophic	
	Time	Upon Receipt °C	Free mg/L	Coliform cfu/100mL	cfu/100mL	Plate Count (HPC) cfu/1mL		
1: Analysis Start Date	---	---	---	---	20-May-23	20-May-23		
2: Analysis Start Time	---	---	---	---	13:20	13:20		
3: Analysis Completed Date	---	---	---	---				
4: Analysis Completed Time	---	---	---	---				
5: MAC	---	---	---	---	0	0		
6: RESAMPLE 1A0E6 DW Sample Station	19-May-23 19:27	6.0	0.63	0	0	0		
7: DW Blow off	19-May-23 20:23	6.0	1.26	0	0	0		
8: DW Distribution tap @plant	19-May-23 20:11	6.0	1.11.	0	0	0		

MAC - Maximum Acceptable Concentration

### Method Descriptions

Parameter	Description	SGS Method Code
E.Coli	E.Coli by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001
Heterotrophic Plate Count (HPC)	Heterotrophic Plate Count (HPC) by SP (using SPCA)	ME-CA-[ENV]MIC-LAK-AN-002
Total Coliform	Total Coliform by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001

Works #: 220005492

LR Report : CA21182-MAY23



SGS Canada Inc.  
657 Consortium Court  
London - Ontario - N6E 2S8  
Phone: 519-672-4500 FAX: 519-672-0361

---

*Angela Stott, B.Sc.  
Branch Manager-London  
Environment, Health & Safety*

Works #: 220005492

20-May-2023

Date Rec.: 19 May 2023  
LR Report: CA21157-MAY23

Copy: #1

**SGS Canada Inc.**  
657 Consortium Court  
London - Ontario - N6E 2S8  
Phone: 519-672-4500 FAX: 519-672-0361

**Mun of Middlesex Centre (Birr)**

Attn : Brian Watson

10227 Ilderton Rd.  
Ilderton, ON  
N0M 2A0, Canada

Phone: 519-666-0190 ext 255  
Fax: 519-666-0271

# CERTIFICATE OF ANALYSIS

## DRAFT

Sample ID	Sample Date & Temperature		Field ResCi		Total		E.Coli Heterotrophic	
	Time	Upon Receipt °C	Free mg/L	Coliform cfu/100mL	Coliform cfu/100mL	Plate Count (HPC) cfu/1mL	Plate Count (HPC) cfu/1mL	Plate Count (HPC) cfu/1mL
1: Analysis Start Date	---	---	---	19-May-23	19-May-23	19-May-23	19-May-23	19-May-23
2: Analysis Start Time	---	---	---	11:20	11:20	11:20	11:20	11:20
3: Analysis Completed Date	---	---	---	---	---	---	---	---
4: Analysis Completed Time	---	---	---	---	---	---	---	---
5: MAC	---	---	---	0	0	0	0	0
6: 1A0E6 DW 1A0E6 Sample Station	18-May-23	18:42	5.0	0.75	0	0	0	0
7: DW Blow Off	18-May-23	18:46	5.0	0.82	0	0	0	0
8: DW distribution tap @ plant	18-May-23	18:56	5.0	0.90	0	0	0	0

MAC - Maximum Acceptable Concentration

### Method Descriptions

Parameter	Description	SGS Method Code
E.Coli	E.Coli by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001
Heterotrophic Plate Count (HPC)	Heterotrophic Plate Count (HPC) by SP (using SPCA)	ME-CA-[ENV]MIC-LAK-AN-002
Total Coliform	Total Coliform by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001

Works #: 220005492

LR Report : CA21157-MAY23



SGS Canada Inc.  
657 Consortium Court  
London - Ontario - N6E 2S8  
Phone: 519-672-4500 FAX: 519-672-0361

---

*Angela Stott, B.Sc.  
Branch Manager-London  
Environment, Health & Safety*



MUNICIPALITY OF MIDDLESEX CENTRE  
10227 Ilderton Road, Ilderton, ON, N0M 2A0  
519-666-0190

## Attention: Birr Municipal Water Users

# CANCELLATION OF BOIL WATER NOTICE Sunday, May 21, 2023

---

**Please be advised that the Boil Water Advisory for the Birr Water System that was put in place on May 19, 2023, is now cancelled.**

Appropriate actions have been taken and follow-up bacteriological water results have been received indicating appropriate chlorine residual with zero presence of total coliform and E. Coli bacteria. The water is now SAFE TO DRINK.

It is recommended that all residents using this water system conduct the following prior to drinking the water:

- Run cold water from your faucets for one minute before using the water.
- Run your water softener through a regeneration cycle.
- Drain and refill hot-water heaters.
- Flush all garden hoses by running cold water through them for one minute.

Thank you for your cooperation and understanding during this temporary situation.

If you have any questions, please call the Middlesex Centre Public Works Department at 519-666-0190 ext. 5255, or if calling outside of business hours, our after-hours water emergency number (519-435-6434).

Sincerely,

Eric Joudrey, Manager of Water and Wastewater Operations



### Instructions

These Notice forms apply to drinking water system owners and operators (Owners/Operators) and Ministry of the Environment, Conservation and Parks (MECP) licensed laboratories (Licensed Laboratories) regulated by Drinking Water Systems Regulation, Ontario Regulation 170/03 (O. Reg. 170/03).

#### Immediate Report of Adverse Results

Section 16-3(3) of Schedule 16 of O. Reg. 170/03 sets out the requirements for Owners/Operators and Licensed Laboratories to make an immediate report of adverse test results under O. Reg. 170/03 by speaking in person or by telephone to the MECP's Spills Action Centre (SAC), at 1-800-268-6060 or 416-325-3000, the local Medical Officer of Health/Health Unit (Health Unit) and the Owner/Operator (Immediate Report).

[Adverse test results for trihalomethanes (THMs) or haloacetic acids (HAAs) do not require an Immediate Report; see section below.]

#### Written Notice within 24 hours of the Immediate Report

Within 24 hours of an Immediate Report, Section 16-7(3) of Schedule 16 requires that Owners/Operators and Licensed Laboratories also provide written notice to the MECP and the Health Unit, by fax or e-mail. Licensed Laboratories must complete and submit Sections 1 and 3 of this Notice. Owners/Operators must complete and submit Section 2A of this Notice. **Note:** Section 3 is not required to be completed for operational parameter incidents which have no correlating adverse results.

#### Notice Within 7 Days of Issue Resolution

Within 7 days after the issue has been resolved, Section 16-9(1) of Schedule 16 requires that Owners/Operators must provide a written notice, Section 2B of this Notice, to SAC and the Health Unit, summarizing the actions taken and the results achieved. This written notice must also be sent to the interested authority for any designated facility (if applicable) within 30 days.

Owners and Operators must follow any additional corrective actions required by the Health Unit.

#### Total Trihalomethanes (THMs) and Haloacetic Acids (HAAs)

As of January 2016 for THMs and January 2020 for HAAs, Sections 16-6 and 16-7 of Schedule 16 require that Owners/Operators and Licensed Laboratories calculate the running annual average (RAA) for THMs and HAAs and report any adverse test result in writing to the MECP and the Health Unit within 7 calendar days of the end of the calendar quarter that produced the adverse test result. The written notice is to be submitted using Section 2C of this Notice. RAA calculation is outlined in Schedule 13-6 of O. Reg. 170/03.

Immediate oral notification is no longer required for these parameters.

Licensed Laboratories that upload all the THM and HAA test results into the ministry's data system and provide the results to Owners/Operators within 48 hours of the test result being authorized at the laboratory, may be exempt from the RAA reporting requirements noted above.

**Note:** Small municipal residential systems and non-municipal year-round residential systems that serve designated facilities also must notify the operator of each designated facility served by their system.

The 'Trihalomethane and Haloacetic Acid Sampling and Reporting Requirements Technical Bulletin' provides full details on the changes to the reporting requirements and provides examples for calculating quarterly and running annual averages. The Technical Bulletin is available on the ministry's web page via the following link:

<https://www.ontario.ca/page/total-trihalomethane-thm-reporting-requirements-technical-bulletin>

Fields marked with an asterisk (\*) are mandatory.

SAC fax: 1-800-268-6061 or 416-325-3011

SAC e-mail: [AWQI.Reporting@ontario.ca](mailto:AWQI.Reporting@ontario.ca)

Provincial standards for water quality are set out in:

[Safe Drinking Water Act, 2002](#)

[Ontario Regulation 169/03 \(Water Quality Standards\)](#)

[Ontario Regulation 170/03 \(Drinking Water Systems\)](#)

Failure to notify these parties in accordance with the Regulation constitutes an offence under the *Safe Drinking Water Act*. A copy of this form may be acquired through the MECP public website ([www.ontario.ca/drinkingwater](http://www.ontario.ca/drinkingwater)) or by contacting any MECP office.

Collection of information on this form is done in accordance with the [Safe Drinking Water Act, 2002](#) and its Regulations. Information gathered herein, including personal information, is governed by the *Freedom of Information and Protection of Privacy Act (FIPPA)* and may be disclosed to other government agencies (including municipal health unit employees) pursuant to 'Section 42' of the FIPPA for the consistent purpose of administering any Act or program that pertains to drinking water safety. For questions and concerns, please contact the MECP at 1-866-793-2588.

---

Are you a \*

Licensed Laboratory  DWS

Which Section(s) of the Form do you need today?

Section 1 - Written Notice By Licensed Laboratory

Section 2A - Written Notice By Drinking Water System

Section 2B - Notice Of Issues Resolution

Section 2C - Written Notice By Drinking Water System Owner - Reporting RAA for THMs and HAAs

Section 3 - Adverse Analytical Results

Fields marked with an asterisk (\*) are mandatory.

### Section 2B – Notice of Issue Resolution – Section 16-9 (O. Reg. 170/03)

#### DWS Information

DWS Name *	Birr Limited Groundwater System	DWS Number *	220005492
------------	---------------------------------	--------------	-----------

#### DWS Contact Name

Last Name *	Tyler	First Name *	Jocelyn
-------------	-------	--------------	---------

Telephone Number (including area code) *	519-854-7639	Fax Number (including area code)		Email Address	Tyler@middlesexcentre.ca
--	--------------	----------------------------------	--	---------------	--------------------------

Initial AWQI Number <sup>1</sup> *	161979	Date Resolved (yyyy/mm/dd) *	2023/05/21	Date Resolution Notice Provided (yyyy/mm/dd) *	2023/05/21
------------------------------------	--------	------------------------------	------------	--	------------

Are there previous resample AWQI numbers? \*

Yes  No

If known, please provide All Other Resample AWQI numbers<sup>2</sup>

Summary of action taken and results achieved (include test results showing water quality is no longer adverse) \*

- received AWQI notification 2023/05/18
- Flushed original sample location and two others for 0.5 hours, residual leaving the plant was 0.84, increased dosage
- First set of samples taken:
  - Sample station (original sample point) - 18:42, 0.75 mg/L free chlorine
  - Blow off - 18:46, 0.82 mg/L free chlorine
  - Distribution tap @ plant - 18:56, 0.90 mg/L free chlorine
- Second set of samples taken after 24 hrs:
  - Sample station (original sample point) - 19:27, 0.63 mg/L free chlorine
  - Distribution tap @ plant - 20:11, 1.11 mg/L free chlorine
  - Blow off - 20:23, 1.26 mg/L free chlorine
- Boil water advisory was rescinded 2023/05/21 after draft reports for both sets of samples were received showing both set were free of EC and TC. (reports attached)
- Notices were handed out to residents on 2023/05/21 at approximately 12:30

Was an advisory issued by the Health Unit? *	Advisory Type	Date Issued (yyyy/mm/dd)
<input type="checkbox"/> Yes	Boil Water	2023/05/19
<input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> Self Imposed Advisory		

If rescinded, please select date the advisory was rescinded

Date Rescinded (yyyy/mm/dd)  
2023/05/21


Other (Include Health Unit directions and any additional attachments)

MLHU has been copied into all emails concerning this incident  
Eric Joudrey (Manager of Water/wastewater Operations spoke with James Adas, Public Health Inspector, Safe Water, Rabies and Vector Borne Disease with the MLHU to follow up regarding the email and no further actions are required

Attached File Name	Created	Modified	Size (MB)	Remove Selected File
				<input type="checkbox"/>

Fields marked with an asterisk (\*) are mandatory.

Section 2B continued

Attached File Name	Created	Modified	Size (MB)	Remove Selected File
		Number of attachments	0	
Notification/Report Provided By				
Last Name *		First Name *		
Tyler		Jocelyn		
Position *				
Compliance Coordinator / Maintenance Operator				
Signature			Date (yyyy/mm/dd) *	
			2023/05/23	

Additional Comments

This form is updated to include clarification on sampling conducted, including times and residuals, and health unit notification.

Do you have another adverse to report?  Yes  No

<sup>1</sup> The original adverse test result.

<sup>2</sup> When resolving an AWQI state all resample AWQI numbers associated with the initial AWQI. For example, an adverse test result of total coliform requires the corrective action of resampling. If any of the resamples come back adverse, then you must continue resampling until the test results for two consecutive sets of samples taken 24 to 48 hours apart are clear or as directed by the Health Unit. Submit the AWQI form and include all related AWQI numbers (Initial AWQI number and any Resample AWQI number) on the same Section 2B. This eliminates the requirement to submit a Section 2B form for every adverse test result associated with one incident. If the first resample test result is clear then this section does not apply. For THMs and HAAs drinking water system owners/operators are not required to take resamples as part of the prescribed corrective actions; unless directed by the Health Unit.

**SGS Canada Inc.**  
 657 Consortium Court  
 London - Ontario - N6E 2S8  
 Phone: 519-672-4500 FAX: 519-672-0361

23-May-2023

**Mun of Middlesex Centre (Birr)**

Attn : Brian Watson

Date Rec. : 19 May 2023  
 LR Report: CA21157-MAY23

10227 Ilderton Rd.  
 Ilderton, ON  
 N0M 2A0, Canada

Copy: #1

Phone: 519-666-0190 ext 255  
 Fax:519-666-0271

# CERTIFICATE OF ANALYSIS

## Final Report

Sample ID	Sample Date & Time	Temperature Upon Receipt °C	Field ResCl Free mg/L	Total Coliform cfu/100mL	E.Coli cfu/100mL	Heterotrophic Plate Count (HPC) cfu/1mL
1: Analysis Start Date		---	---	19-May-23	19-May-23	19-May-23
2: Analysis Start Time		---	---	11:20	11:20	10:20
3: Analysis Completed Date		---	---	23-May-23	23-May-23	23-May-23
4: Analysis Completed Time		---	---	11:23	11:23	11:23
5: MAC		---	---	0	0	---
6: RESAMPLE 1A0E6 DW 1A0E6 Sample Station	18-May-23 18:42	5.0	0.75	0	0	< 10
7: RESAMPLE DW Blow Off	18-May-23 18:46	5.0	0.82	0	0	---
8: RESAMPLE DW Distribution Tap @ Plant	18-May-23 18:56	5.0	0.90	0	0	---

MAC - Maximum Acceptable Concentration

### Method Descriptions

Units	Description	SGS Method Code
cfu/100mL	E.Coli by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001
cfu/1mL	Heterotrophic Plate Count (HPC) by SP (using SPCA)	ME-CA-[ENV]MIC-LAK-AN-002
cfu/100mL	Total Coliform by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001

  
**Cristal Schuster**  
 Project Specialist-London,  
 Environment, Health & Safety

**SGS Canada Inc.**  
 657 Consortium Court  
 London - Ontario - N6E 2S8  
 Phone: 519-672-4500 FAX: 519-672-0361

23-May-2023

**Mun of Middlesex Centre (Birr)**

Attn : Brian Watson

**Date Rec. :** 20 May 2023  
**LR Report:** CA21182-MAY23

10227 Ilderton Rd., Ilderton  
 Canada, N0M 2A0  
 Phone: 519-666-0190 ext 255, Fax:519-666-0271

**Copy:** #1

# CERTIFICATE OF ANALYSIS

## Final Report

Sample ID	Sample Date & Time	Temperature Upon Receipt °C	Field ResCl Free mg/L	Total Coliform cfu/100mL	E.Coli cfu/100mL	Heterotrophic Plate Count (HPC) cfu/1mL
1: Analysis Start Date		---	---	20-May-23	20-May-23	20-May-23
2: Analysis Start Time		---	---	13:20	13:20	13:00
3: Analysis Completed Date		---	---	23-May-23	23-May-23	23-May-23
4: Analysis Completed Time		---	---	12:42	12:42	12:42
5: MAC		---	---	0	0	---
6: RESAMPLE 1A0E6 DW 1A0E6 Sample Station	19-May-23 19:27	6.0	0.63	0	0	< 10
7: DW Blow off	19-May-23 20:23	6.0	1.26	0	0	---
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MAC - Maximum Acceptable Concentration

### Method Descriptions

Units	Description	SGS Method Code
cfu/100mL	E.Coli by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001
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cfu/100mL	Total Coliform by MF (using DCM)	ME-CA-[ENV]MIC-LAK-AN-001

  
**Cristal Schuster**  
 Project Specialist-London,  
 Environment, Health & Safety



MUNICIPALITY OF MIDDLESEX CENTRE  
10227 Ilderton Road, Ilderton, ON, N0M 2A0  
519-666-0190

## Attention: Birr Municipal Water Users

# CANCELLATION OF BOIL WATER NOTICE Sunday, May 21, 2023

---

**Please be advised that the Boil Water Advisory for the Birr Water System that was put in place on May 19, 2023, is now cancelled.**

Appropriate actions have been taken and follow-up bacteriological water results have been received indicating appropriate chlorine residual with zero presence of total coliform and E. Coli bacteria. The water is now SAFE TO DRINK.

It is recommended that all residents using this water system conduct the following prior to drinking the water:

- Run cold water from your faucets for one minute before using the water.
- Run your water softener through a regeneration cycle.
- Drain and refill hot-water heaters.
- Flush all garden hoses by running cold water through them for one minute.

Thank you for your cooperation and understanding during this temporary situation.

If you have any questions, please call the Middlesex Centre Public Works Department at 519-666-0190 ext. 5255, or if calling outside of business hours, our after-hours water emergency number (519-435-6434).

Sincerely,

Eric Joudrey, Manager of Water and Wastewater Operations



### Instructions

These Notice forms apply to drinking water system owners and operators (Owners/Operators) and Ministry of the Environment, Conservation and Parks (MECP) licensed laboratories (Licensed Laboratories) regulated by Drinking Water Systems Regulation, Ontario Regulation 170/03 (O. Reg. 170/03).

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[Adverse test results for trihalomethanes (THMs) or haloacetic acids (HAAs) do not require an Immediate Report; see section below.]

#### Written Notice within 24 hours of the Immediate Report

Within 24 hours of an Immediate Report, Section 16-7(3) of Schedule 16 requires that Owners/Operators and Licensed Laboratories also provide written notice to the MECP and the Health Unit, by fax or e-mail. Licensed Laboratories must complete and submit Sections 1 and 3 of this Notice. Owners/Operators must complete and submit Section 2A of this Notice. **Note:** Section 3 is not required to be completed for operational parameter incidents which have no correlating adverse results.

#### Notice Within 7 Days of Issue Resolution

Within 7 days after the issue has been resolved, Section 16-9(1) of Schedule 16 requires that Owners/Operators must provide a written notice, Section 2B of this Notice, to SAC and the Health Unit, summarizing the actions taken and the results achieved. This written notice must also be sent to the interested authority for any designated facility (if applicable) within 30 days.

Owners and Operators must follow any additional corrective actions required by the Health Unit.

#### Total Trihalomethanes (THMs) and Haloacetic Acids (HAAs)

As of January 2016 for THMs and January 2020 for HAAs, Sections 16-6 and 16-7 of Schedule 16 require that Owners/Operators and Licensed Laboratories calculate the running annual average (RAA) for THMs and HAAs and report any adverse test result in writing to the MECP and the Health Unit within 7 calendar days of the end of the calendar quarter that produced the adverse test result. The written notice is to be submitted using Section 2C of this Notice. RAA calculation is outlined in Schedule 13-6 of O. Reg. 170/03.

Immediate oral notification is no longer required for these parameters.

Licensed Laboratories that upload all the THM and HAA test results into the ministry's data system and provide the results to Owners/Operators within 48 hours of the test result being authorized at the laboratory, may be exempt from the RAA reporting requirements noted above.

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The 'Trihalomethane and Haloacetic Acid Sampling and Reporting Requirements Technical Bulletin' provides full details on the changes to the reporting requirements and provides examples for calculating quarterly and running annual averages. The Technical Bulletin is available on the ministry's web page via the following link:

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Fields marked with an asterisk (\*) are mandatory.

SAC fax: 1-800-268-6061 or 416-325-3011

SAC e-mail: [AWQI.Reporting@ontario.ca](mailto:AWQI.Reporting@ontario.ca)

Provincial standards for water quality are set out in:

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[Ontario Regulation 169/03 \(Water Quality Standards\)](#)

[Ontario Regulation 170/03 \(Drinking Water Systems\)](#)

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---

Are you a \*

Licensed Laboratory  DWS

Which Section(s) of the Form do you need today?

Section 1 - Written Notice By Licensed Laboratory

Section 2A - Written Notice By Drinking Water System

Section 2B - Notice Of Issues Resolution

Section 2C - Written Notice By Drinking Water System Owner - Reporting RAA for THMs and HAAs

Section 3 - Adverse Analytical Results

Fields marked with an asterisk (\*) are mandatory.

## Section 2A – Written Notice By Drinking Water System (DWS) Owner (For THM and HAA reporting see Section 2C)

### Indicators of Adverse Water Quality

AWQI Number \*

162389

Is this a resample? \*

Yes  No  Unknown If Yes, then provide initial AWQI number

### Indicator of Adverse Results

Microbiological \*  Chemical \*  Radiological \*  Operational \*  Licence/Order/Certificate Authority \*

Observations of Improperly disinfected water directed to water users

Low Distribution Chlorine \_\_\_\_\_ mg/L

High Turbidity \_\_\_\_\_ NTU

Other \_\_\_\_\_

### Details of Adverse Result \*

Chlorine residuals below CT value of 0.04 mg/L on July 2, 2023.

From 14:03 to 14:05 a volume of 0.11 m3 was discharged from the treatment facility with a residual of 0.03 mg/L and between 14:25 to 14:55 a volume of 0.26 m3 was discharged with residuals ranging from 0.02 - 0.03 mg/L.

Distribution residual did not go below 0.05 mg/L.

### DWS Information

DWS Name \*

Birr Drinking Water System

DWS Number \*

220005492

Last Name \*

Watson

First Name \*

Brian

Position \*

Water/Wastewater Operations Supervisor

Email Address

watson@middlesexcentre.on.ca

Telephone Number (including area code)

519-854-7618

ext.

Additional Comments

### Oral Notification to Health Unit - Person Contacted

Public Health Unit Name \*

London Middlesex Health Unit

Last Name \*

Garcha

First Name \*

Hargit

Position \*

Public Health Inspector

Telephone Number (including area code) \*

519-719-3128

ext.

Fax Number (including area code)

Date (yyyy/mm/dd) \*

2023/07/02

Time (hh:mm) \*

3:02 PM

Fields marked with an asterisk (\*) are mandatory.

Section 2A continued

DWS Person Providing Oral Notification *	Email Address
Brian Watson	watson@middlesexcentre.ca

**Corrective Actions to be Taken by Owner/Operator**

Corrective Actions	Required *	Completed	Comments
Resample and Test (including upstream, downstream and at AWQI location)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Disinfection Restored / Increased	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Mains / Pipes Flushed	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Signs Posted (Do Not Drink Water)	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Users Advised to Boil Water / Seek Alternate Source	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	

**Other** (Include any other Health Unit directions and any additional attachments)

Other:	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
--------	--	---	--

**Oral Notification to Spills Action Centre (SAC) - Person Contacted**

Last Name *	First Name *
McDonald	Haiden

Position \*  
Environmental Officer

DWS Person Providing Oral Notifying *	Date (yyyy/mm/dd) *	Time (hh:mm)*
Brian Watson	2023/07/02	2:33 PM

Initial DWS Notification Prepared by \*  
Brian Watson

Signature	Date (yyyy/mm/dd) *
Brian Watson	2023/07/03

Additional Comments

Do you have another adverse to report? \*  Yes  No





July 5, 2023

Ministry of the Environment, Conservation and Parks  
Southwest Region  
733 Exeter Road  
London ON, N6E 1L3  
[andrew.winkler@ontario.ca](mailto:andrew.winkler@ontario.ca)

**RE: Birr AWQI#162389 Summary Report**

---

Dear Andrew,

This report summarizes the AWQI event which occurred on July 2, 2023 at the Birr Drinking Water System.

9:24 – On-call Operator received low chlorine level alarm.

9:44 – OIC responded to a low chlorine alarm. The low level chlorine set point was 0.50 mg/L at this time.

9:44 to 11:30 – OIC increased chlorine dosage rate and began flushing while monitoring chlorine residuals. Flushing occurred from the discharge header within the plant, the sample station and the blow off.

11:30 – OIC found the cause of the event which was a cracked fitting on the chlorine injection line. The fitting is a ¼” ball valve used to isolate the line. The injection line along with the chlorine system in its entirety is inspected 3 times/weekly by operations staff.

Immediate response was turning off the well pump/chlorine pumps and to restore disinfection. A new ball valve was installed by 12:55 but during testing was found to be leaking. By 15:45 a new injection line was installed.

14:03 to 14:05 – 0.11 m3 of water was discharged below CT value of 0.04 mg/L

14:25 to 15:00 – 0.26 m3 of water was discharged below CT value of 0.04 mg/L

It's was determined that the chlorine residual did not drop below 0.05 mg/L in the distribution system by collecting the below samples:

Time	Location	Residual (mg/L)
------	----------	-----------------



10:22	Sample station	0.30
10:26	Blow off	1.20
14:03	Sample station	0.86
14:25	Blow off	0.73
15:28	Sample station	0.45
15:30	Blow off	0.61
17:27	Sample station	0.58
17:31	Blow off	0.68

Micro biological samples were collected at 14:03 from the sample station and 14:25 from the blow off. A draft lab report is attached with no hits of EC or TC. An additional micro sample was collected on July 4<sup>th</sup> at 9:06 from the sample station with lab analysis still in progress.

15:02 – ORO reported the incident to the Health Unit. No additional corrective actions were issued.

15:05 – Chlorine residuals started increasing.

15:32 – ORO provide an update to the Health Unit. No additional corrective actions were issued.

15:45 – New chlorine injection line was installed and disinfection restored.

To prevent future occurrences we will be installing a standby chlorine injection line which can easily be utilize if the duty injection line was to fail.

Also provided with this report are the log book entries, weekly inspection logs and continuous monitoring data.

Sincerely,



**Brian Watson**

Water/Wastewater Operations Supervisor

<http://middlesexcentre.ca> | [watson@middlesexcentre.ca](mailto:watson@middlesexcentre.ca)

22280 Komoka Road, RR#3 | Komoka, Ontario, N0L 1R0

C: 519.854.7618

Cc: Eric Joudrey, Operations Manager - Municipality of Middlesex Centre  
 Jocelyn Tyler, Water/Wastewater Operator / Compliance Coordinator



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**Instructions**

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These Notice forms apply to drinking water system owners and operators (Owners/Operators) and Ministry of the Environment, Conservation and Parks (MECP) licensed laboratories (Licensed Laboratories) regulated by Drinking Water Systems Regulation, Ontario Regulation 170/03 (O. Reg. 170/03).

**Immediate Report of Adverse Results**

Section 16-3(3) of Schedule 16 of O. Reg. 170/03 sets out the requirements for Owners/Operators and Licensed Laboratories to make an immediate report of adverse test results under O. Reg. 170/03 by speaking in person or by telephone to the MECP's Spills Action Centre (SAC), at 1-800-268-6060 or 416-325-3000, the local Medical Officer of Health/Health Unit (Health Unit) and the Owner/Operator (Immediate Report).

[Adverse test results for trihalomethanes (THMs) or haloacetic acids (HAAs) do not require an Immediate Report; see section below.]

**Written Notice within 24 hours of the Immediate Report**

Within 24 hours of an Immediate Report, Section 16-7(3) of Schedule 16 requires that Owners/Operators and Licensed Laboratories also provide written notice to the MECP and the Health Unit, by fax or e-mail. Licensed Laboratories must complete and submit Sections 1 and 3 of this Notice. Owners/Operators must complete and submit Section 2A of this Notice. **Note:** Section 3 is not required to be completed for operational parameter incidents which have no correlating adverse results.

**Notice Within 7 Days of Issue Resolution**

Within 7 days after the issue has been resolved, Section 16-9(1) of Schedule 16 requires that Owners/Operators must provide a written notice, Section 2B of this Notice, to SAC and the Health Unit, summarizing the actions taken and the results achieved. This written notice must also be sent to the interested authority for any designated facility (if applicable) within 30 days.

Owners and Operators must follow any additional corrective actions required by the Health Unit.

**Total Trihalomethanes (THMs) and Haloacetic Acids (HAAs)**

As of January 2016 for THMs and January 2020 for HAAs, Sections 16-6 and 16-7 of Schedule 16 require that Owners/Operators and Licensed Laboratories calculate the running annual average (RAA) for THMs and HAAs and report any adverse test result in writing to the MECP and the Health Unit within 7 calendar days of the end of the calendar quarter that produced the adverse test result. The written notice is to be submitted using Section 2C of this Notice. RAA calculation is outlined in Schedule 13-6 of O. Reg. 170/03.

Immediate oral notification is no longer required for these parameters.

Licensed Laboratories that upload all the THM and HAA test results into the ministry's data system and provide the results to Owners/Operators within 48 hours of the test result being authorized at the laboratory, may be exempt from the RAA reporting requirements noted above.

**Note:** Small municipal residential systems and non-municipal year-round residential systems that serve designated facilities also must notify the operator of each designated facility served by their system.

The 'Trihalomethane and Haloacetic Acid Sampling and Reporting Requirements Technical Bulletin' provides full details on the changes to the reporting requirements and provides examples for calculating quarterly and running annual averages. The Technical Bulletin is available on the ministry's web page via the following link:

<https://www.ontario.ca/page/total-trihalomethane-thm-reporting-requirements-technical-bulletin>



Fields marked with an asterisk (\*) are mandatory.

SAC fax: 1-800-268-6061 or 416-325-3011

SAC e-mail: [AWQI.Reporting@ontario.ca](mailto:AWQI.Reporting@ontario.ca)

Provincial standards for water quality are set out in:

Safe Drinking Water Act, 2002

Ontario Regulation 169/03 (Water Quality Standards)

Ontario Regulation 170/03 (Drinking Water Systems)

Failure to notify these parties in accordance with the Regulation constitutes an offence under the *Safe Drinking Water Act*. A copy of this form may be acquired through the MECP public website ([www.ontario.ca/drinkingwater](http://www.ontario.ca/drinkingwater)) or by contacting any MECP office.

Collection of information on this form is done in accordance with the Safe Drinking Water Act, 2002 and its Regulations. Information gathered herein, including personal information, is governed by the *Freedom of Information and Protection of Privacy Act* (FIPPA) and may be disclosed to other government agencies (including municipal health unit employees) pursuant to 'Section 42' of the FIPPA for the consistent purpose of administering any Act or program that pertains to drinking water safety. For questions and concerns, please contact the MECP at 1-866-793-2588.

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Are you a \*

Licensed Laboratory  DWS

Which Section(s) of the Form do you need today?

Section 1 - Written Notice By Licensed Laboratory

Section 2A - Written Notice By Drinking Water System

Section 2B - Notice Of Issues Resolution

Section 2C - Written Notice By Drinking Water System Owner - Reporting RAA for THMs and HAAs

Section 3 - Adverse Analytical Results

Fields marked with an asterisk (\*) are mandatory.

**Section 2B – Notice of Issue Resolution – Section 16-9 (O. Reg. 170/03)**

**DWS Information**

DWS Name * Birr Drinking Water System	DWS Number * 220005492
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DWS Contact Name

Last Name * Watson	First Name * Brian
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Telephone Number (including area code) * 519-854-7618 ext.	Fax Number (including area code)	Email Address watson@middlesexcentre.ca
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Initial AWQI Number <sup>1</sup> * 162389	Date Resolved (yyyy/mm/dd) * 2023/07/02	Date Resolution Notice Provided (yyyy/mm/dd) * 2023/07/07
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Are there previous resample AWQI numbers? \*

Yes  No

If known, please provide All Other Resample AWQI numbers<sup>2</sup>

Summary of action taken and results achieved (include test results showing water quality is no longer adverse) \*

Restored disinfection by installing a new chemical injection line and flushed watermain.

Collected micro bacteriological samples on July 2, 2023:

- 1) Sample station, 14:03, 0.86 mg/L free chlorine
- 2) Blow off, 14:25, 0.73 mg/L free chlorine

Collected additional micro bacteriological sample on July 4, 2023:

- 2) Blow off, 9:06, 0.58 mg/L free chlorine

Collected distribution free chlorine residuals:

- 10:22, Sample Station, 0.30 mg/L
- 10:26, Blow off, 1.20 mg/L
- 14:03, Sample station, 0.86 mg/L
- 14:25, Blow off, 0.73 mg/L
- 15:28, Sample station, 0.45 mg/L
- 15:30, Blow off, 0.61 mg/L
- 17:27, Sample station, 0.58 mg/L
- 17:31, Blow off, 0.68 mg/L

Was an advisory issued by the Health Unit? *	Advisory Type	Date Issued (yyyy/mm/dd)
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Self Imposed Advisory		

If rescinded, please select date the advisory was rescinded

Date Rescinded (yyyy/mm/dd)

Other (Include Health Unit directions and any additional attachments)

Fields marked with an asterisk (\*) are mandatory.

Section 2B continued

Attached File Name	Created	Modified	Size (MB)	Remove Selected File
				<input type="checkbox"/>
			Number of attachments	0

Notification/Report Provided By

Last Name \*

Watson

First Name \*

Brian

Position \*

Water/Wastewater Operations Supervisor

Signature



Date (yyyy/mm/dd) \*

2023/07/07

Additional Comments

Installed standby chlorine injection line on July 7, 2023

Do you have another adverse to report?  Yes  No

<sup>1</sup> The original adverse test result.

<sup>2</sup> When resolving an AWQI state all resample AWQI numbers associated with the initial AWQI. For example, an adverse test result of total coliform requires the corrective action of resampling. If any of the resamples come back adverse, then you must continue resampling until the test results for two consecutive sets of samples taken 24 to 48 hours apart are clear or as directed by the Health Unit. Submit the AWQI form and include all related AWQI numbers (Initial AWQI number and any Resample AWQI number) on the same Section 2B. This eliminates the requirement to submit a Section 2B form for every adverse test result associated with one incident. If the first resample test result is clear then this section does not apply. For THMs and HAAs drinking water system owners/operators are not required to take resamples as part of the prescribed corrective actions; unless directed by the Health Unit.

## **Appendix C**

### ***Drinking Water System Forms 2(A) & 2(B)***



**Retain Completed Form - Do Not Send to the Ministry**

**Part 1 - Drinking Water Works Permit Number**

(Insert the Drinking Water Works Permit number authorizing minor modifications or replacements to the Drinking Water System)  
052-204-Issue #4

**Part 2 - Description of Minor Modifications or Replacements (Use attachments if required)**

Birr Drinking Water System

Replaced existing chlorine injection line with schedule 80 PVC.

The description shall include:

- 1) An identification of the system component being modified or replaced;
- 2) The location of the works being modified or replaced; and
- 3) A brief description of the modification or replacement

**Part 3 - Verification by Owner**

I hereby verify that

- 1) The minor modifications or replacements described in Part 2 of this form meets the requirements of the conditions of the Drinking Water Works Permit identified in Part 1 of this form which authorizes the minor modifications or replacements; and
- 2) I am authorized by the owner to complete this verification.

Name of Owner <i>municipality of Middlesex Centre</i>	Name of Owner Representative <i>ERIC JORDREY</i>
Signature <i>[Signature]</i>	Date (yyyy/mm/dd) 2023/03/06

**Form 2 - Record of Minor  
Modifications or Replacements to the  
Drinking Water System****RETAIN COMPLETED FORM - DO NOT SEND TO MOE****Part 1 - Drinking Water Works Permit Number**

(Insert the Drinking Water Works Permit number authorizing minor modifications or replacements to the Drinking Water System)

052-204 Issue #4

**Part 2 - Description of Minor Modifications or Replacements (Use attachments if required)**

Birr Drinking Water System

Replaced existing Sample Station with like Sample Station on 18-Apr-23.

The description shall include:

- 1) An identification of the system component being modified or replaced;
- 2) The location of the works being modified or replaced; and
- 3) A brief description of the modification or replacement

**Part 3 - Verification by Owner**

I hereby verify that

- 1) The minor modifications or replacements described in Part 2 of this form meets the requirements of the conditions of the Drinking Water Works Permit identified in Part 1 of this form which authorizes the minor modifications or replacements; and
- 2) I am authorized by the owner to complete this verification.

Name of Owner (Print)	Name of Owner Representative (Print)
Municipality of Middlesex centre	Brian Watson
Signature	Date (yyyy/mm/dd)
<i>Brian Watson</i>	2023/04/20

**Form 2 - Record of Minor  
Modifications or Replacements to the  
Drinking Water System****RETAIN COMPLETED FORM - DO NOT SEND TO MOE****Part 1 - Drinking Water Works Permit Number**

(Insert the Drinking Water Works Permit number authorizing minor modifications or replacements to the Drinking Water System)

052-204 Issue#4

**Part 2 - Description of Minor Modifications or Replacements (Use attachments if required)**

Birr Drinking Water System

Replaced online Hach Turbidimeter 1720E Low Range with TU5300sc Online Laser Turbidimeter

The description shall include:

- 1) An identification of the system component being modified or replaced;
- 2) The location of the works being modified or replaced; and
- 3) A brief description of the modification or replacement

**Part 3 - Verification by Owner**

I hereby verify that

- 1) The minor modifications or replacements described in Part 2 of this form meets the requirements of the conditions of the Drinking Water Works Permit identified in Part 1 of this form which authorizes the minor modifications or replacements; and
- 2) I am authorized by the owner to complete this verification.

Name of Owner (Print) Municipality of Middlesex Centre	Name of Owner Representative (Print) Cromwell Damile
Signature <i>Brian Watson</i>	Date (yyyy/mm/dd) 2023/11/17