

## Ministry of the Environment, Conservation Ministère de l'Environnement, de la Protection de and Parks la nature et des Parcs

Drinking Water and Environmental Compliance Division, Northern Region Timmins District, North Bay Office 191 Booth Road, unit 16-17 North Bay ON P1A 4K3

North Bay ON P1A 4K3 Tel.: 705 497-6865 Fax: 705 497-6866 Division de la conformité en matière d'eau potable et d'environnement, Direction régionale du Nord District de Timmins, Bureau de North Bay 191, rue Booth, Unité 16-17

North Bay ON P1A 4K3 Tél.: 705 497-6865 Téléc.: 705 497-6866

August 9<sup>th</sup>, 2024

by Email

Don McArthur
Clerk Administrator
The Corporation of the Village of South River
63 Marie St.
South River, ON P0A 1X0

RE: Inspection of the South River Drinking Water System at 28 Howard St., South River, ON on June 25<sup>th</sup>, 2024 | Planned Event No. 1-328895948

Attached to this letter is the report for the recent announced inspection completed at the South River Drinking Water System at 28 Howard St., South River, ON on June 25<sup>th</sup>, 2024. The corresponding Incident Rating Report (IRR) and Risk Methodology document are to follow in a separate email. This report provides an assessment of compliance and conformance based on observations and information available during the inspection review period only.

#### CORRECTIVE ACTIONS

Instances of non-compliance and/or non-conformance were not identified during the inspection. There are no further actions required on your part and the inspection can be considered closed.

The IRR is a summarized quantitative measure of the drinking water system's annual inspections and is published in the Ministry's Chief Drinking Water Inspector's Annual Report. The Risk Methodology document describes the risk rating methodology which has been applied to the findings of the Ministry's municipal residential drinking water system inspection results.

If you have questions or concerns, please contact me by email at <a href="mailto:erin.spires@ontario.ca">erin.spires@ontario.ca</a> or by telephone at 705-358-1316.

Sincerely,

Erin Spires

Provincial Officer Badge #1540 and Water Compliance Officer Drinking Water and Environmental Compliance Division Ministry of the Environment, Conservation and Parks' North Bay Area Office

#### Attachments

CC:

S Maes, Chief Public Works Operator – Village of South River

J Gravelle, Process and Compliance Technician, Ontario Clean Water Agency (OCWA)

D Aljoe, Operator with Overall Responsibility, OCWA

P Dyrda, Senior Operations Manager, OCWA

S Ilersich, Water Compliance Supervisor, MECP- DWECD, Timmins/North Bay Office

A Belanger, District Manager (A) - Ministry of Natural Resources and Forestry - North Bay Office





SOUTH RIVER DRINKING WATER SYSTEM
Physical Address: 28 HOWARD ST, , SOUTH
RIVER, ON POA 1X0

## **INSPECTION REPORT**

System Number: 220013562

Entity: ONTARIO CLEAN WATER

**AGENCY** 

CORPORATION OF THE VILLAGE OF SOUTH RIVER

Inspection Start Date: June 11, 2024
Site Inspection Date: June 25, 2024
Inspection End Date: July 25, 2024

Inspected By: Erin Spires

Badge #: 1540

Inspected By: Sherry Ilersich

Badge #:

(signature)



#### INTRODUCTION

## **Purpose**

This announced, detailed inspection was conducted to confirm compliance with Ministry of the Environment, Conservation and Parks' (MECP) legislation and conformance with Ministry drinking water policies and guidelines.

## Scope

The ministry utilizes a comprehensive, multi-barrier approach in the inspection of water systems that focuses on the source, treatment, and distribution components as well as management and the operation of the system.

The inspection of the drinking water system included both the physical inspection of the component parts of the system listed in section 4 "Systems Components" of the report and the review of data and documents associated with the operation of the drinking water system during the review period.

This drinking water system is subject to the legislative requirements of the Safe Drinking Water Act, 2002 (SDWA) and regulations made therein, including Ontario Regulation 170/03, "Drinking Water Systems" (O. Reg. 170/03). This inspection has been conducted pursuant to Section 81 of the SDWA.

This inspection report does not suggest that all applicable legislation and regulations were evaluated. It remains the responsibility of the owner to ensure compliance with all applicable legislative and regulatory requirements.

## **Facility Contacts and Dates**

The drinking water system is owned by The Corporation of the Village of South River and operated by the Ontario Clean Water Agency.

The system serves an estimated population of 942 and is categorized as a Large Municipal Residential System.

Information reviewed for this inspection covered the time period of November 30th, 2023 to June 25th, 2024.

The water inspector and Drinking Water Assistant, Gursharan Kaur, met with Darren Aljoe (Operator with Overall Responsibility, OCWA) as part of the inspection process.

## **Systems/Components**

**Event Number:** 1-328895948 Page **2** of **36** 



All locations associated with primary disinfection were visited as part of this inspection. The following sites were visited as part of the inspection of the drinking water system:

## Forest Lake, South River:

- The intake facilities consist of a 300 mm diameter intake pipe extending 232 m into Forest Lake, with a flared elbow in a wooden and concrete crib located at a depth of 4.5 m. An isolation valve is located in the low lift pumping station (LLPS). Two plastic, 15 mm lines (unused) reportedly run from the LLPS to the intake, one for pre-chlorination for zebra muscle control (with diffuser) and the second for raw water sampling.
- The LLPS is located approximately 170 m south of the eastern end of Howard Street, at the south end of Tom Thomson Lane. The locked, entry alarmed building contains a 4.2 m deep raw water well, dual manual screens which separate the low lift intake well and the low lift pump well. There are continuous level monitors trended to the Sensory Control and Data Acquisition (SCADA) system at the water treatment plant (WTP) on either side of the screens. There are three submersible electric-driven low lift pumps (LLPs), each rated at 10 L/s, which typically operate automatically (manual control is possible) and sequentially in response to clearwell level sensors. Each LLP discharge is equipped with backflow prevention and manual valves. A low lift pressure control valve will return water to the intake pipe if there is too much pressure in the raw water main to the WTP. The LLPs will lock-out on a low level alarm from the low lift pump well level switch.
- The raw watermain to the WTP is 200 mm diameter stainless steel with an isolation valve at the LLPS discharge point. It runs approximately 400 m subsurface to the WTP. At the WTP inlet, there is a continuously monitored magnetic flow meter, a mechanical control valve, a raw water sample tap, and a supply line feeding the raw water turbidity analyzer and pH meter, both continuously monitored through SCADA.

#### Chemical Addition Systems:

## Coagulant System

Polyaluminum chloride (coagulant) is fed into the raw water header prior to the in-line mixer. There are two metering pumps (one duty and one standby) each rated at approximately 30 L/hr. There is an 11 500 L polyethylene bulk storage tank which is filled from the exterior of the plant by tanker and which is vented to the exterior of the WTP. A transfer pump, drawing from the bulk tank and controlled by a float switch in the adjacent, 450 L day tank, maintains solution level in the day tank. Coagulant is fed continuously while the SCADA system registers raw water flows. A failure of this system will shut-down water production at the WTP.

- pH and Alkalinity Adjustment System

**Event Number:** 1-328895948 Page **3** of **36** 



Soda ash is fed into the raw water header prior to the in-line mixer and the HLPW discharge. There is a 1350 L storage tank. The pre-pH chemical pump is rated at 30 L/hr and triggered by raw water flows. The post-pH chemical pump is rated at 60 L/hr and is triggered by treated water flows.

- Iron and Manganese Control System:

Currently feeding potassium permanganate into the raw water header prior to the in-line mixer with a pre-oxidation chemical pump rated at 30 L/hr. The 1 350 L storage tank has an in-tank mixer. Chemical is fed continuously while the SCADA system registers raw water flows. The filter backwash greensand regeneration pump is rated at 120 L/hr.

- Sodium Hypochlorite Feed System - Primary and Secondary Disinfection

Each package plant has a dedicated sodium hypochlorite pump rated at 30 L/hr. Chemical is fed continuously to the filter effluent line while the SCADA system registers raw water flows. A failure of both pumps will lock-out the LLPs and stop water production.

South River Water Treatment Plant:

- Treatment consists of chemical addition, coagulation, flocculation, sedimentation, filtration and disinfection by chlorination with contact time. The WTP has a rated capacity of 1 680 m3/day. All of the processes are completed within the enclosed WTP building located at 28 Howard Street, the Village of South River, District of Parry Sound, Ontario.
- Raw water passes the raw water analyzers and is injected with potassium permanganate (iron and manganese control by oxidation/precipitation), sodium carbonate (soda ash for elevation of pH) and polyaluminum chloride (coagulant). These chemical feeds are triggered by raw water flows and are flow paced. After chemical injection and prior to entering the package plants the water passes through an in-line mixer.
- A coagulant feed failure will lock-out the LLPs and effectively stop treatment.
- Water is directed equally into two Napier Reid package treatment plants via individual headers and automated valves (plants can operate individually).
- Within each plant, water flows into flocculation tanks, each equipped with a flash mixer, vertical flocculator and a floc recirculator. The flocculation tanks provide 30 minutes detention time.
- Continuous pH monitoring is completed within the mixing/flocculation chamber. An unused pH analyzer is also located at each package plant inlet.

**Event Number:** 1-328895948 Page **4** of **36** 



- Following flocculation, the water flows into two semi-circular settling/clarification chambers. Each chamber has level monitoring, inclined tube settlers, 150 mm inlet piping and 150 mm sludge collection and recirculation headers. Each tank is designed for an overflow rate of 2.4 m/hour. Settled sludge is drawn down via an automated valve to the backwash clarification tank.
- The clarified water overflows from the tube settlers in the clarifiers into gravity fed, individual multi-media filters consisting of garnet, silica sand, greensand and granulated activated carbon (GAC) with gravel underlayers. There is continuous level monitoring on the surface of each filter. Continuous turbidity monitoring is completed on each filter effluent line with programmable LLP lock-outs on high/high alarm set point for the affected plant(s) to stop water production. Continuous flow monitoring is also completed on each filter effluent line.
- Filter backwashes are triggered on programmed pass-through volume (typical), time, filtered water turbidity and/or head-loss pressure monitoring. Backwashes are completed using chlorinated water from the clearwells via two submersible, 15 HP pumps. Each backwash line has continuous flow monitoring, automated valving and backflow prevention.
- Filter-to-waste is completed during filter ripening. Backwash water is directed to the backwash effluent handling system (backwash clarification tank).
- Filtered water is directed into a common header and injected with a 6% sodium hypochlorite solution for primary and secondary disinfection. There is a pre-chlorine analzyer used for continuous monitoring. The header splits and chlorinated water is directed equally (typical, but manual valving exists to isolate individual cells) into a two celled (each with a capacity of 573 m3), baffled, clearwells. Each cell is equipped with continuous level monitoring (controls LLPs), low level lock-outs for emergency low levels and valved lines feeding the high lift pump well by gravity and high lift pump (HLP) draw down. Overflows are directed to the roadside ditch.
- The high lift pump well has an estimated capacity of 140 m3. Six (6) vertical turbine HLPs (two rated at 7 L/s at 45 m total dynamic head (TDH) with 5.6 kW motors; two rated at 14 L/s at 45 m TDH with 11.2 kW motors; and two fire pumps rated at 56 L/s at 38 m TDH with 22 kW motors) are situated above and draw from this tank (sequential starts on system pressure monitoring set points). These pumps direct treated water to the common discharge header which is equipped with a post-contact sodium hypochlorite injection point, a sodium carbonate injection point (post treatment pH adjustment), a continuously monitored treated water turbidity analyzer, a treated water/distributed water continuously monitored magnetic flow meter, continuous distribution system /treated water discharge pressure monitoring, continuous treated water pH monitoring, a plant supply line with flow monitoring and backflow prevention, and, a continuously monitored treated water free chlorine residual analyzer.
- The SCADA system continuously collects and monitors information from instruments and

**Event Number:** 1-328895948 Page **5** of **36** 



sensor throughout the works and automatically controls plant processes and generates alarms.

- There is an on-site septic system

## South River Distribution System:

The South River distribution system supplies approximately 1100 consumers. It is classified as a Class I Water Distribution Subsystem (#1497). As of December 2021, there were 508 total service connections: 454 residential and multiresidential services; 38 commercial connections (mix of commercial, industrial and institutional); and 16 separate residential services in Machar Township fed from a watermain in South River Village.

- There are 30 customers who do not receive water, but who are billed for fire protection.
- The distribution system infrastructure consists of a mixture of cast iron, ductile iron, asbestos and PVC piping ranging in diameter from 300 mm down to 50 mm.
- There are approximately 13 km of distribution watermains.
- There are 11 dead end locations, approximately 60 main valves and 66 fire hydrants.

#### Stand-by Power Generator:

- Emergency backup power is provided by a 135 kW radiator cooled diesel generator housed in a separate building. The fuel is contained in a double walled external storage tank. The generator is programmed for automatic starts and stops on power interruptions and restoration. It is monitored and alarmed for operational parameters.

## Wastewater Treatment System:

The South River Water Treatment Plant Process generates wastewater through filter backwashing and clarifier blowdown to remove sludge.

- Filter backwash water is directed to the clarification tank. The supernatant from the clarification tank is decanted and discharged to a storm sewer which discharges to the lake. The settled solids from the clarification tank are pumped to the sludge holding tank.
- Clarifier blow-down is directed to the wastewater surge tank. Supernatant from the wastewater surge tank is directed to the clarification tank, while the settled solids are directed to the sludge holding tank.
- The sludge holding tank receives settled solids from both the clarification tank and the waste surge tank. Supernatant from the sludge holding tank is directed to the clarification tank. The settled solids from the sludge holding tank are pumped to the sludge bagging system 3-5 times/week for disposal at Machar Township Landfill.
- There are two process wastewater polymer systems; one system consists of a storage tank, mechanical mixer, and a single metering pump that injects polymer into the package plant waste effluent line (common pipe for both clarifier blowdown and filter backwash water). The second system forms part of the twelve (12) bag sludge dewatering system.

**Event Number:** 1-328895948 Page **6** of **36** 



## **Permissions/Approvals**

This drinking water system was subject to specific conditions contained within the following permissions and/or approvals (please note this list is not exhaustive) at the time of the inspection in addition to the requirements of the SDWA and its regulations:

- Drinking Water Works Permit No. 200-201, Issue No. 4, dated January 15th, 2021 (Permit),
- Municipal Drinking Water Licence No. 200-101, Issue No. 4, dated January 15th, 2021 (Licence),
- Permit to Take Water No. 4340-BA6RUQ dated March 14th, 2019, and;
- Previous ministry inspection reports dated January 18th, 2024 and September 21st, 2022.

**Event Number:** 1-328895948 Page **7** of **36** 



#### NON-COMPLIANCE

This should not be construed as a confirmation of full compliance with all potential applicable legal requirements. These inspection findings are limited to the components and/or activities that were assessed, and the legislative framework(s) that were applied. It remains the responsibility of the owner to ensure compliance with all applicable legislative and regulatory requirements.

If you have any questions related to this inspection, please contact the signed Provincial Officer.

**Event Number:** 1-328895948 Page **8** of **36** 



#### RECOMMENDATIONS

This should not be construed as a confirmation of full conformance with all potential applicable BMPs. These inspection findings are limited to the components and/or activities that were assessed, and the legislative framework(s) that were applied. It remains the responsibility of the owner to ensure compliance with all applicable legislative and regulatory requirements.

If you have any questions related to this inspection, please contact the signed Provincial Officer.

**Event Number:** 1-328895948 Page **9** of **36** 



#### **INSPECTION DETAILS**

This section includes all questions that were assessed during the inspection.

Ministry Program: DRINKING WATER | Regulated Activity: DW Municipal Residential

Question ID	DWMR1012001	Question Type	Legislative
Legislative Ro	equirement(s): 1);		

#### Question:

Did the owner have a harmful algal bloom monitoring plan in place that met the requirements of the Municipal Drinking Water Licence?

## **Compliance Response(s)/Corrective Action(s)/Observation(s):**

The owner had a harmful algal bloom monitoring plan in place which met the requirements.

Condition 6 of Schedule C of the Licence requires that the owner shall develop and keep up to date a Harmful Algal Bloom (HAB) monitoring, reporting, and sampling plan to be implemented when a potential harmful algal bloom is suspected or present.

A review of the Operations and Maintenance Manuals indicate that there is a Standard Operating Procedure for Responding to a Blue-Green Algae Bloom (dated March 29th, 2023).

A review of the certificates of analysis indicate that weekly raw water samples were taken and tested for microcystins on June 3rd, 2024, June 10th, 2024, and June 24th, 2024 (<0.1 ug/L <MDL).

A review of the elogbook indicates that weekly monitoring of the source occurred in June 2024.

Question ID DWMR1010001	Question Type	BMP
Legislative Requirement(s): Not Applicable		
Question: Were trends in source water quality monitored?		

## **Compliance Response(s)/Corrective Action(s)/Observation(s):**

Trends in source water quality were monitored.

The operating authority and round sheets for the inspection period indicate that trends in source water quality are monitored weekly for turbidity, pH, colour, iron, and manganese.

**Event Number:** 1-328895948 Page **10** of **36** 



Question ID DWMR1014001 Question Type Legislative

## Legislative Requirement(s):

SDWA | 31 | (1);

#### Question:

Was flow monitoring performed as required by the Municipal Drinking Water Licence or Drinking Water Works Permit?

## **Compliance Response(s)/Corrective Action(s)/Observation(s):**

Flow monitoring was performed as required.

Condition 2 of Schedule C of the Licence requires continuous flow measurement and recording for the flow rate and daily volume of: treated water that flows from the treatment subsystem to the distribution system, and water that flows into the treatment subsystem.

Question IDDWMR1015001Question TypeLegislative

## Legislative Requirement(s):

SDWA | 31 | (1);

#### Question:

Were flow measuring devices calibrated or verified in accordance with the requirements of the Municipal Drinking Water Licence?

### **Compliance Response(s)/Corrective Action(s)/Observation(s):**

Flow measuring devices were calibrated or verified as required.

Condition 3.2 of Schedule C of the Licence specifies that all flow measuring devices required by the Licence shall be checked and where necessary calibrated at least once every 12 months during which the drinking water system is in operation.

A review of the calibration/verification records indicates that the raw water flowmeter and treated water flowmeter were verified on August 30th, 2023.

Question IDDWMR1016001Question TypeLegislative

## Legislative Requirement(s):

SDWA | 31 | (1);

#### Question:

Was the owner in compliance with the conditions associated with maximum flow rate or the rated/operational capacity in the Municipal Drinking Water Licence?

## **Compliance Response(s)/Corrective Action(s)/Observation(s):**

The owner was in compliance with the conditions associated with maximum flow rate and/or the rated/operational capacity conditions.

Condition 1.1 of Schedule C of the Licence specifies the rated capacity as 1 680 m3/day of treated water that flows from the treatment subsystem to the distribution system.

**Event Number:** 1-328895948 Page **11** of **36** 



A review of the monthly summary data provided for the inspection period indicates that the maximum daily treated water volume was 743.25 m3/day in April 2024.

Question ID	DWMR1013001	Question Type	Legislative
Legislative R	equirement(s):		

OWRA | 34 | (3);

#### Question:

Was the owner in compliance with all conditions of the Permit To Take Water?

### Compliance Response(s)/Corrective Action(s)/Observation(s):

The owner was in compliance with all conditions of the Permit To Take Water.

Condition 3.2 of Permit To Take Water No. 4340-BA6RUQ states that the Corporation of the Village of South River shall only take water from Forest Lake for municipal water supply at a maximum rate of 1 160 L/min (19.33 L/sec) and 1 680 m3/day.

A review of the monthly summary data provided for the inspection period indicates that the maximum daily raw water flow into the treatment plant was 994.13 m3/day and 14.37 L/sec in April 2024.

Question ID	DWMR1018001	Question Type	Legislative
Legislative R	equirement(s):		

SDWA | 31 | (1);

#### Question:

Did the owner ensure that equipment was installed in accordance with Schedule A and Schedule C of the Drinking Water Works Permit?

## Compliance Response(s)/Corrective Action(s)/Observation(s):

The owner ensured that equipment was installed as required.

Question ID DWMR1021001 Legislative **Question Type** Legislative Requirement(s):

SDWA | 31 | (1);

## Question:

Were Form 2 documents prepared as required?

## Compliance Response(s)/Corrective Action(s)/Observation(s):

Form 2 documents were prepared as required.

Condition 4.6.1 of Schedule B of the Permit requires any alteration by modifying or replacing instrumentation and controls shall be recorded on Form 2 – Record of Minor Modifications or

**Event Number:** 1-328895948 Page **12** of **36** 



Replacements to the Drinking Water System.

There were two Form 2's for the inspection period on December 1st, 2023 (replacement of the free chlorine analyzer with a new Swan AMI Trides analyzer), and on February 12th, 2024 for replacing the POE chlorine analyzer's sampling line and equipping with a cartridge filter.

Question ID	DWMR1028001	Question Type	Legislative	
Legislative Requirement(s):				
SDWA   31   (1);				

#### Question:

Were up-to-date plans for the drinking water system made available in such a manner that they could be readily viewed by all persons responsible for all or part of the operation of the drinking water system, in accordance with the Drinking Water Works Permit and Municipal Drinking Water Licence?

## **Compliance Response(s)/Corrective Action(s)/Observation(s):**

Plans for the drinking water system were kept up-to-date and made available as required.

Question ID	DWMR1025001	Question Type	Legislative
Legislative R SDWA   31   (	equirement(s): 1);		

#### Question:

Were all parts of the drinking water system that came in contact with drinking water disinfected in accordance with a procedure listed in Schedule B of the Drinking Water Works Permit?

## **Compliance Response(s)/Corrective Action(s)/Observation(s):**

All parts of the drinking water system were disinfected as required.

Condition 2.3 of Schedule B of the Permit requires that all parts of the drinking water system in contact with drinking water that are added, modified, replaced, or extended shall be disinfected in accordance with the ministry's AWWA C652 – Standard for Disinfection of Water-Storage Facilities.

Section 4.4.4 of C652 specifies that the utility shall establish the chlorine residual and turbidity in the reservoir water before entering it.

Section 4.4.6 of C652 specifies that all equipment and personnel that will enter the waterstorage facility must be disinfected immediately prior to entry into the potable-water reservoir. The method of equipment disinfection can be sprayed with disinfectant solution of at least 200 mg/L available chlorine applied directly to any surfaces that come in contact with water.

**Event Number:** 1-328895948 Page **13** of **36** 



A review of the elogbooks for the inspection period indicates that on December 18th, 2023 the clearwell inspection was completed and the equipment was disinfected with 3% solution of sodium hypochlorite. The clearwell inspection was conducted while the system was online. Free chlorine residuals and turbidity were measured in the water entering and exiting the clearwells.

Bacteriological samples were taken on December 19th, 2023 (the day after the clearwell inspection) from the treated water sample location and tested for E.coli, total coliforms and heterotrophic plate count.

Note: The ministry's Environmental Assessment and Permissions Division indicated that the clearwell was not removed from service so microbiological samples are not required as no cleaning or isolation, or disturbing tank bottom sediment took place which could cause contamination.

Condition 1.3 of the Watermain Disinfection Procedure (August 2020) identifies that, for swabbing, the system can be returned to normal service after an acceptable disinfectant concentration is achieved at the point of flushing.

A review of the elogbook indicates that the watermains were swabbed on April 16th, 2024.

Question ID	DWMR1023001	Question Type	Legislative
-------------	-------------	---------------	-------------

## Legislative Requirement(s):

SDWA | O. Reg. 170/03 | 1-2 | (2);

#### Question:

Did records indicate that the treatment equipment was operated in a manner that achieved the design capabilities prescribed by O. Reg. 170/03, Drinking Water Works Permit and/or Municipal Drinking Water Licence at all times that water was being supplied to consumers?

## Compliance Response(s)/Corrective Action(s)/Observation(s):

Records indicated that the treatment equipment was operated in a manner that achieved the design capabilities prescribed.

The Procedure for Disinfection of Drinking Water in Ontario requires the treatment process of surface water to consist of chemically assisted filtration and disinfection and achieve an overall performance that provides (at a minimum) 2-log (99%) removal or inactivation of Cryptosporidium oocysts, a 3-log (99.9%) removal or inactivation of Giardia cysts, and a 4-log (99.99%) removal or inactivation of viruses prior to the first consumer. In addition, at least 0.5-log removal or inactivation of Giardia cysts and a 2-log removal or inactivation of viruses must be provided through disinfection.

#### Conventional Filtration

Conventional filtration provides 2 log inactivation credit for Cryptosporidium oocyts, 2.5 log inactivation credits for Giardia cysts, and 2 log removal credit for viruses when:

**Event Number:** 1-328895948 Page **14** of **36** 



- 1. A chemical coagulant is used at all times when the treatment plant is in operation.
- 2. Chemical dosages are monitored and adjusted in response to variations in raw water quality.
- 3. Effective backwash procedures, including the filter-to-waste, to ensure that the effluent turbidity requirements are met at all times.
- 4. Filtrate turbidity is continuously monitored from each filter, and;
- 5. Performance Criterion for filtered water turbidity of less than or equal to 0.3 NTU in 95% of the measurements each month shall be met for each filter.

#### Chlorination

Chlorination is required to provide the remaining 0.5 log inactivation credit for Giardia Cysts and 2 log inactivation credits for viruses.

The Standard Operating Procedure (SOP) for CT (Chlorine Concentration x Time) at the South River Drinking Water System, dated December 2nd, 2022, indicates that a CT of 61.51 mg/L\*min would be achieved under the following worst-case conditions:

- Free chlorine residual below: 1.25 mg/L
- Treated flow above: 85 L/sec
- Clearwell level of 1.75 m
- pH above 8

A review of the monthly filter performance sheets, continuous trends, and wonderware summary sheets and elogbooks for the inspection period indicates that primary disinfection was achieved.

Question ID	DWMR1027001	<b>Question Type</b>	Legislative
Legislative Requirement(s): SDWA   31   (1);			

#### Question:

Did the owner have evidence indicating that chemicals and materials that came in contact with water within the drinking water system met all applicable AWWA and ANSI standards in accordance with the Municipal Drinking Water Licence and Drinking Water Works Permit?

## Compliance Response(s)/Corrective Action(s)/Observation(s):

The owner had evidence indicating that chemicals and materials that came in contact with water within the drinking water system met the applicable standards.

**Event Number:** 1-328895948 Page **15** of **36** 



Question ID DWMR1024001 Question Type Legislative

## Legislative Requirement(s):

SDWA | O. Reg. 170/03 | 1-2 | (2);

#### Question:

Did records confirm that the water treatment equipment which provides chlorination or chloramination for secondary disinfection was operated as required?

## **Compliance Response(s)/Corrective Action(s)/Observation(s):**

Records confirmed that the water treatment equipment which provides chlorination or chloramination for secondary disinfection was operated as required.

A review of the South River Distribution System sheets for the inspection period indicates that the lowest free chlorine residual occurred on December 7th, 2023 at 0.84 mg/L.

Question IDDWMR1033001Question TypeLegislative

## Legislative Requirement(s):

SDWA | O. Reg. 170/03 | 7-2 | (3); SDWA | O. Reg. 170/03 | 7-2 | (4);

#### Question:

Was secondary disinfectant residual tested as required for the large municipal residential distribution system?

## **Compliance Response(s)/Corrective Action(s)/Observation(s):**

Secondary disinfectant residual was tested as required.

Question ID DWMR1049001 Question Type BMP

## Legislative Requirement(s):

Not Applicable

#### Question:

Did records confirm that disinfectant residuals were routinely checked at the extremities and dead ends of the distribution system?

## **Compliance Response(s)/Corrective Action(s)/Observation(s):**

Records confirmed that disinfectant residuals were routinely checked at the extremities and dead ends of the distribution system.

 Question ID
 DWMR1036001

 Question Type
 Legislative

## Legislative Requirement(s):

SDWA | O. Reg. 170/03 | 6-7 | (1);

#### Question:

Where continuous monitoring equipment was not used for chlorine residual analysis, were

**Event Number:** 1-328895948 Page **16** of **36** 



samples tested using an acceptable portable device?

## **Compliance Response(s)/Corrective Action(s)/Observation(s):**

Samples for chlorine residual analysis were tested using an acceptable portable device.

The operator uses a HACH DR300 to measure free chlorine residuals.

<b>Question ID</b>	DWMR1030001	Question Type	Legislative
--------------------	-------------	---------------	-------------

## Legislative Requirement(s):

SDWA | O. Reg. 170/03 | 7-2 | (1); SDWA | O. Reg. 170/03 | 7-2 | (2);

#### Question:

Was primary disinfection chlorine monitoring being conducted at a location approved by Municipal Drinking Water Licence and/or Drinking Water Works Permit or at/near a location where the intended CT had just been achieved?

## **Compliance Response(s)/Corrective Action(s)/Observation(s):**

Primary disinfection chlorine monitoring was conducted as required.

The POE chlorine analyzer is located at the high lift header at the point of entry of treated water into the distribution system and is used to confirm that the intended CT has been achieved.

Question ID	DWMR1031001	Question Type	BMP

#### Legislative Requirement(s):

Not Applicable

#### Question:

Were operators aware of the operational criteria necessary to achieve primary disinfection within the drinking water system?

## **Compliance Response(s)/Corrective Action(s)/Observation(s):**

Operators were aware of the operational criteria necessary to achieve primary disinfection within the drinking water system.

<b>Question ID</b>	DWMR1032001	Question Type	Legislative
•	<b>equirement(s):</b> eg. 170/03   7-3   (2);		

#### Question:

If the drinking water system obtained water from a surface water source and provided filtration, was continuous monitoring of each filter effluent line performed for turbidity?

**Event Number:** 1-328895948 Page **17** of **36** 



## Compliance Response(s)/Corrective Action(s)/Observation(s):

Continuous monitoring of each filter effluent line was performed for turbidity.

Question ID DW	MR1035001	<b>Question Type</b>	Legislative
----------------	-----------	----------------------	-------------

#### Legislative Requirement(s):

SDWA | O. Reg. 170/03 | 6-5 | (1)1-4;

#### Question:

Were operators examining continuous monitoring test results and did they examine the results within 72 hours of the test?

## Compliance Response(s)/Corrective Action(s)/Observation(s):

Operators were examining continuous monitoring test results as required.

<b>Question ID</b>	DWMR1038001	Question Type	Legislative
--------------------	-------------	---------------	-------------

#### **Legislative Requirement(s):**

SDWA | O. Reg. 170/03 | 6-5 | (1)1-4;

#### Question:

Was continuous monitoring equipment that was being utilized to fulfill O. Reg. 170/03 requirements performing tests for the parameters with at least the minimum frequency and recording data with the prescribed format?

## **Compliance Response(s)/Corrective Action(s)/Observation(s):**

Continuous monitoring equipment that was being utilized to fulfill O. Reg. 170/03 requirements was performing tests for the parameters with at least the minimum frequency and recording data with the prescribed format.

## Question IDDWMR1037001Question TypeLegislative

## Legislative Requirement(s):

SDWA | O. Reg. 170/03 | 6-5 | (1)5-10; SDWA | O. Reg. 170/03 | 6-5 | (1.1);

#### Question:

Were all continuous monitoring equipment utilized for sampling and testing required by O. Reg. 170/03, or Municipal Drinking Water Licence or Drinking Water Works Permit or order, equipped with alarms or shut-off mechanisms that satisfied the standards described in Schedule 6?

## **Compliance Response(s)/Corrective Action(s)/Observation(s):**

All required continuous monitoring equipment utilized for sampling and testing were equipped with alarms or shut-off mechanisms that satisfied the standards

**Event Number:** 1-328895948 Page **18** of **36** 



Section 5-1(1.1)1 of Schedule 6 of O. Reg. 170/03 requires that continuous monitoring equipment must cause an alarm to signal immediately at a location where the equipment conducts tests and at a location where a person is present, if the equipment malfunctions, loses power, or a test result for a free chlorine residual is below the minimum alarm standard.

Section 6-5(1)5 of Schedule 6 of O. Reg. 170/03 requires that continuous monitoring equipment must be designed and operated so that no water is directed to users in the event that the equipment malfunctions, loses power, or if the filter effluent turbidity exceeds 1 NTU, and a qualified person takes appropriate action before water is directed to users.

The filter effluent turbidity analyzers are equipped with multiple alarms. There is an alarm through WIN that will call out, without delay, at 0.15 NTU. The SCADA alarm set point is 0.4 NTU (with a 30 second delay). The package plant shutdown is triggered when filter effluent turbidity reaches 1 NTU (without delay).

The clearwells have low level alarms set at 3.1 m.

The finished free chlorine residual alarm is set at 1.85 mg/L.

Question ID	DWMR1040001	Question Type	Legislative
-------------	-------------	---------------	-------------

#### Legislative Requirement(s):

SDWA | O. Reg. 170/03 | 6-5 | (1)1-4; SDWA | O. Reg. 170/03 | 6-5 | (1)5-10;

#### Question:

Were all continuous analysers calibrated, maintained, and operated, in accordance with the manufacturer's instructions or the regulation?

## Compliance Response(s)/Corrective Action(s)/Observation(s):

All continuous analysers were calibrated, maintained, and operated as required.

A review of the workorder summary and the elogbooks for the inspection period indicates that the POE chlorine analyzer was verified weekly and calibrated as needed.

A review of the workorder summary and the elogbooks for the inspection period indicates that the Filter Effluent Turbidity Analyzers No. 1 and No. 2 were calibrated on February 2nd, 2024 and May 29th, 2024.

## Question IDDWMR1108001Question TypeLegislative

## Legislative Requirement(s):

SDWA | O. Reg. 170/03 | 6-5 | (1)5-10; SDWA | O. Reg. 170/03 | 6-5 | (1.1);

#### Question:

Where continuous monitoring equipment used for the monitoring of free chlorine residual, total chlorine residual, combined chlorine residual or turbidity, required by O. Reg. 170/03, Municipal Drinking Water Licence, Drinking Water Works Permit, or order triggered an alarm

**Event Number:** 1-328895948 Page **19** of **36** 



or an automatic shut-off, did a qualified person respond as required and take appropriate actions?

## **Compliance Response(s)/Corrective Action(s)/Observation(s):**

A qualified person responded as required and took appropriate actions.

Question ID	DWMR1099001	Question Type	Information	
Legislative Requirement(s):				

### Legislative Requirement(s):

Not Applicable

#### Question:

Do records show that water provided by the drinking water system met the Ontario Drinking Water Quality Standards?

## Compliance Response(s)/Corrective Action(s)/Observation(s):

Records showed that all water sample results met the Ontario Drinking Water Quality Standards.

Question ID DWM	R1079001	Question Type	Legislative
-----------------	----------	---------------	-------------

## Legislative Requirement(s):

SDWA | O. Reg. 170/03 | 10-4 | (1); SDWA | O. Reg. 170/03 | 10-4 | (2); SDWA | O. Reg. 170/03 | 10-4 | (3);

#### Question:

Were raw water microbiological sampling requirements prescribed by Schedule 10-4 of O. Reg. 170/03 for large municipal residential systems met?

## **Compliance Response(s)/Corrective Action(s)/Observation(s):**

Raw water microbiological sampling requirements were met.

Section 10-4 of Schedule 10 of O. Reg. 170/03 requires that the owner and operating authority of the drinking water system must ensure that a raw water sample is taken at least once every week and tested for E.coli and total coliforms.

A review of the certificates of analysis for the inspection period indicates that at least one raw water sample was taken each week and tested for E.coli and total coliforms.

 Question ID
 DWMR1083001
 Question Type
 Legislative

## Legislative Requirement(s):

SDWA | O. Reg. 170/03 | 10-3;

#### Question:

Were treated microbiological sampling requirements prescribed by Schedule 10-3 of O. Reg.

**Event Number:** 1-328895948 Page **20** of **36** 



170/03 for large municipal residential systems met?

## **Compliance Response(s)/Corrective Action(s)/Observation(s):**

Treated microbiological sampling requirements were met.

Section 10-3 of Schedule 10 of O. Reg. 170/03 requires the owner and operating authority of the drinking water system must ensure that a treated water sample is taken at least once every week and tested for E.coli, total coliforms, and HPC.

A review of the certificates of analysis for the inspection period indicates that one treated water sample was taken each week and tested for E.coli, total coliforms, and HPC.

Question ID	DWMR1081001	Question Type	Legislative
-------------	-------------	---------------	-------------

#### **Legislative Requirement(s):**

SDWA | O. Reg. 170/03 | 10-2 | (1); SDWA | O. Reg. 170/03 | 10-2 | (2); SDWA | O. Reg. 170/03 | 10-2 | (3);

#### Question:

Were distribution microbiological sampling requirements prescribed by Schedule 10-2 of O. Reg. 170/03 for large municipal residential systems met?

## **Compliance Response(s)/Corrective Action(s)/Observation(s):**

Distribution microbiological sampling requirements were met.

Section 10-2 of Schedule 10 of O. Reg. 170/03 requires that the owner and operating authority for the drinking water system must ensure that at least eight distribution samples are taken every month, with at least one of the samples being taken each week. The owner and operating authority must ensure that each of the samples are tested for E.coli, total coliforms, and that at least 25% of the samples are tested for general bacteria population expressed as colony counts on a heterotropic plate count (HPC).

A review of the certificates of analysis for the inspection period indicates that at least twelve distribution samples were taken each month and each of the samples were tested for E.coli, total coliforms, and one of the samples taken each week were also tested for HPC.

Question ID	DWMR1096001	Question Type	Legislative
•	equirement(s): eg. 170/03   6-3   (1);		

#### Question:

Did records confirm that chlorine residual tests were conducted at the same time and location as microbiological samples?

### Compliance Response(s)/Corrective Action(s)/Observation(s):

Records confirmed that chlorine residual tests were conducted as required.

**Event Number:** 1-328895948 Page **21** of **36** 



Question ID	DWMR1084001	Question Type	Legislative
Legislative R	eguirement(s):		

SDWA | O. Reg. 170/03 | 13-2;

#### Question:

Were inorganic parameter sampling requirements prescribed by Schedule 13-2 of O. Reg. 170/03 met?

## Compliance Response(s)/Corrective Action(s)/Observation(s):

Inorganic parameter sampling requirements were met.

Section 13-2 of Schedule 13 of O. Reg. 170/03 requires that the owner and operating authority for the system must ensure that at least one treated water sample is taken every 12 months, if the system obtains water from a raw water supply that is surface water, and tested for every parameter set out in Schedule 23 (Inorganics).

A review of the certificates of analysis for the inspection period indicates that treated water samples were taken on January 8th, 2024 and tested for every parameter in Schedule 23 (Inorganics).

#### Question ID DWMR1085001 Question Type Legislative

## **Legislative Requirement(s):**

SDWA | O. Reg. 170/03 | 13-4 | (1); SDWA | O. Reg. 170/03 | 13-4 | (2); SDWA | O. Reg. 170/03 | 13-4 | (3);

#### Question:

Were organic parameter sampling requirements prescribed by Schedule 13-4 of O. Reg. 170/03 met?

## Compliance Response(s)/Corrective Action(s)/Observation(s):

Organic parameter sampling requirements were met.

Section 13-4 of Schedule 13 of O. Reg. 170/03 requires that the owner and operating authority for the system must ensure that at least one treated water sample is taken every 12 months, if the system obtains water from a raw water supply that is surface water, and tested for every parameter set out in Schedule 24 (Organics).

A review of the certificates of analysis for the inspection period indicates that treated water samples were taken on January 8th, 2024 and tested for every parameter in Schedule 24 (Organics).

Question ID	DWMR1086001	Question Type	Legislative	
Legislative Requirement(s):				
SDWA   O. Reg. 170/03   13-6.1   (1); SDWA   O. Reg. 170/03   13-6.1   (2); SDWA   O. Reg.				

**Event Number:** 1-328895948 Page **22** of **36** 



170/03 | 13-6.1 | (3); SDWA | O. Reg. 170/03 | 13-6.1 | (4); SDWA | O. Reg. 170/03 | 13-6.1 | (5); SDWA | O. Reg. 170/03 | 13-6.1 | (6);

#### **Question:**

Were haloacetic acid sampling requirements prescribed by Schedule 13-6 of O. Reg. 170/03 met?

### Compliance Response(s)/Corrective Action(s)/Observation(s):

Haloacetic acid sampling requirements were met.

Section 13-6.1 of Schedule 13 of O. Reg. 170/03 requires the owner and operating authority of the drinking water system that provides chlorination must ensure that at least one distribution sample is taken in each calendar quarter, from a point in the distribution system that is likely to have an elevated potential for the formation of haloacetic acids and tested for haloacetic acids (HAAs).

O. Reg. 170/03 defines "calendar quarter" as the three-month period that begins on January 1, April 1, July 1, or October 1.

Effective January 1, 2020, the standard for HAAs of 0.08 mg/L (80 μg/L) was introduced and is expressed as a running annual average (RAA) of quarterly results.

A review of the certificates of analysis for the inspection period and, the previous ministry inspection report, indicates that a sample was taken and tested for HAAs on July 11th, 2023 (38.2  $\mu$ g/L), October 16th, 2023 (24  $\mu$ g/L), January 8th, 2024 (38.6  $\mu$ g/L and 35.6  $\mu$ g/L), and April 15th, 2024 (31.4  $\mu$ g/L).

The running annual average for HAAs at the time of the inspection is 32.64 µg/L.

Question ID	DWMR1087001	Question Type	Legislative
-------------	-------------	---------------	-------------

#### Legislative Requirement(s):

SDWA | O. Reg. 170/03 | 13-6 | (1); SDWA | O. Reg. 170/03 | 13-6 | (2); SDWA | O. Reg. 170/03 | 13-6 | (3); SDWA | O. Reg. 170/03 | 13-6 | (4); SDWA | O. Reg. 170/03 | 13-6 | (5); SDWA | O. Reg. 170/03 | 13-6 | (6);

#### Question:

Were trihalomethane sampling requirements prescribed by Schedule 13-6 of O. Reg. 170/03 met?

## **Compliance Response(s)/Corrective Action(s)/Observation(s):**

Trihalomethane sampling requirements were met.

Section 13-6 of Schedule 13 of O. Reg. 170/03 requires the owner and operating authority of drinking water system that provides chlorination must ensure that at least one distribution sample is taken in each calendar quarter from a point in the distribution system that is likely to have an elevated potential for the formation of trihalomethanes and tested for trihalomethanes (THMs).

**Event Number:** 1-328895948 Page **23** of **36** 



As of January 1st, 2016, the Ontario standard for THMs is 0.1 mg/L (100 µg/L) and is expressed as a running annual average (RAA) of quarterly results.

A review of the certificates of analysis for the inspection period, and previous ministry inspection report, indicates that a sample was taken and tested for THMs on July 11th, 2023 (70 μg/L), October 16th, 2023 (50 μg/L), January 8th, 2024 (45 μg/L and 49 μg/L), and April 15th, 2024 (42 µg/L).

The running annual average for THMs at the time of the inspection is 52.25 µg/L.

Question ID	DWMR1088001	Question Type	Legislative
Legislative R	equirement(s):		

SDWA | O. Reg. 170/03 | 13-7;

#### Question:

Were nitrate/nitrite sampling requirements prescribed by Schedule 13-7 of O. Reg. 170/03

## Compliance Response(s)/Corrective Action(s)/Observation(s):

Nitrate/nitrite sampling requirements were met.

Section 13-7 of Schedule 13 of O. Reg. 170/03 requires that the owner and operating authority of a drinking water system must ensure that at least one water sample is taken every three months and tested for nitrate and nitrite.

A review of the certificates of analysis for the inspection period and previous ministry report indicates that sampling for nitrates and nitrite occurred on October 16th, 2023, January 8th, 2024, and April 15th, 2024.

Question ID	DWMR1089001	<b>Question Type</b>	Legislative
Legislative R	equirement(s):		

SDWA | O. Reg. 170/03 | 13-8;

#### Question:

Were sodium sampling requirements prescribed by Schedule 13-8 of O. Reg. 170/03 met?

## Compliance Response(s)/Corrective Action(s)/Observation(s):

Sodium sampling requirements were met.

Section 13-8 of Schedule 13 of O. Reg. 170/03 requires that the owner rand operating authority for the drinking water system must ensure that at least one treated water sample is taken every 60 months and tested for sodium.

The most recent sample was collected and tested for sodium on January 30th, 2023 at 62.4 mg/L.

**Event Number:** 1-328895948 Page **24** of **36** 



The North Bay Parry Sound District Health Unit requires notices of the elevated sodium levels to be posted in public locations since the first sodium exceedance in 2013.

Question ID	DWMR1090001	Question Type	Legislative

## Legislative Requirement(s):

SDWA | O. Reg. 170/03 | 13-9;

#### Question:

Where fluoridation is not practiced, were fluoride sampling requirements prescribed by Schedule 13-9 of O. Reg. 170/03 met?

## **Compliance Response(s)/Corrective Action(s)/Observation(s):**

Fluoride sampling requirements were met.

Section 13-9 of Schedule 13 of O. Reg. 170/03 requires the owner and operating authority for the drinking water system must ensure that at least one treated water sample is taken every 60 months and tested for fluoride.

The most recent fluoride sample was collected on January 18th, 2021.

Question IDDWMR1092001Question TypeLegislative

## Legislative Requirement(s):

SDWA | O. Reg. 170/03 | 6-2;

#### Question:

Were water samples taken at the prescribed location?

## Compliance Response(s)/Corrective Action(s)/Observation(s):

Water samples were taken at the prescribed location.

 Question ID
 DWMR1095001
 Question Type
 Legislative

#### Legislative Requirement(s):

SDWA | O. Reg. 170/03 | 15.1-10; SDWA | O. Reg. 170/03 | 15.1-4 | (1); SDWA | O. Reg. 170/03 | 15.1-5 | (1); SDWA | O. Reg. 170/03 | 15.1-5 | (10); SDWA | O. Reg. 170/03 | 15.1-5 | (11); SDWA | O. Reg. 170/03 | 15.1-5 | (2); SDWA | O. Reg. 170/03 | 15.1-5 | (3); SDWA | O. Reg. 170/03 | 15.1-5 | (4); SDWA | O. Reg. 170/03 | 15.1-5 | (5); SDWA | O. Reg. 170/03 | 15.1-5 | (8); SDWA | O. Reg. 170/03 | 15.1-5 | (9); SDWA | O. Reg. 170/03 | 15.1-7 | (1); SDWA | O. Reg. 170/03 | 15.1-7 | (1); SDWA | O. Reg. 170/03 | 15.1-7 | (2); SDWA | O. Reg. 170/03 | 15.1-7 | (3); SDWA | O. Reg. 170/03 | 15.1-7 | (4); SDWA | O. Reg. 170/03 | 15.1-9 | (1); SDWA | O. Reg. 170/03 | 15.1-9 | (2); SDWA | O. Reg. 170/03 | 15.1-9 | (3); SDWA | O. Reg. 170/03 | 15.1-9 | (4); SDWA | O. Reg. 170/03 | 15.1-9 | (7); SDWA | O. Reg. 170/03 | 15.1-9 | (8); SDWA | O. Reg. 170/03 | 15.1-9 | (9);

**Event Number:** 1-328895948 Page **25** of **36** 



#### Question:

Were lead sampling requirements prescribed by Schedule 15.1 of O. Reg. 170/03 met?

## Compliance Response(s)/Corrective Action(s)/Observation(s):

Lead sampling requirements were met.

Community lead sampling and testing in the South River Drinking Water System has been previously conducted in accordance with the requirements of Section 15.1-5 of Schedule 15.1 to O. Reg.170/03. The system qualified for exemption from the monitoring of lead in plumbing effective 2011.

Systems that are exempt from testing for lead in plumbing under Section 15.1-5(9) of Schedule 15.1 of O. Reg. 170/03 require the ongoing testing of total alkalinity and pH in the distribution system during the periods of December 15 to April 15 (winter period) and June 15 to October 15 (summer period) in every 12-month period and testing for lead in the distribution system during the winter and summer periods in every third 12-month period.

A review of the certificates of analysis and ministry records indicates that the most recent sample was collected in the South River Distribution System and tested for lead, alkalinity and pH on April 11th, 2023, October 3rd, 2023. Additionally, two distribution system samples were taken on April 4th, 2024 and tested for alkalinity and pH.

Question ID	DWMR1110001	Question Type	Legislative
		I .	

## Legislative Requirement(s):

SDWA | O. Reg. 170/03 | 11 | (6);

#### Question:

Was the annual report prepared by February 28th of the following year and did it contain the required information?

#### Compliance Response(s)/Corrective Action(s)/Observation(s):

The annual report requirements were met.

The 2023 Annual Report for the South Drinking Water System was prepared on January 16th, 2024.

Question ID	DWMR1111001	Question Type	Legislative
*		<b>7</b> 1	0

#### **Legislative Requirement(s):**

SDWA | O. Reg. 170/03 | 22-2 | (1); SDWA | O. Reg. 170/03 | 22-2 | (2); SDWA | O. Reg. 170/03 | 22-2 | (3); SDWA | O. Reg. 170/03 | 22-2 | (4);

#### Question:

Did the summary report contain the required information and was it completed and distributed as required?

## **Compliance Response(s)/Corrective Action(s)/Observation(s):**

The summary report requirements were met.

**Event Number:** 1-328895948 Page **26** of **36** 



Question ID	DWMR1098001	Question Type	Legislative
-------------	-------------	---------------	-------------

### Legislative Requirement(s):

SDWA | O. Reg. 170/03 | 13 | (1); SDWA | O. Reg. 170/03 | 13 | (2); SDWA | O. Reg. 170/03 | 13 | (3);

#### Question:

Were the required records kept for the periods prescribed by section 13 of O. Reg. 170/03?

### Compliance Response(s)/Corrective Action(s)/Observation(s):

The required records were kept for the prescribed periods.

All records are kept onsite at the South River Water Treatment Plant.

Question ID	DWMR1043001	<b>Question Type</b>	Legislative
Legislative Ro	equirement(s):		

#### Question:

Were the process wastewater and residual solids/sludges treated, handled, and disposed of in accordance with the design requirements approved under the Drinking Water Works Permit and the Municipal Drinking Water Licence?

## **Compliance Response(s)/Corrective Action(s)/Observation(s):**

The process wastewater and residual solids/sludges were treated, handled, and disposed of as required.

Filter backwash water is directed to the clarification tank. The supernatant from the clarification tank is decanted and discharged to a storm sewer which discharges to Forest Lake. The settled solids from the clarification tank are pumped to the storage holding tank.

Clarifier blow-down is directed to the wastewater surge tank. Supernatant from the wastewater surge tank is directed to the clarification tank while settled solids are directed to the sludge holding tank.

Polymer is injected into the filter effluent waste line.

The sludge holding tank receives settled solids from both the clarification tank and the waste surge tank. Supernatant from the sludge holding tank is directed to the clarification tank. The settled solids from the sludge holding tank are pumped to the sludge bagging system 3-5 times per week for disposal at the Machar Township Landfill.

A review of the elogbooks indicates that the sludge was pumped out from the waste clarifier and surge tanks by Rick Vallancourt on January 25th, 2024, March 7th, 2024, and May 17th, 2024.

**Event Number:** 1-328895948 Page **27** of **36** 



Question ID	DWMR1044001	Question Type	Legislative	
Legislative Requirement(s):				

SDWA | 31 | (1);

#### Question:

Did the process wastewater discharge monitoring program and discharge quality comply with requirements established in the Municipal Drinking Water Licence?

## **Compliance Response(s)/Corrective Action(s)/Observation(s):**

The process wastewater discharge monitoring program and discharge quality complied with the requirements.

Condition 5.4 of Schedule C of the Licence requires the owner and operating authority of the drinking water system to take monthly composite samples of the backwash wastewater facility's point of discharge and test for suspended solids.

Condition 1.5 of Schedule C of the Licence states that the annual average concentration of suspended solids shall not exceed 25 mg/L.

A review of the certificates of analysis for the inspection period indicates that monthly composite samples of the backwash wastewater were taken and tested for suspended solids. The TSS average for 2023 was 17.44 mg/L. The TSS average for 2024 (January 1 to June 25, 2024) is <8.37 mg/L.

<b>Question ID</b>	DWMR1045001	<b>Question Type</b>	Legislative

## Legislative Requirement(s):

SDWA | 31 | (1);

#### Question:

Did the owner update the document describing the distribution components within 12 months of completion of alterations to the system in accordance with the Drinking Water Works Permit?

## **Compliance Response(s)/Corrective Action(s)/Observation(s):**

The owner had up-to-date documents describing the distribution components.

Condition 3.5 of Schedule B of the Permit requires that the "9a. South River DWS Distribution System Map (Plan)" dated June 26th, 2019 shall be updated to include watermain additions, modifications, replacements and extensions within 12 months of the alteration.

The ministry's previous inspection report identifies that several watermain replacements were completed in the South River Distribution System from November 2022 to July 2023.

The South River Distribution Map provided for the inspection report was dated November 30th, 2020. The operating authority indicated that the Corporation of the Village of South River is in the process of having the GIS map updated. The map has not been finalized at the time of issuing this report.

**Event Number:** 1-328895948 Page **28** of **36** 



Question ID	DWMR1046001	Question Type	ВМР
Legislative Ro	equirement(s):		

#### Question:

Was there a backflow prevention program, policy and/or bylaw in place that addressed cross connections and connections to high hazard facilities?

## **Compliance Response(s)/Corrective Action(s)/Observation(s):**

There was a backflow prevention program, policy and/or bylaw in place.

The Corporation of the Village of South River By-law No. 05-2014 (dated February 10th, 2014) addresses cross connections, backflow prevention and connections to high hazard facilities.

Question ID	DWMR1053001	Question Type	BMP	
Legislative Requirement(s):				

## Not Applicable

#### Question:

Was the owner able to maintain proper pressures in the distribution system and was pressure monitored to alert the operator of conditions of loss of pressure below the value under which the system was designed to operate?

## **Compliance Response(s)/Corrective Action(s)/Observation(s):**

The owner was able to maintain proper pressures in the distribution system and pressure was monitored to alert the operator of conditions which may lead to loss of pressure below the value under which the system is designed to operate.

Distribution system pressure is monitored at the water treatment plant and is equipped with high and low pressure alarms. The low pressure alarm is set at 43.5 psi.

Question ID	DWMR1047001	Question Type	BMP	
Legislative Requirement(s):				
Not Applicable				

#### Question:

Did the owner have a program or maintain a schedule for routine cleanout, inspection and maintenance of reservoirs and elevated storage tanks within the distribution system?

## Compliance Response(s)/Corrective Action(s)/Observation(s):

The owner had a program or maintained a schedule for routine cleanout, inspection and maintenance of reservoirs and elevated storage tanks within the distribution system.

The clearwell located at the South River WTP was last examined on December 18th, 2023 and it was determined the clearwell did not require cleaning.

**Event Number:** 1-328895948 Page **29** of **36** 



Question IDDWMR1048001Question TypeBMP

Legislative Requirement(s):

Not Applicable

#### Question:

Had the owner implemented a program for the flushing of watermains as per industry standards?

## **Compliance Response(s)/Corrective Action(s)/Observation(s):**

The owner had implemented a program for the flushing of watermains.

South River Public Works Department conducts flushing of the watermains every spring and fall. Flushing was not completed in Fall 2023 (due to recent watermain replacements) and was resumed in Spring 2024.

Question IDDWMR1050001Question TypeBMP

Legislative Requirement(s):

Not Applicable

#### Question:

Was there a program in place for inspecting and exercising valves?

## Compliance Response(s)/Corrective Action(s)/Observation(s):

There was a program in place for inspecting and exercising valves.

Question IDDWMR1051000Question TypeBMP

## Legislative Requirement(s):

Not Applicable

#### Question:

Is there a program in place for inspecting and operating hydrants?

## Compliance Response(s)/Corrective Action(s)/Observation(s):

There was a program in place for inspecting and operating hydrants.

Question ID DWMR1052001 Question Type BMP

## Legislative Requirement(s):

Not Applicable

#### Question:

Was there a bylaw or policy in place limiting access to hydrants?

**Event Number:** 1-328895948 Page **30** of **36** 



## Compliance Response(s)/Corrective Action(s)/Observation(s):

There was a bylaw or policy in place limiting access to hydrants.

The Corporation of the Village of South River By-law No. 05-2014 (dated February 10th, 2014) restricts access to fire hydrants to the South River Public Works and Fire Departments. Any filling of water trucks is supervised by the Fire Department.

Question ID	DWMR1058001	Question Type	Legislative
-------------	-------------	---------------	-------------

## Legislative Requirement(s):

SDWA | O. Reg. 128/04 | 28;

#### Question:

Did operators and maintenance personnel have ready access to operations and maintenance manuals?

## **Compliance Response(s)/Corrective Action(s)/Observation(s):**

Operators and maintenance personnel had ready access to operations and maintenance manuals.

Question ID	DWMR1059001	<b>Question Type</b>	Legislative

## Legislative Requirement(s):

SDWA | O. Reg. 128/04 | 28;

#### Question:

Did the operations and maintenance manuals contain plans, drawings, and process descriptions sufficient for the safe and efficient operation of the system?

## Compliance Response(s)/Corrective Action(s)/Observation(s):

The operations and maintenance manuals contained plans, drawings, and process descriptions sufficient for the safe and efficient operation of the system.

Question IDDWMR1060001Question TypeLegislative

## Legislative Requirement(s):

SDWA | 31 | (1);

#### Question:

Did the operations and maintenance manual(s) meet the requirements of the Municipal Drinking Water Licence?

## Compliance Response(s)/Corrective Action(s)/Observation(s):

The operations and maintenance manual(s) met the requirements of the Municipal Drinking Water Licence.

**Event Number:** 1-328895948 Page **31** of **36** 



Question IDDWMR1064001Question TypeLegislative

## Legislative Requirement(s):

SDWA | O. Reg. 128/04 | 26 | (2);

#### Question:

Did an operator-in-charge ensure that records were maintained of all adjustments to the processes within their responsibility?

## **Compliance Response(s)/Corrective Action(s)/Observation(s):**

The operator-in-charge ensured that records were maintained of all adjustments to the processes within their responsibility.

Question ID DWMR1062001 Question Type Legislative

## Legislative Requirement(s):

SDWA | O. Reg. 170/03 | 7-5;

#### Question:

Did records or other record keeping mechanisms confirm that operational testing not performed by continuous monitoring equipment was done by a certified operator, water quality analyst, or person who met the requirements of Schedule 7-5 of O. Reg. 170/03?

## Compliance Response(s)/Corrective Action(s)/Observation(s):

Records or other record keeping mechanisms confirmed that operational testing not performed by continuous monitoring equipment was done by a certified operator, water quality analyst, or person who met the requirements of Schedule 7-5 of O. Reg. 170/03.

 Question ID
 DWMR1063001
 Question Type
 Legislative

 Legislative Requirement(s):

SDWA | O. Reg. 170/03 | 6-10 | (1);

#### Question:

For every required operational test and sample, was a record made of the date, time, location, results, and name of the person conducting the test?

## Compliance Response(s)/Corrective Action(s)/Observation(s):

For every required operational test and sample, a record was made as required.

 Question ID
 DWMR1061001
 Question Type
 Legislative

## **Legislative Requirement(s):**

SDWA | O. Reg. 128/04 | 27 | (1); SDWA | O. Reg. 128/04 | 27 | (2); SDWA | O. Reg. 128/04 | 27 | (3); SDWA | O. Reg. 128/04 | 27 | (4); SDWA | O. Reg. 128/04 | 27 | (5); SDWA | O. Reg.

**Event Number:** 1-328895948 Page **32** of **36** 

Ministry of the Environment, Conservation and Parks

Ministère de l'Environnement, de la Protection de la nature et des Parcs



128/04 | 27 | (6); SDWA | O. Reg. 128/04 | 27 | (7);

#### Question:

Were logbooks properly maintained and did they contain the required information?

## Compliance Response(s)/Corrective Action(s)/Observation(s):

Logbooks were properly maintained and contained the required information.

Question ID	DWMR1065001	Question Type	Legislative	
Legislative Requirement(s):				

SDWA | O. Reg. 128/04 | 27 | (6):

#### Question:

Were logs and other record keeping mechanisms available for at least five (5) years?

### Compliance Response(s)/Corrective Action(s)/Observation(s):

Logs or other record keeping mechanisms were available for at least five (5) years.

Question ID	DWMR1066001	Question Type	BMP

## Legislative Requirement(s):

Not Applicable

#### Question:

Was spill containment provided for process chemicals and standby power generator fuel?

#### Compliance Response(s)/Corrective Action(s)/Observation(s):

Spill containment was provided for process chemicals and/or standby power generator fuel.

There are double walled containers for process chemicals and generator fuel. There are also concrete barriers in place for spill containment.

**Question ID** DWMR1067001 **Question Type BMP** 

## Legislative Requirement(s):

Not Applicable

#### Question:

Were equipment and materials in place for the clean up of spills?

#### Compliance Response(s)/Corrective Action(s)/Observation(s):

Equipment and materials were in place for the clean up of spills.

There is a spill kit kept onsite at the South River Water Treatment Plant.

**Event Number:** 1-328895948 Page **33** of **36**  Ministry of the Environment, Conservation and Parks

# Ministère de l'Environnement, de la Protection de la nature et des Parcs



Question IDDWMR1068001Question TypeBMP

Legislative Requirement(s):

Not Applicable

#### Question:

If available, were standby power generators tested under normal load conditions?

## **Compliance Response(s)/Corrective Action(s)/Observation(s):**

Standby power generators were tested under normal load conditions.

A review of the Work Order Summary for the generator indicates that the generator was tested monthly.

Question ID DWMR1069001 Question Type BMP

## Legislative Requirement(s):

Not Applicable

#### Question:

Were all storage facilities completely covered and secure?

## **Compliance Response(s)/Corrective Action(s)/Observation(s):**

Storage facilities were completely covered and secure.

Question IDDWMR1071001Question TypeBMP

## Legislative Requirement(s):

Not Applicable

#### Question:

Did the owner provide security measures to protect components of the drinking water system?

## **Compliance Response(s)/Corrective Action(s)/Observation(s):**

The owner provided security measures to protect components of the drinking water system.

The South River Water Treatment Plant is equipped with intruder alarms, security lights, and doors are kept locked when operators are not onsite.

The low lift pumping station is equipped with security cameras, alarm, and is kept locked when operators are not onsite.

Question IDDWMR1072001Question TypeBMPLegislative Requirement(s):Not Applicable

**Event Number:** 1-328895948 Page **34** of **36** 



#### Question:

Had the owner and/or operating authority undertaken efforts to promote water conservation and reduce water losses in the drinking water system?

#### **Compliance Response(s)/Corrective Action(s)/Observation(s):**

The owner and/or operating authority undertook efforts to promote water conservation and reduce water losses in their system.

The South River Distribution System uses water meters to promote water conservation and reduce losses in the drinking water system. The operating authority also monitors trends to notice if there are any water losses in the distribution system.

The Corporation of the Village of South River By-law No. 05-2014 governs the use of water meters and outdoor water use restrictions.

Question ID	DWMR1073001	Question Type	Legislative
	equirement(s): eg. 128/04   23   (1);		

#### Question:

Was an overall responsible operator designated for all subsystems which comprise the drinking water system?

### Compliance Response(s)/Corrective Action(s)/Observation(s):

An overall responsible operator was designated for all subsystem.

Darren Aljoe is the designated Operators with Overall Responsibility for the South River Drinking Water System.

Dan Finnigan is the backup ORO.

<b>Question ID</b>	DWMR1074001	Question Type	Legislative
	<b>equirement(s):</b> eg. 128/04   25   (1);		

#### Question:

Were operators-in-charge designated for all subsystems which comprise the drinking water system?

#### Compliance Response(s)/Corrective Action(s)/Observation(s):

Operators-in-charge were designated for all subsystems.

Question ID	DWMR1075001	Question Type	Legislative
Legislative Re	equirement(s): eg. 128/04   22;		

**Event Number:** 1-328895948 Page **35** of **36** 

Ministry of the Environment, Conservation and Parks Ministère de l'Environnement, de la Protection de la nature et des Parcs



### Question:

Were all operators certified as required?

### **Compliance Response(s)/Corrective Action(s)/Observation(s):**

All operators were certified as required.

Question ID	DWMR1076001	Question Type	Legislative			
Legislative Requirement(s): SDWA   O. Reg. 170/03   1-2   (2);						
<b>Question:</b> Were adjustm	Question: Were adjustments to the treatment equipment only made by certified operators?					
Compliance Response(s)/Corrective Action(s)/Observation(s): Adjustments to the treatment equipment were only made by certified operators.						

**Event Number:** 1-328895948 Page **36** of **36** 

# **Key Reference and Guidance Material for Municipal Residential Drinking Water Systems**

Many useful materials are available to help you operate your drinking water system. Below is a list of key materials owners and operators of municipal residential drinking water systems frequently use.

To access these materials online click on their titles below or use your web browser to search for their titles. Contact the Ministry if you need assistance or have questions at 1-866-793-2588 or waterforms@ontario.ca.

For more information on Ontario's drinking water visit www.ontario.ca/page/drinking-water



### Click on the publication below to access it

- Drinking Water System Profile Information Form 012-2149E
- Laboratory Services Notification Form 012-2148E
- Adverse Test Result Notification Form 012-4444E
- <u>Taking Care of Your Drinking Water: A Guide for Members of Municipal</u>
  <u>Councils</u>
- Procedure for Disinfection of Drinking Water in Ontario
- Strategies for Minimizing the Disinfection Products Trihalomethanes and Haloacetic Acids
- Filtration Processes Technical Bulletin
- Ultraviolet Disinfection Technical Bulletin
- Guide for Applying for Drinking Water Works Permit Amendments, & License Amendments
- Certification Guide for Operators and Water Quality Analysts
- Training Requirements for Drinking Water Operator
- Community Sampling and Testing for Lead: Standard and Reduced Sampling and Eligibility for Exemption
- Drinking Water System Contact List 7128E01
- Ontario's Drinking Water Quality Management Standard Pocket Guide
- 2020 Watermain Disinfection Procedure
- List of Licensed Laboratories



#### Ministry of the Environment, Conservation and **Parks**

Ministère de l'Environnement, de la Protection de la nature et des Parcs



Laboratory Services Branch

125 Resources Road Toronto ON M9P 3V6 Tel: 416 235-5743 Fax: 416 235-5744

Direction des services de laboratoire

125, chemin Resources Toronto ON M9P 3V6 Tél: 416 235-5743 Téléc.: 416 235-5744

### **Certificate of Analysis**

Chain: L15904 Workorder: ES-SRIVER-01 (16063)

**Workorder Description:** 

Client: Northern Region - Timmins District Water Report To: Sherry Ilersich

Compliance

Profile: Municipal Drinking Water

Line Item: Inspection of Municipal WTP (SWIP)

DWECD-NR-Timmins-WC Units 16 & 17 191 Booth Road Ministry of the Environment North Bay, ON P1A 4K3

Canada

Date Reported: 7/17/2024 11:59:20 AM **Date Approved:** 7/17/2024 11:39:26 AM

The results relate only to the items tested as received.

Customer service feedback for this test report and/or other services by LaSB may be provided by calling the HelpDesk at 416-235-6030, the Customer Service Manager at 416-235-5831, or through LabOnline.

This report contains confidential information intended only for the person(s) to whom it is addressed. Any unauthorized disclosure, copying, other distribution of this report, or taking any action on its content is strictly prohibited. If you have received this report in error, please contact the LaSB HelpDesk at 416-235-6030 or the Customer Service Manager at 416-235-5831.

Laboratory Services Branch is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific tests listed on the scope of accreditation. Accreditation is matrix- and parameter-specific. A complete listing of accredited test methods, matrices, and parameters is available from www.cala.ca. The tests on this report may not necessarily be included in the scope of accreditation.

Calculated results for IBC3196 (Ion Balance) and DTKN3424 (Total Kjeldahl Nitrogen) are provided in the test report only if all required parameters were requested/measured.

Bolded results indicate value(s) outside of method acceptance limits.

Approved for release by:

Cassandra Lofranco



Workorder: ES-SRIVER-01 (16063) Chain: L15904

### **Sample Summary**

Lab ID	Field ID	Matrix	Method	Tests Ordered	Container Condition	Sampling Date & Time	Received Date & Time	Sampled By
16063001	Inspection of Municipal WTP (S	WD	E3132, E3172, E3364, E3480, E3488, E3500, E3501, E3503, E3526, E3552, E3553, E3565, E3571	SWIPENHANC	Temperature >10°C	06/25/2024 13:16	06/26/2024 10:20	Erin Spires
	Sample Description							
	South River WTP - Treated	d Water Ta	p					



Workorder: ES-SRIVER-01 (16063) Chain: L15904

### **Analytical Results**

Lab ID:	16063001		Date Collect	ed: 6/25/2024 1:10	6:00 PM
Field ID:	Inspection of Municipal WTP (S		Mati	rix: Drinking Wate	r
Parameter	,	Result	Units	RDL Rmk	Analyzed
GENERAL CH	IEMISTRY				
E3172					
Fluoride		0.04	mg/L	0.01	07/03/2024
E3364					
Phosphorus; phos	sphate	<0.003	mg/L	0.003	06/27/2024
Nitrogen; nitrite		<0.001	mg/L	0.001	06/27/2024
Nitrogen; ammoni	a+ammonium	<0.02	mg/L	0.02	06/27/2024
Nitrogen; nitrate+	nitrite	0.16	mg/L	0.04	06/27/2024
Nitrate		0.16	mg/L	0.04	06/27/2024
METALS					
E3526					
Mercury		<5.0	ng/L	5.0	07/03/2024
E3565					
Beryllium		<0.5	μg/L	0.5	07/09/2024
Boron		<10	μg/L	10	07/09/2024
Aluminum		<5	μg/L	5	07/09/2024
Titanium		<5	μg/L	5	07/09/2024
Vanadium		<0.5	μg/L	0.5	07/09/2024
Chromium		<5	μg/L	5	07/09/2024
Iron		39	μg/L	30	07/09/2024
Manganese		1.5	μg/L	0.5	07/09/2024
Cobalt		<1	μg/L	1	07/09/2024
Nickel		<2	μg/L	2	07/09/2024
Copper		<5	μg/L	5	07/09/2024



Workorder: ES-SRIVER-01 (16063) **Chain:** L15904

### **Analytical Results**

Lab ID: Field ID:	16063001 Inspection of Municipa WTP (S	ıl	Date Collect Mat		25/2024 1:1 inking Wate	
Parameter		Result	Units	RDL	Rmk	Analyzed
Zinc		2	μg/L	2		07/09/2024
Arsenic		<1	μg/L	1		07/09/2024
Selenium		<5	μg/L	5		07/09/2024
Strontium		29	μg/L	1		07/09/2024
Molybdenum		<0.5	μg/L	0.5		07/09/2024
Silver		<0.5	μg/L	0.5		07/09/2024
Cadmium		<0.5	μg/L	0.5		07/09/2024
Antimony		<0.5	μg/L	0.5		07/09/2024
Barium		11.5	μg/L	0.5		07/09/2024
Thallium		<0.5	μg/L	0.5		07/09/2024
Lead		<0.5	μg/L	0.5		07/09/2024
Uranium		<0.5	μg/L	0.5		07/09/2024
Microbiology	r Results					
E3571						
Total Coliform co	ount per 100mL	0	MPN / 100mL			06/27/2024
E. coli count per	100 mL	0	MPN / 100mL			06/27/2024
			1001112			
ORGANIC CH	HEMISTRY					
E3132						
1,1,1,2-Tetrachlo	proethane	<0.20	μg/L	0.20		07/08/2024
1,1,1-Trichloroetl	hane	<0.20	μg/L	0.20		07/08/2024
1,1,2,2-Tetrachlo	proethane	<0.20	μg/L	0.20		07/08/2024
1,1,2-Trichloroetl	hane	<0.20	μg/L	0.20		07/08/2024
1,1-Dichloroetha	ne	<0.20	μg/L	0.20		07/08/2024
1,1-Dichloroethyl	lene	<0.20	μg/L	0.20		07/08/2024
1,2,3-Trimethylbe	enzene	<0.20	μg/L	0.20		07/08/2024



Workorder: ES-SRIVER-01 (16063) Chain: L15904

### **Analytical Results**

 Lab ID:
 16063001
 Date Collected:
 6/25/2024 1:16:00 PM

 Field ID:
 Inspection of Municipal WTD /S
 Matrix:
 Drinking Water

WTP (S		-				
Parameter	Result	Units	RDL	Rmk	Analyzed	
1,2,4-Trimethylbenzene	<0.20	μg/L	0.20		07/08/2024	
1,2-Dichlorobenzene	<0.20	μg/L	0.20		07/08/2024	
1,2-Dichloroethane	<0.20	μg/L	0.20		07/08/2024	
1,2-Dichloropropane	<0.20	μg/L	0.20		07/08/2024	
1,2-Diethylbenzene	<0.20	μg/L	0.20		07/08/2024	
1,3,5-Trimethylbenzene	<0.20	μg/L	0.20		07/08/2024	
1,3-Dichlorobenzene	<0.20	μg/L	0.20		07/08/2024	
1,3-Diethylbenzene	<0.20	μg/L	0.20		07/08/2024	
1,4-Dichlorobenzene	<0.20	μg/L	0.20		07/08/2024	
1,4-Diethylbenzene	<0.20	μg/L	0.20		07/08/2024	
2-Ethyltoluene	<0.20	μg/L	0.20		07/08/2024	
3-Ethyltoluene	<0.20	μg/L	0.20		07/08/2024	
4-Ethyltoluene	<0.20	μg/L	0.20		07/08/2024	
Benzene	<0.20	μg/L	0.20		07/08/2024	
Bromomethane	<0.50	μg/L	0.50		07/08/2024	
Carbon tetrachloride	<0.20	μg/L	0.20		07/08/2024	
Chloroethane	<0.50	μg/L	0.50		07/08/2024	
Bromodichloromethane	4.89	μg/L	0.20		07/08/2024	
Bromoform	<0.20	μg/L	0.20		07/08/2024	
Chlorodibromomethane	0.51	μg/L	0.20		07/08/2024	
Chloroform	37.6	μg/L	1.00	RDS	07/08/2024	
Trihalomethanes-total	43.0	μg/L	0.20		07/08/2024	
Chloromethane	<0.50	μg/L	0.50		07/08/2024	
cis-1,2-Dichloroethylene	<0.20	μg/L	0.20		07/08/2024	
cis-1,3-Dichloropropylene	<0.20	μg/L	0.20		07/08/2024	
Dichlorodifluoromethane	<0.50	μg/L	0.50		07/08/2024	
Dichloromethane (DCM)	<0.20	μg/L	0.20		07/08/2024	





Workorder: ES-SRIVER-01 (16063) Chain: L15904

### **Analytical Results**

 Lab ID:
 16063001
 Date Collected:
 6/25/2024 1:16:00 PM

 Field ID:
 Inspection of Municipal WTP (S
 Matrix:
 Drinking Water

WIP (S					
Parameter	Result	Units	RDL	Rmk	Analyzed
Diisopropyl ether (DIPE)	<0.20	μg/L	0.20		07/08/2024
Ethylbenzene	<0.20	μg/L	0.20		07/08/2024
Ethylene dibromide	<0.20	μg/L	0.20		07/08/2024
Isopropylbenzene	<0.20	μg/L	0.20		07/08/2024
Isopropyltoluene	<0.20	μg/L	0.20		07/08/2024
m/p-Xylene	<0.20	μg/L	0.20		07/08/2024
o-Xylene	<0.20	μg/L	0.20		07/08/2024
Xylenes-total	<0.20	μg/L	0.20		07/08/2024
Methyl isobutyl ketone (MIBK)	<0.20	μg/L	0.20		07/08/2024
Methyl tert-butyl ether (MTBE)	<0.20	μg/L	0.20		07/08/2024
Monochlorobenzene	<0.20	μg/L	0.20		07/08/2024
n-Propylbenzene	<0.20	μg/L	0.20		07/08/2024
Styrene	<0.20	μg/L	0.20		07/08/2024
tert-Amyl methyl ether (TAME)	<0.20	μg/L	0.20		07/08/2024
Tetrachloroethylene	<0.20	μg/L	0.20		07/08/2024
Toluene	<0.20	μg/L	0.20		07/08/2024
trans-1,2-Dichloroethylene	<0.20	μg/L	0.20		07/08/2024
trans-1,3-Dichloropropylene	<0.20	μg/L	0.20		07/08/2024
Trichloroethylene	<0.20	μg/L	0.20		07/08/2024
Trichlorofluoromethane	<0.50	μg/L	0.50		07/08/2024
Vinyl chloride (Chloroethene)	<0.20	μg/L	0.20		07/08/2024
Surrogates					
Analyte	ı	Jnits	Recovery	C	ontrol Limits

Surrogates			
Analyte	Units	Recovery	Control Limits
Fluorobenzene (S)	%	94.8	70 - 130
Toluene-d8 (S)	%	99	70 - 130
4-Bromofluorobenzene (S)	%	89.8	70 - 130
3480			



Workorder: ES-SRIVER-01 (16063) Chain: L15904

### **Analytical Results**

Lab ID: 16063001 Date Collected: 6/25/2024 1:16:00 PM

Field ID: Inspection of Municipal WTP (S

Date Collected: 6/25/2024 1:16:00 PM

Matrix: Drinking Water

WIP (S					
Parameter	Result	Units	RDL	Rmk	Analyzed
1-Methylnaphthalene	<10	ng/L	10		07/05/2024
2-Methylnaphthalene	<10	ng/L	10		07/05/2024
Acenaphthene	<10	ng/L	10		07/05/2024
Acenaphthylene	<10	ng/L	10		07/05/2024
Anthracene	<10	ng/L	10		07/05/2024
Benz(a)anthracene	<20	ng/L	20		07/05/2024
Benzo(a)pyrene	<2.0	ng/L	2.0		07/05/2024
Benzo(b)fluoranthene	<10	ng/L	10		07/05/2024
Benzo(e)pyrene	<10	ng/L	10		07/05/2024
Benzo(g,h,i)perylene	<20	ng/L	20		07/05/2024
Benzo(k)fluoranthene	<10	ng/L	10		07/05/2024
Chrysene	<10	ng/L	10		07/05/2024
Dibenz(a,h)anthracene	<20	ng/L	20		07/05/2024
Fluoranthene	<10	ng/L	10		07/05/2024
Fluorene	<10	ng/L	10		07/05/2024
Indeno(1,2,3-cd)pyrene	<20	ng/L	20		07/05/2024
Naphthalene	<10	ng/L	10		07/05/2024
Perylene	<10	ng/L	10		07/05/2024
Phenanthrene	<10	ng/L	10		07/05/2024
Pyrene	<10	ng/L	10		07/05/2024

Surrogates			
Analyte	Units	Recovery	Control Limits
Acenaphthene-d10 (S)	%	116.5	25 - 150
Benz(a)anthracene-d12 (S)	%	124.9	25 - 150
Benzo(a)pyrene-d12 (S)	%	116.9	25 - 150
Benzo(g,h,i)perylene-d12 (S)	%	120.7	25 - 150
Fluoranthene-d10 (S)	%	116.2	25 - 150



Workorder: ES-SRIVER-01 (16063) **Chain:** L15904

### **Analytical Results**

Lab ID: 16063001 **Date Collected:** 6/25/2024 1:16:00 PM Inspection of Municipal Field ID: Matrix: Drinking Water

WTP (S

Parameter	Result	Units	RDL	Rmk Analyzed
Surrogates				
Analyte	ι	Units		Control Limits
Phenanthrene-d10 (S)		%	115.8	25 - 150
E3488				
PCB4/PCB10	<5.1	ng/L	5.1	07/12/2024
PCB6	<2.0	ng/L	2.0	07/12/2024
PCB8	<2.0	ng/L	2.0	07/12/2024
PCB15	<2.0	ng/L	2.0	07/12/2024
PCB16	<2.0	ng/L	2.0	07/12/2024
PCB18	<2.0	ng/L	2.0	07/12/2024
PCB19	<2.0	ng/L	2.0	07/12/2024
PCB22	<2.0	ng/L	2.0	07/12/2024
PCB28/PCB31	<5.1	ng/L	5.1	07/12/2024
PCB33	<2.0	ng/L	2.0	07/12/2024
PCB37	<2.0	ng/L	2.0	07/12/2024
PCB40	<2.0	ng/L	2.0	07/12/2024
PCB41	<2.0	ng/L	2.0	07/12/2024
PCB44	<2.0	ng/L	2.0	07/12/2024
PCB49	<2.0	ng/L	2.0	07/12/2024
PCB52	<2.0	ng/L	2.0	07/12/2024
PCB54	<2.0	ng/L	2.0	07/12/2024
PCB60/gamma-Chlordane	<5.1	ng/L	5.1	07/12/2024
PCB66	<2.0	ng/L	2.0	07/12/2024
PCB70	<2.0	ng/L	2.0	07/12/2024
PCB74/H-epoxide	<5.1	ng/L	5.1	07/12/2024
PCB77	<2.0	ng/L	2.0	07/12/2024
PCB81	<2.0	ng/L	2.0	07/12/2024





Workorder: ES-SRIVER-01 (16063) Chain: L15904

### **Analytical Results**

Lab ID: 16063001 Date Collected: 6/25/2024 1:16:00 PM

Field ID: Inspection of Municipal WTP (S Drinking Water

WTP (S				g	
Parameter	Result	Units	RDL	Rmk	Analyzed
PCB84	<2.0	ng/L	2.0		07/12/2024
PCB85	<2.0	ng/L	2.0		07/12/2024
PCB87	<2.0	ng/L	2.0		07/12/2024
PCB90/PCB101	<5.1	ng/L	5.1		07/12/2024
PCB95	<2.0	ng/L	2.0		07/12/2024
PCB97	<2.0	ng/L	2.0		07/12/2024
PCB99	<2.0	ng/L	2.0		07/12/2024
PCB104	<2.0	ng/L	2.0		07/12/2024
PCB105	<2.0	ng/L	2.0		07/12/2024
PCB110	<2.0	ng/L	2.0		07/12/2024
PCB114/cis-Nonachlor	<5.1	ng/L	5.1		07/12/2024
PCB118	<2.0	ng/L	2.0		07/12/2024
PCB119	<2.0	ng/L	2.0		07/12/2024
PCB123	<2.0	ng/L	2.0		07/12/2024
PCB126	<2.0	ng/L	2.0		07/12/2024
PCB128	<2.0	ng/L	2.0		07/12/2024
PCB129	<2.0	ng/L	2.0		07/12/2024
PCB135	<2.0	ng/L	2.0		07/12/2024
PCB137	<2.0	ng/L	2.0		07/12/2024
PCB138	<2.0	ng/L	2.0		07/12/2024
PCB141	<2.0	ng/L	2.0		07/12/2024
PCB149	<2.0	ng/L	2.0		07/12/2024
PCB151	<2.0	ng/L	2.0		07/12/2024
PCB153	<2.0	ng/L	2.0		07/12/2024
PCB155	<2.0	ng/L	2.0		07/12/2024
PCB156	<2.0	ng/L	2.0		07/12/2024
PCB157	<2.0	ng/L	2.0		07/12/2024



Workorder: ES-SRIVER-01 (16063) Chain: L15904

### **Analytical Results**

Lab ID: 16063001 Date Collected: 6/25/2024 1:16:00 PM
Field ID: Inspection of Municipal WTP (S Drinking Water

WTP (S	•			9	
Parameter	Result	Units	RDL	Rmk	Analyzed
PCB158	<2.0	ng/L	2.0		07/12/2024
PCB167	<2.0	ng/L	2.0		07/12/2024
PCB168	<2.0	ng/L	2.0		07/12/2024
PCB169	<2.0	ng/L	2.0		07/12/2024
PCB170	<2.0	ng/L	2.0		07/12/2024
PCB171/DMDT	<5.1	ng/L	5.1		07/12/2024
PCB174	<2.0	ng/L	2.0		07/12/2024
PCB177	<2.0	ng/L	2.0		07/12/2024
PCB178	<2.0	ng/L	2.0		07/12/2024
PCB180	<2.0	ng/L	2.0		07/12/2024
PCB183	<2.0	ng/L	2.0		07/12/2024
PCB187	<2.0	ng/L	2.0		07/12/2024
PCB188	<2.0	ng/L	2.0		07/12/2024
PCB189	<2.0	ng/L	2.0		07/12/2024
PCB191	<2.0	ng/L	2.0		07/12/2024
PCB193	<2.0	ng/L	2.0		07/12/2024
PCB194	<2.0	ng/L	2.0		07/12/2024
PCB199	<2.0	ng/L	2.0		07/12/2024
PCB200	<2.0	ng/L	2.0		07/12/2024
PCB201	<2.0	ng/L	2.0		07/12/2024
PCB202	<2.0	ng/L	2.0		07/12/2024
PCB203	<2.0	ng/L	2.0		07/12/2024
PCB205	<2.0	ng/L	2.0		07/12/2024
PCB206	<2.0	ng/L	2.0		07/12/2024
PCB207	<2.0	ng/L	2.0		07/12/2024
PCB208	<2.0	ng/L	2.0		07/12/2024
PCB Total	<15	ng/L	15		07/12/2024



Workorder: ES-SRIVER-01 (16063) Chain: L15904

### **Analytical Results**

Lab ID:16063001Date Collected:6/25/2024 1:16:00 PMField ID:Inspection of MunicipalMatrix:Drinking Water

WTP (S

Parameter	Result	Units	RDL	Rmk	Analyzed	
Trifluralin	<20	ng/l	20		07/12/2024	

Surrogates				
Analyte		Units	Recovery	Control Limits
PCB209 (S)		%	94.7	50 - 150
1,3,5-Tribromobenzene (S)		%	88.8	50 - 150
E3500				
Aminomethylphosphonic acid	<5.0	μg/L	5.0	07/08/2024
Glufosinate	<2.0	μg/L	2.0	07/08/2024
Glyphosate	<2.0	μg/L	2.0	07/08/2024

Surrogates				
Analyte		Units	Recovery	Control Limits
Aminomethylphosphonic a	cid-15N (S)	%	90	30 - 170
Glyphosate-15N, 13C2 (S	)	%	111	30 - 170
E3501				
Aldicarb	<1.0	μg/L	1.0	06/26/2024
Barban	<2.0	μg/L	2.0	06/26/2024
Bendiocarb	<0.50	μg/L	0.50	06/26/2024
Butylate	<0.50	μg/L	0.50	06/26/2024
Carbaryl	<0.20	μg/L	0.20	06/26/2024
Carbofuran	<0.50	μg/L	0.50	06/26/2024
Chlorbromuron	<0.50	μg/L	0.50	06/26/2024
Chlorpropham	<0.50	μg/L	0.50	06/26/2024
Chlorotoluron	<0.50	μg/L	0.50	06/26/2024
Diallate	<0.50	μg/L	0.50	06/26/2024
Difenoxuron	<0.50	μg/L	0.50	06/26/2024
Diuron	<0.50	μg/L	0.50	06/26/2024



Workorder: ES-SRIVER-01 (16063) **Chain:** L15904

### **Analytical Results**

Lab ID:	16063001	Date Collected:	6/25/2024 1:16:00 PM
Field ID:	Inspection of Municipal	Matrix:	Drinking Water

WIP (S					
Parameter	Result	Units	RDL	Rmk	Analyzed
Eptam	<0.50	μg/L	0.50		06/26/2024
Fluometuron	<0.50	μg/L	0.50		06/26/2024
Linuron	<0.50	μg/L	0.50		06/26/2024
Metobromuron	<0.50	μg/L	0.50		06/26/2024
Metoxuron	<0.50	μg/L	0.50		06/26/2024
Monolinuron	<0.50	μg/L	0.50		06/26/2024
Monuron	<0.50	μg/L	0.50		06/26/2024
Neburon	<0.50	μg/L	0.50		06/26/2024
Propoxur	<0.50	μg/L	0.50		06/26/2024
Siduron	<0.50	μg/L	0.50		06/26/2024
Triallate	<0.50	μg/L	0.50		06/26/2024
Propham	<0.50	μg/L	0.50		06/26/2024

Surrogates				
Analyte		Units	Recovery	Control Limits
Aldicarb-d3, 13C2 (S)		%	97.1	20 - 180
Carbaryl-d7 (S)		%	99.8	20 - 180
Carbofuran-d3 (S)		%		20 - 180
Diuron-d6 (S)		%	107.8	20 - 180
Eptam-d14 (S)		%	99.9	20 - 180
E3503				
Chlormequat	<0.050	μg/L	0.050	07/07/2024
Difenzoquat	<0.050	μg/L	0.050	07/07/2024
Diquat	<0.50	μg/L	0.50	07/07/2024
Paraquat	<0.50	μg/L	0.50	07/07/2024

Surrogates			
Analyte	Units	Recovery	Control Limits
Chlormequat-d4 (S)	%	117.2	50 - 150



Workorder: ES-SRIVER-01 (16063) **Chain:** L15904

### **Analytical Results**

Lab ID: 16063001 **Date Collected:** 6/25/2024 1:16:00 PM Inspection of Municipal Field ID:

Matrix: Drinking Water WTP (S

Parameter	Result	Units	RDL	Rmk Analyzed
Surrogates				
Analyte	ι	Inits	Recovery	Control Limits
Diquat-d8 (S)		%	104.8	50 - 150
Paraquat-d8 (S)		%	111.6	50 - 150
E3552				
2,4-DP	<0.050	μg/L	0.050	07/07/2024
MCPP	<0.050	μg/L	0.050	07/07/2024
2,3,4,5-Tetrachlorophenol	<0.050	μg/L	0.050	07/07/2024
2,3,4,6-Tetrachlorophenol	<0.050	μg/L	0.050	07/07/2024
2,3,4-Trichlorophenol	<0.050	μg/L	0.050	07/07/2024
2,4,5-Trichlorophenol	<0.050	μg/L	0.050	07/07/2024
2,4,5-T	<0.050	μg/L	0.050	07/07/2024
2,4,6-Trichlorophenol	<0.20	μg/L	0.20	07/07/2024
2,4-Dichlorophenol	<0.50	μg/L	0.50	07/07/2024
2,4-Dichlorophenoxyacetic acid	<0.050	μg/L	0.050	07/07/2024
MCPA	<0.050	μg/L	0.050	07/07/2024
2,4-DB	<0.050	μg/L	0.050	07/07/2024
МСРВ	<0.10	μg/L	0.10	07/07/2024
Bromoxynil	<0.050	μg/L	0.050	07/07/2024
Dicamba	<0.20	μg/L	0.20	07/07/2024
Diclofop	<0.050	μg/L	0.050	07/07/2024
Diclofop-methyl	<0.050	μg/L	0.050	07/07/2024
Diclofop-methyl Total	<0.050	μg/L	0.050	07/07/2024
Dinoseb	<0.050	μg/L	0.050	07/07/2024
Pentachlorophenol (PCP)	<0.050	μg/L	0.050	07/07/2024
Picloram	<0.050	μg/L	0.050	07/07/2024
Silvex	<0.050	μg/L	0.050	07/07/2024





Workorder: ES-SRIVER-01 (16063) Chain: L15904

### **Analytical Results**

Lab ID:16063001Date Collected:6/25/2024 1:16:00 PMField ID:Inspection of MunicipalMatrix:Drinking Water

WTP (S

Parameter	Result	Units	RDL	Rmk Analyzed
Surrogates				
Analyte	ι	Jnits	Recovery	Control Limits
2,4-Dichlorophenol-d3 (S)		%	102.1	20 - 180
Pentachlorophenol-13C (S)		%	100.2	20 - 180
2,4-D-d5 (S)		%	109.6	20 - 180
2,4,5-T-d4 (S)		%	97.3	20 - 180
2,4-DP-d3 (S)		%	99.5	20 - 180
MCPA-d3 (S)		%	102.6	20 - 180
2,4-DB-d3 (S)		%	96.2	20 - 180
Dicamba-d3 (S)		%	89.5	20 - 180
Thiamethoxam-d3 (S)		%	105.7	20 - 180
Imidacloprid-d4 (S)		%	106.5	20 - 180
E3553				
Alachlor	<0.10	μg/L	0.10	07/04/2024
Ametryne	<0.050	μg/L	0.050	07/04/2024
Atraton	<0.050	μg/L	0.050	07/04/2024
Atrazine	<0.050	μg/L	0.050	07/04/2024
Azinphos-methyl	<0.10	μg/L	0.10	07/04/2024
Butachlor	<0.10	μg/L	0.10	07/04/2024
Chlorpyrifos	<0.10	μg/L	0.10	07/04/2024
Chlorpyrifos-methyl	<0.050	μg/L	0.050	07/04/2024
Cyanazine	<0.10	μg/L	0.10	07/04/2024
De-ethyl Simazine	<0.10	μg/L	0.10	07/04/2024
Desethyl Atrazine	<0.10	μg/L	0.10	07/04/2024
Diazinon	<0.050	μg/L	0.050	07/04/2024
Dichlorvos	<0.10	μg/L	0.10	07/04/2024
Dimethoate	<0.050	μg/L	0.050	07/04/2024
Ethion	<0.050	μg/L	0.050	07/04/2024
Malathion	<0.050	μg/L	0.050	07/04/2024





Workorder: ES-SRIVER-01 (16063) Chain: L15904

### **Analytical Results**

Lab ID: 16063001 Date Collected: 6/25/2024 1:16:00 PM

Field ID: Inspection of Municipal WTP (S

Matrix: Drinking Water

WTP (S					
Parameter	Result	Units	RDL	Rmk	Analyzed
Metolachlor	<0.10	μg/L	0.10		07/04/2024
Metribuzin	<0.10	μg/L	0.10		07/04/2024
Mevinphos	<0.050	μg/L	0.050		07/04/2024
Parathion-ethyl	<0.10	μg/L	0.10		07/04/2024
Phorate	<0.10	μg/L	0.10		07/04/2024
Prometone	<0.050	μg/L	0.050		07/04/2024
Prometryne	<0.050	μg/L	0.050		07/04/2024
Propazine	<0.050	μg/L	0.050		07/04/2024
Simazine	<0.10	μg/L	0.10		07/04/2024
Temephos	<0.050	μg/L	0.050		07/04/2024
Terbufos	<0.10	μg/L	0.10		07/04/2024
Terbutryne	<0.10	μg/L	0.10		07/04/2024
Atrazine Total	<0.10	μg/L	0.10		07/04/2024

Surrogates			
Analyte	Units	Recovery	Control Limits
Diazinon-d10 (S)	%	99.6	20 - 180
Dichlorvos-d6 (S)	%	100.4	20 - 180
Dimethoate-d6 (S)	%	100.2	20 - 180
Malathion-d10 (S)	%	100.7	20 - 180
Alachlor-d13 (S)	%	99.3	20 - 180
Atrazine-d5 (S)	%	99	20 - 180
Simazine-d10 (S)	%	96.5	20 - 180



Workorder: ES-SRIVER-01 (16063) Chain: L15904

### Legend

Code	Definition
RDL	RDL refers to the Reported Detection Limit for each analyte being measured. The RDL listed on the Certificate of Analysis has been adjusted where required based on variations in the final volume and/or initial sample weight/volume analysed.
RDS	RESULT OBTAINED ON DILUTED SAMPLE



Workorder: ES-SRIVER-01 (16063) Chain: L15904

#### **Workorder Summary**

#### **Method Summary**

#### F3132

THE DETERMINATION OF VOLATILE ORGANOHALIDES AND HYDROCARBONS IN WATER, LEACHATES AND EFFLUENTS BY PURGE AND TRAP GAS CHROMATOGRAPHY (GC) MASS SPECTROMETRY

#### E3172

THE DETERMINATION OF FLUORIDE AND SULPHATE IN WATER, LEACHATES AND EFFLUENTS BY ION CHROMATOGRAPHY

#### E3364

THE DETERMINATION OF AMMONIA NITROGEN, NITRITE NITROGEN, NITRITE plus NITRATE NITROGEN AND REACTIVE ORTHO-PHOSPHATE IN SURFACE WATERS, DRINKING WATERS AND PRECIPITATION BY COLOURIMETRY

#### E3480

THE DETERMINATION OF POLYCYCLIC AROMATIC HYDROCARBONS IN WATER BY GAS CHROMATOGRAPHY MASS SPECTROMETRY

#### F3488

THE DETERMINATION OF POLYCHLORINATED BIPHENYL CONGENERS (PCBc), ORGANOHALOGENATED PESTICIDES AND CHLOROBENZENES (CB) IN WATER BY TWO-DIMENSIONAL GAS CHROMATOGRAPHY MICRO-ELECTRON CAPTURE DETECTION (GCxGC-µECD)

#### E3500

THE DETERMINATION OF GLYPHOSATE, GLUFOSINATE AND AMINOMETHYL-PHOSPHONIC ACID IN WATER BY DIRECT AQUEOUS INJECTION LIQUID CHROMATOGRAPHY-TANDEM MASS SPECTROMETRY (LC-MS/MS) ANALYSIS

#### E3501

THE DETERMINATION OF CARBAMATES AND PHENYL UREAS IN WATER BY DIRECT AQUEOUS INJECTION LIQUID CHROMATOGRAPHY-TANDEM MASS SPECTROMETRY (LC-MS/MS) ANALYSIS

#### E3503

THE DETERMINATION OF QUATERNARY AMMONIUM PESTICIDES (QUATS) IN WATER BY DIRECT AQUEOUS INJECTION LIQUID CHROMATOGRAPHY-TANDEM MASS SPECTROMETRY (LC-MS/MS) ANALYSIS

#### F3526

THE DETERMINATION OF MERCURY IN AQUEOUS SAMPLES BY COLD VAPOUR ATOMIC FLUORESCENCE SPECTROMETRY (CV-AFS)

#### E3552

THE DETERMINATION OF CHLOROPHENOLS (CPs) AND CHLORO-PHENOXYACID HERBICIDES (PAs) IN AQUEOUS ENVIRONMENTAL MATRICES BY LIQUID CHROMATOGRAPHY-TANDEM MASS SPECTROMETRIC (LC-MS/MS) ANALYSIS

#### E3553

THE DETERMINATION OF ORGANOPHOSPHATE AND TRIAZINE PESTICIDES IN WATER BY DIRECT AQUEOUS INJECTION LIQUID CHROMATOGRAPHY-TANDEM MASS SPECTROMETRY (LC-MS/MS) ANALYSIS

#### E3565

DETERMINATION OF TRACE METALS IN POTABLE WATERS BY INDUCTIVELY COUPLED PLASMA - MASS SPECTROMETRY (ICP-MS)

#### E357

QUANTITATIVE TEST FOR TOTAL COLIFORM AND/OR ESCHERICHIA COLI IN WATER BY COLILERT QUANTI-TRAY



Workorder: ES-SRIVER-01 (16063) Chain: L15904

### **Workorder Summary**

#### **Additional Information**

#### Sample 16063001 - UTM Coordinates Info

Easting 627160.41

NAD 83

Northing 5077795.18

Zone 17

#### Sample 16063001 - Drinking Water Sample Info

Drinking Water Type TREATED

Free Chlorine (mg/L) 2.00

Water for human consumption? Y

#### Workorder 16063 - Drinking Water Sub. Workorder

Contact Telephone No 705-303-9767

DWS or Well Address 28 Howard Street, South River, ON P0A 1X0

Drinking Water System Name South River Drinking Water System

Drinking Water System No. 220013562

Public Health Unit North Bay

Regulation Reg170

Water System Operator Don Michaud

Water System Owner The Corporation of the Village of South River



Workorder: ES-SRIVER-01 (16063) Chain: L15904

**QC** Results

QC Batch: INOI/6487 Analysis Method: E3364

Preparation Method: E3364 Associated Lab IDs: 16063001

Method Blank(198480)

Parameter	Result	Units	RDL
Phosphorus; phosphate	<0.003	mg/L	0.003
Nitrogen; nitrite	0.001	mg/L	0.001
Nitrogen; ammonia+ammonium	<0.02	mg/L	0.02
Nitrogen; nitrate+nitrite	<0.04	mg/L	0.04



Workorder: ES-SRIVER-01 (16063) Chain: L15904

**QC** Results

QC Batch: ORGI/3258 Analysis Method: E3501

Preparation Method: E3501 Associated Lab IDs: 16063001

#### Method Blank(196380)

Parameter	Result	Units F	RDL
Aldicarb	<1.0	μg/L 1	.0
Barban	<2.0	μg/L 2	2.0
Bendiocarb	<0.50	μg/L 0	0.50
Butylate	<0.50	μg/L 0	0.50
Carbaryl	<0.20	μg/L 0	0.20
Carbofuran	<0.50	μg/L 0	0.50
Chlorbromuron	<0.50	μg/L 0	0.50
Chlorpropham	<0.50	μg/L 0	0.50
Chlorotoluron	<0.50	μg/L 0	.50
Diallate	<0.50	μg/L 0	.50
Difenoxuron	<0.50	μg/L 0	).50
Diuron	<0.50	μg/L 0	.50
Eptam	<0.50	μg/L 0	).50
Fluometuron	<0.50	μg/L 0	.50
Linuron	<0.50	μg/L 0	.50
Metobromuron	<0.50	μg/L 0	0.50
Metoxuron	<0.50	μg/L 0	.50
Monolinuron	<0.50	μg/L 0	.50
Monuron	<0.50	μg/L 0	.50
Neburon	<0.50	μg/L 0	.50
Propham	<0.50	μg/L 0	).50
Propoxur	<0.50	μg/L 0	).50
Siduron	<0.50	μg/L 0	.50
Triallate	<0.50	μg/L 0	0.50



Workorder: ES-SRIVER-01 (16063) Chain: L15904

**QC** Results

QC Batch: ORGI/3268 Analysis Method: E3480

Preparation Method: E3480 Associated Lab IDs: 16063001

#### Method Blank(197412)

Parameter	Result	Units	RDL
Naphthalene	<10	ng/L	10
2-Methylnaphthalene	<10	ng/L	10
1-Methylnaphthalene	<10	ng/L	10
Acenaphthylene	<10	ng/L	10
Acenaphthene	<10	ng/L	10
Fluorene	<10	ng/L	10
Phenanthrene	<10	ng/L	10
Anthracene	<10	ng/L	10
Fluoranthene	<10	ng/L	10
Pyrene	<10	ng/L	10
Benz(a)anthracene	<20	ng/L	20
Chrysene	<10	ng/L	10
Benzo(b)fluoranthene	<10	ng/L	10
Benzo(k)fluoranthene	<10	ng/L	10
Benzo(e)pyrene	<10	ng/L	10
Benzo(a)pyrene	<2.0	ng/L	2.0
Perylene	<10	ng/L	10
Indeno(1,2,3-cd)pyrene	<20	ng/L	20
Dibenz(a,h)anthracene	<20	ng/L	20
Benzo(g,h,i)perylene	<20	ng/L	20



Workorder: ES-SRIVER-01 (16063) Chain: L15904

### **QC** Results

QC Batch: ORGI/3270 Analysis Method: E3552

Preparation Method: E3552 Associated Lab IDs: 16063001

#### Method Blank(197576)

Parameter	Result	Units	RDL
2,4-Dichlorophenol	<0.50	μg/L	0.50
2,4-Dichlorophenol	<0.50	μg/L	0.50
2,4,6-Trichlorophenol	<0.20	μg/L	0.20
2,4,6-Trichlorophenol	<0.20	μg/L	0.20
2,3,4-Trichlorophenol	<0.050	μg/L	0.050
2,3,4-Trichlorophenol	<0.050	μg/L	0.050
2,4,5-Trichlorophenol	<0.050	μg/L	0.050
2,4,5-Trichlorophenol	<0.050	μg/L	0.050
2,3,4,6-Tetrachlorophenol	<0.050	μg/L	0.050
2,3,4,6-Tetrachlorophenol	<0.050	μg/L	0.050
2,3,4,5-Tetrachlorophenol	<0.050	μg/L	0.050
2,3,4,5-Tetrachlorophenol	<0.050	μg/L	0.050
Pentachlorophenol (PCP)	<0.050	μg/L	0.050
Pentachlorophenol (PCP)	<0.050	μg/L	0.050
2,4-Dichlorophenoxyacetic acid (2,4-D)	<0.050	μg/L	0.050
2,4-Dichlorophenoxyacetic acid (2,4-D)	<0.050	μg/L	0.050
2,4,5-Trichlorophenoxyacetic acid (2,4,5-T)	<0.050	μg/L	0.050
2,4,5-Trichlorophenoxyacetic acid (2,4,5-T)	<0.050	μg/L	0.050
2-Methyl-4-chlorophenoxyacetic acid (MCPA)	<0.050	μg/L	0.050
2-Methyl-4-chlorophenoxyacetic acid (MCPA)	<0.050	μg/L	0.050
4-(2-Methyl-4-chlorophenoxy) butyric acid (MCPB)	<0.10	μg/L	0.10
4-(2-Methyl-4-chlorophenoxy) butyric acid (MCPB)	<0.10	μg/L	0.10
4-(2,4-Dichlorophenoxy)butyric acid (2,4-DB)	<0.050	μg/L	0.050
4-(2,4-Dichlorophenoxy)butyric acid (2,4-DB)	<0.050	μg/L	0.050
2-(2-Methyl-4-chlorophenoxy) propanoic acid (MCPP)	<0.050	μg/L	0.050
2-(2-Methyl-4-chlorophenoxy) propanoic acid (MCPP)	<0.050	μg/L	0.050
2-(2,4-Dichlorophenoxy)propionic acid (2,4-DP or Dichlorprop)	<0.050	μg/L	0.050
2-(2,4-Dichlorophenoxy)propionic acid (2,4-DP or Dichlorprop)	<0.050	μg/L	0.050
Bromoxynil	<0.050	μg/L	0.050
Bromoxynil	<0.050	μg/L	0.050
Dicamba	<0.20	μg/L	0.20
Dicamba	<0.20	μg/L	0.20
Diclofop	<0.050	μg/L	0.050
Diclofop	<0.050	μg/L	0.050
Diclofop-methyl	<0.050	μg/L	0.050



Workorder: ES-SRIVER-01 (16063) Chain: L15904

**QC** Results

QC Batch: ORGI/3270 Analysis Method: E3552

Preparation Method: E3552 Associated Lab IDs: 16063001

Parameter	Result	Units	RDL
Diclofop-methyl	<0.050	μg/L	0.050
Diclofop-methyl Total	<0.050	μg/L	0.050
Diclofop-methyl Total	<0.050	μg/L	0.050
Dinoseb	<0.050	μg/L	0.050
Dinoseb	<0.050	μg/L	0.050
Picloram	<0.050	μg/L	0.050
Picloram	<0.050	μg/L	0.050
Silvex (2,4,5-TP)	<0.050	μg/L	0.050
Silvex (2,4,5-TP)	<0.050	μg/L	0.050



Workorder: ES-SRIVER-01 (16063) Chain: L15904

**QC** Results

QC Batch: ORGI/3271 Analysis Method: E3503

Preparation Method: E3503 Associated Lab IDs: 16063001

Method Blank(197596)

Parameter	Result	Units	RDL
Chlormequat	<0.050	μg/L	0.050
Difenzoquat	<0.050	μg/L	0.050
Diquat	<0.50	μg/L	0.50
Paraquat	<0.50	μg/L	0.50



Workorder: ES-SRIVER-01 (16063) Chain: L15904

### **QC** Results

QC Batch: ORGI/3277

Analysis Method: E3500

Preparation Method: E3500 Associated Lab IDs: 16063001

#### Method Blank(197884)

Parameter	Result	Units	RDL
Aminomethylphosphonic acid (AMPA)	<5.0	μg/L	5.0
Glufosinate	<2.0	μg/L	2.0
Glyphosate	<2.0	μg/L	2.0

Surrogates			
Parameter	Units	Recovery	Control Limits
Aminomethylphosphonic acid-15N (S)	%	86.7	30 - 170
Glyphosate-15N, 13C2 (S)	%	112	30 - 170



Workorder: ES-SRIVER-01 (16063) Chain: L15904

### **QC** Results

QC Batch: ORGI/3278 Analysis Method: E3553

**Preparation Method:** E3553 **Associated Lab IDs:** 16063001

#### Method Blank(197334)

Parameter	Result	Units	RDL
Azinphos-methyl	<0.10	μg/L	0.10
Chlorpyrifos	<0.10	μg/L	0.10
Chlorpyrifos-methyl	<0.050	μg/L	0.050
Diazinon	<0.050	μg/L	0.050
Dichlorvos	<0.10	μg/L	0.10
Dimethoate	<0.050	μg/L	0.050
Ethion	<0.050	μg/L	0.050
Malathion	<0.050	μg/L	0.050
Mevinphos	<0.050	μg/L	0.050
Parathion-ethyl	<0.10	μg/L	0.10
Phorate	<0.10	μg/L	0.10
Temephos	<0.050	μg/L	0.050
Terbufos	<0.10	μg/L	0.10
Alachlor	<0.10	μg/L	0.10
Ametryne	<0.050	μg/L	0.050
Atraton	<0.050	μg/L	0.050
Atrazine	<0.050	μg/L	0.050
Butachlor	<0.10	μg/L	0.10
Cyanazine	<0.10	μg/L	0.10
De-ethyl Simazine	<0.10	μg/L	0.10
Desethyl Atrazine	<0.10	μg/L	0.10
Metolachlor	<0.10	μg/L	0.10
Metribuzin	<0.10	μg/L	0.10
Prometone	<0.050	μg/L	0.050
Prometryne	<0.050	μg/L	0.050
Propazine	<0.050	μg/L	0.050
Simazine	<0.10	μg/L	0.10
Terbutryne	<0.10	μg/L	0.10
Atrazine Total	<0.10	μg/L	0.10

Surrog	gates
--------	-------

Parameter	Units	Recovery	Control Limits
Alachlor-d13 (S)	%	101.6	20 - 180
Atrazine-d5 (S)	%	104.3	20 - 180
Diazinon-d10 (S)	%	101.2	20 - 180





Workorder: ES-SRIVER-01 (16063) Chain: L15904

### **QC** Results

QC Batch: ORGI/3278 Analysis Method: E3553

Preparation Method: E3553 Associated Lab IDs: 16063001

Surrogates			
Parameter	Units	Recovery	Control Limits
Dichlorvos-d6 (S)	%	100.3	20 - 180
Dimethoate-d6 (S)	%	101.3	20 - 180
Malathion-d10 (S)	%	101.7	20 - 180
Simazine-d10 (S)	%	97.2	20 - 180



Workorder: ES-SRIVER-01 (16063) Chain: L15904

### **QC** Results

QC Batch: ORGI/3287 Analysis Method: E3488

Preparation Method: E3488 Associated Lab IDs: 16063001

#### Method Blank(198828)

PCBB10         420         ngL         2.0           PCBB         420         ngL         2.0           PCB15         420         ngL         2.0           PCB16         420         ngL         2.0           PCB18         420         ngL         2.0           PCB18         420         ngL         2.0           PCB19         420         ngL         2.0           PCB29         420         ngL         2.0           PCB32         420         ngL         2.0           PCB33         420         ngL         2.0           PCB37         420         ngL         2.0           PCB40         410         ngL         1.0           PCB41         410         ngL         1.0           PCB42         410         ngL         1.0           PCB43         410         ngL         1.0           PCB44         410         ngL         1.0           PCB49         410         ngL         1.0           PCB49         410         ngL         1.0           PCB40         410         ngL         1.0           PCB71         420 </th <th>Parameter</th> <th>Result</th> <th>Units</th> <th>RDL</th>	Parameter	Result	Units	RDL
PCBB         420         rgL         20           PCB156         420         rgL         20           PCB168         420         rgL         20           PCB19         420         rgL         20           PCB29         420         rgL         20           PCB2D2         420         rgL         20           PCB33         420         rgL         20           PCB33         420         rgL         20           PCB40         410         rgL         20           PCB41         410         rgL         10           PCB41         410         rgL         10           PCB44         410         rgL         10           PCB44         410         rgL         10           PCB44         410         rgL         10           PCB49         410         rgL         10           PCB49         410         rgL         10           PCB49         410         rgL         10           PCB52         410         rgL         10           PCB64         410         rgL         10           PCB65         410         r	PCB4/PCB10	<2.0	ng/L	2.0
PCB15         42.0         ngL         2.0           PCB16         42.0         ngL         2.0           PCB18         42.0         ngL         2.0           PCB19         42.0         ngL         2.0           PCB22         42.0         ngL         2.0           PCB28/PCB31         42.0         ngL         2.0           PCB37         42.0         ngL         2.0           PCB38         42.0         ngL         2.0           PCB40         42.0         ngL         2.0           PCB41         41.0         ngL         2.0           PCB42         41.0         ngL         1.0           PCB43         41.0         ngL         1.0           PCB44         41.0         ngL         1.0           PCB49         41.0         ngL         1.0           PCB49         41.0         ngL         1.0           PCB52         41.0         ngL         1.0           PCB63         41.0         ngL         1.0           PCB54         41.0         ngL         1.0           PCB74         41.0         ngL         1.0           PCB	PCB6	<2.0	ng/L	2.0
PCB16         4.20         ngL         2.0           PCB18         4.20         ngL         2.0           PCB19         4.20         ngL         2.0           PCB2D         4.20         ngL         2.0           PCB2BPCB31         2.0         ngL         2.0           PCB33         4.0         ngL         2.0           PCB40         4.0         ngL         1.0           PCB41         4.0         ngL         1.0           PCB44         4.0         ngL         1.0           PCB49         4.0         ngL         1.0           PCB52         ngL         1.0         ngL           PCB60         1.0         ngL         1.0           PCB7         1.0         ngL         1.0           PCB7         1.0         ngL         1.0           PCB84 <t< td=""><td>PCB8</td><td>&lt;2.0</td><td>ng/L</td><td>2.0</td></t<>	PCB8	<2.0	ng/L	2.0
PCB18         <2.0	PCB15	<2.0	ng/L	2.0
PCB19         <20	PCB16	<2.0	ng/L	2.0
PCB22       q20       ng/L       2.0         PCB28/PCB31       q20       ng/L       2.0         PCB33       q20       ng/L       2.0         PCB40       q20       ng/L       2.0         PCB40       q10       ng/L       1.0         PCB41       q10       ng/L       1.0         PCB44       q10       ng/L       1.0         PCB49       q10       ng/L       1.0         PCB49       q10       ng/L       1.0         PCB52       q10       ng/L       1.0         PCB54       q10       ng/L       1.0         PCB60/gama-Chlordane       q20       ng/L       2.0         PCB67       g1       ng/L       2.0         PCB70       q10       ng/L       1.0         PCB70       q10       ng/L       1.0         PCB71       q10       ng/L       1.0         PCB81       q10       ng/L       1.0         PCB84       q10       ng/L       1.0         PCB85       q10       ng/L       1.0         PCB86       q10       ng/L       1.0         PCB87       q10	PCB18	<2.0	ng/L	2.0
PCB28/PCB31          30         ng/L         20           PCB33          20         ng/L         20           PCB37          20         ng/L         20           PCB40          10         ng/L         10           PCB41          ng/L         10           PCB44          ng/L         10           PCB49          10         ng/L         10           PCB49          10         ng/L         10           PCB52          10         ng/L         10           PCB54          10         ng/L         10           PCB54          10         ng/L         10           PCB60          10         ng/L         10           PCB61          10         ng/L         10           PCB7          10         ng/L         10           PCB7          10         ng/L         10           PCB81          10         ng/L         10           PCB85          10         ng/L         10 <t< td=""><td>PCB19</td><td>&lt;2.0</td><td>ng/L</td><td>2.0</td></t<>	PCB19	<2.0	ng/L	2.0
PCB33         4.0         mg/L         2.0           PCB37         4.0         mg/L         2.0           PCB40         4.0         mg/L         1.0           PCB41         4.0         mg/L         1.0           PCB44         4.0         mg/L         1.0           PCB49         4.0         mg/L         1.0           PCB49         4.0         mg/L         1.0           PCB54         4.0         mg/L         1.0           PCB60/gamma-Chlordane         4.0         mg/L         1.0           PCB61         4.0         mg/L         1.0           PCB70         4.0         mg/L         1.0           PCB70         4.0         mg/L         1.0           PCB81         4.0         mg/L         1.0           PCB85         4.0         mg/L         1.0           PCB97         4.0         mg/L         1.0	PCB22	<2.0	ng/L	2.0
PCB37         2.0         rg/L         2.0           PCB40         4.0         rg/L         1.0           PCB41         1.0         rg/L         1.0           PCB44         1.0         rg/L         1.0           PCB49         4.0         rg/L         1.0           PCB52         1.0         rg/L         1.0           PCB64         4.0         rg/L         1.0           PCB54         4.0         rg/L         1.0           PCB54         1.0         rg/L         1.0           PCB60/gamma-Chlordane         4.0         rg/L         1.0           PCB60/gamma-Chlordane         4.0         rg/L         1.0           PCB60         4.0         rg/L         1.0           PCB60         4.0         rg/L         1.0           PCB7         5.0         rg/L         1.0           PCB81         4.0         rg/L         1.0           PCB84         4.0         rg/L         1.0           PCB85         4.0         rg/L         1.0           PCB90/PCB101         4.0         rg/L         1.0           PCB99         4.0         rg/L         1.0	PCB28/PCB31	<2.0	ng/L	2.0
PCB40         <1.0	PCB33	<2.0	ng/L	2.0
PCB41        ng/L       1.0         PCB44        1.0       ng/L       1.0         PCB49        1.0       ng/L       1.0         PCB52        1.0       ng/L       1.0         PCB64        1.0       ng/L       1.0         PCB60        1.0       ng/L       2.0         PCB7        1.0       ng/L       1.0         PCB74/H-epoxide        2.0       ng/L       1.0         PCB77        1.0       ng/L       1.0         PCB84        1.0       ng/L       1.0         PCB85        1.0       ng/L       1.0         PCB87        1.0       ng/L       1.0         PCB87        1.0       ng/L       1.0         PCB86        1.0       ng/L       1.0         PCB87        1.0       ng/L       1.0         PCB96        1.0       ng/L       1.0         PCB97        1.0       ng/L       1.0         PCB99        1.0       ng/L       1.0	PCB37	<2.0	ng/L	2.0
PCB44       \$1.0       ng/L       1.0         PCB49       \$1.0       ng/L       1.0         PCB52       \$1.0       ng/L       1.0         PCB54       \$1.0       ng/L       1.0         PCB60/gamma-Chlordane       \$2.0       ng/L       2.0         PCB66       \$1.0       ng/L       1.0         PCB70       \$1.0       ng/L       1.0         PCB74/Hepoxide       \$2.0       ng/L       1.0         PCB81       \$1.0       ng/L       1.0         PCB84       \$1.0       ng/L       1.0         PCB85       \$1.0       ng/L       1.0         PCB869       \$1.0       ng/L       1.0         PCB90/PCB101       \$1.0       ng/L       1.0         PCB97       \$1.0       ng/L       1.0         PCB98       \$1.0       ng/L       1.0         PCB90/PCB101       \$1.0       ng/L       1.0         PCB99       \$1.0       ng/L       1.0         PCB99       \$1.0       ng/L       1.0         PCB104       \$1.0       ng/L       1.0         PCB105       \$1.0       ng/L       1.0	PCB40	<1.0	ng/L	1.0
PCB49       \$1.0       ng/L       1.0         PCB52       \$1.0       ng/L       1.0         PCB54       \$1.0       ng/L       1.0         PCB60/gamma-Chlordane       \$2.0       ng/L       2.0         PCB66       \$1.0       ng/L       1.0         PCB70       \$1.0       ng/L       1.0         PCB74/H-epoxide       \$2.0       ng/L       2.0         PCB77       \$1.0       ng/L       1.0         PCB84       \$1.0       ng/L       1.0         PCB85       \$1.0       ng/L       1.0         PCB87       \$1.0       ng/L       1.0         PCB87       \$1.0       ng/L       1.0         PCB86       \$1.0       ng/L       1.0         PCB87       \$1.0       ng/L       1.0         PCB90/PCB101       \$2.0       ng/L       1.0         PCB97       \$1.0       ng/L       1.0         PCB98       \$1.0       ng/L       1.0         PCB99       \$1.0       ng/L       1.0         PCB90       \$1.0       ng/L       1.0         PCB90       \$1.0       ng/L       1.0         PC	PCB41	<1.0	ng/L	1.0
PCB52         <1.0         mg/L         1.0           PCB54         <1.0         mg/L         1.0           PCB60/gamma-Chlordane         <2.0         mg/L         2.0           PCB66         <1.0         mg/L         1.0           PCB70         <1.0         mg/L         1.0           PCB74/H-epoxide         <2.0         mg/L         1.0           PCB77         <1.0         mg/L         1.0           PCB81         <1.0         mg/L         1.0           PCB84         <1.0         mg/L         1.0           PCB85         <1.0         mg/L         1.0           PCB80/PCB101         <2.0         mg/L         1.0           PCB90/PCB101         <2.0         mg/L         1.0           PCB97         <1.0         mg/L         1.0           PCB99         <1.0         mg/L         1.0           PCB99         <1.0         mg/L         1.0           PCB104         <1.0         mg/L         1.0           PCB105         <1.0         mg/L         1.0           PCB114/cis-Nonachlor         <1.0         mg/L         1.0           <1.0         mg/L	PCB44	<1.0	ng/L	1.0
PCB54       x1.0       ng/L       1.0         PCB60/gamma-Chlordane       x2.0       ng/L       2.0         PCB66       x1.0       ng/L       1.0         PCB70       x1.0       ng/L       1.0         PCB74/H-epoxide       x2.0       ng/L       2.0         PCB77       x1.0       ng/L       1.0         PCB81       x1.0       ng/L       1.0         PCB84       x1.0       ng/L       1.0         PCB85       x1.0       ng/L       1.0         PCB87       x1.0       ng/L       1.0         PCB90/PCB101       x2.0       ng/L       1.0         PCB95       x1.0       ng/L       1.0         PCB96       x1.0       ng/L       1.0         PCB99       x1.0       ng/L       1.0         PCB104       x1.0       ng/L       1.0         PCB105       x1.0       ng/L       1.0         PCB114/cis-Nonachlor       x1.0       ng/L       1.0         PCB114/cis-Nonachlor       x1.0       ng/L       1.0         x1.0       ng/L       1.0       ng/L       1.0         x1.0       ng/L       1.0	PCB49	<1.0	ng/L	1.0
PCB60/gamma-Chlordane         <2.0	PCB52	<1.0	ng/L	1.0
PCB66       \$1.0       ng/L       1.0         PCB70       \$1.0       ng/L       1.0         PCB74/H-epoxide       \$2.0       ng/L       2.0         PCB77       \$1.0       ng/L       1.0         PCB81       \$1.0       ng/L       1.0         PCB84       \$1.0       ng/L       1.0         PCB85       \$1.0       ng/L       1.0         PCB87       \$1.0       ng/L       1.0         PCB90/PCB101       \$2.0       ng/L       2.0         PCB95       \$1.0       ng/L       1.0         PCB97       \$1.0       ng/L       1.0         PCB99       \$1.0       ng/L       1.0         PCB104       \$1.0       ng/L       1.0         PCB105       \$1.0       ng/L       1.0         PCB110/cis-Nonachlor       \$2.0       ng/L       1.0         PCB1114/cis-Nonachlor       \$2.0       ng/L       1.0	PCB54	<1.0	ng/L	1.0
PCB70       <1.0       ng/L       1.0         PCB74/H-epoxide       <2.0	PCB60/gamma-Chlordane	<2.0	ng/L	2.0
PCB74/H-epoxide       <2.0 ng/L	PCB66	<1.0	ng/L	1.0
PCB77       <1.0       ng/L       1.0         PCB81       <1.0       ng/L       1.0         PCB84       <1.0       ng/L       1.0         PCB85       <1.0       ng/L       1.0         PCB87       <1.0       ng/L       1.0         PCB90/PCB101       <2.0       ng/L       1.0         PCB95       <1.0       ng/L       1.0         PCB97       <1.0       ng/L       1.0         PCB99       <1.0       ng/L       1.0         PCB104       <1.0       ng/L       1.0         PCB105       <1.0       ng/L       1.0         PCB110       <1.0       ng/L       1.0         PCB1114/cis-Nonachlor       <2.0       ng/L       2.0	PCB70	<1.0	ng/L	1.0
PCB81       \$1.0       ng/L       1.0         PCB84       \$1.0       ng/L       1.0         PCB85       \$1.0       ng/L       1.0         PCB87       \$1.0       ng/L       1.0         PCB90/PCB101       \$2.0       ng/L       2.0         PCB95       \$1.0       ng/L       1.0         PCB97       \$1.0       ng/L       1.0         PCB99       \$1.0       ng/L       1.0         PCB104       \$1.0       ng/L       1.0         PCB105       \$1.0       ng/L       1.0         PCB110       \$1.0       ng/L       1.0         PCB111/cis-Nonachlor       \$2.0       ng/L       2.0	PCB74/H-epoxide	<2.0	ng/L	2.0
PCB84       <1.0       ng/L       1.0         PCB85       <1.0       ng/L       1.0         PCB87       <1.0       ng/L       1.0         PCB90/PCB101       <2.0       ng/L       2.0         PCB95       <1.0       ng/L       1.0         PCB97       <1.0       ng/L       1.0         PCB104       <1.0       ng/L       1.0         PCB105       <1.0       ng/L       1.0         PCB110       <1.0       ng/L       1.0         PCB111/cis-Nonachlor       <2.0       ng/L       2.0	PCB77	<1.0	ng/L	1.0
PCB85       <1.0	PCB81	<1.0	ng/L	1.0
PCB87       <1.0       ng/L       1.0         PCB90/PCB101       <2.0	PCB84	<1.0	ng/L	1.0
PCB90/PCB101       <2.0	PCB85	<1.0	ng/L	1.0
PCB95       <1.0	PCB87	<1.0	ng/L	1.0
PCB95       <1.0	PCB90/PCB101	<2.0	ng/L	2.0
PCB97       <1.0	PCB95	<1.0		1.0
PCB104       <1.0	PCB97	<1.0	ng/L	1.0
PCB104       <1.0	PCB99			
PCB105       <1.0 ng/L	PCB104			1.0
PCB110       <1.0 ng/L	PCB105			1.0
PCB114/cis-Nonachlor <2.0 ng/L 2.0				
	PCB114/cis-Nonachlor			
	PCB118	<1.0	ng/L	1.0



Workorder: ES-SRIVER-01 (16063) Chain: L15904

**QC** Results

QC Batch: ORGI/3287 Analysis Method: E3488

Preparation Method: E3488 Associated Lab IDs: 16063001

Parameter	Result	Units	RDL
PCB119	<1.0	ng/L	1.0
PCB123	<1.0	ng/L	1.0
PCB126	<1.0	ng/L	1.0
PCB128	<1.0	ng/L	1.0
PCB129	<1.0	ng/L	1.0
PCB135	<1.0	ng/L	1.0
PCB137	<1.0	ng/L	1.0
PCB138	<1.0	ng/L	1.0
PCB141	<1.0	ng/L	1.0
PCB149	<1.0	ng/L	1.0
PCB151	<1.0	ng/L	1.0
PCB153	<1.0	ng/L	1.0
PCB155	<1.0	ng/L	1.0
PCB156	<1.0	ng/L	1.0
PCB157	<1.0	ng/L	1.0
PCB158	<1.0	ng/L	1.0
PCB167	<1.0	ng/L	1.0
PCB168	<1.0	ng/L	1.0
PCB169	<1.0	ng/L	1.0
PCB170	<1.0	ng/L	1.0
PCB174	<1.0	ng/L	1.0
PCB177	<1.0	ng/L	1.0
PCB178	<1.0	ng/L	1.0
PCB180	<1.0	ng/L	1.0
PCB183	<1.0	ng/L	1.0
PCB187	<1.0	ng/L	1.0
PCB188	<1.0	ng/L	1.0
PCB189	<1.0	ng/L	1.0
PCB191	<1.0	ng/L	1.0
PCB193	<1.0	ng/L	1.0
PCB194	<1.0	ng/L	1.0
PCB199	<1.0	ng/L	1.0
PCB200	<1.0	ng/L	1.0
PCB201	<1.0	ng/L	1.0
PCB202	<1.0	ng/L	1.0
PCB203	<1.0	ng/L	1.0



Workorder: ES-SRIVER-01 (16063) Chain: L15904

**QC** Results

QC Batch: ORGI/3287 Analysis Method: E3488

Preparation Method: E3488 Associated Lab IDs: 16063001

Parameter	Result	Units	RDL
PCB205	<1.0	ng/L	1.0
PCB206	<1.0	ng/L	1.0
PCB207	<1.0	ng/L	1.0
PCB208	<1.0	ng/L	1.0
PCB Total	<10	ng/L	10
Trifluralin	<20	ng/L	20



Workorder: ES-SRIVER-01 (16063) Chain: L15904

**QC Results** 

QC Batch: SPCI/4849 Analysis Method: E3526

Preparation Method: E3526 Associated Lab IDs: 16063001

70000001			
Method Blank(197016)			
Parameter	Result	Units	RDL
Mercury	<5.0	ng/L	5.0
Method Blank(197021)			
Parameter	Result	Units	RDL
Mercury	<5.0	ng/L	5.0
Method Blank(197026)			
Parameter	Result	Units	RDL
Mercury	<5.0	ng/L	5.0
Method Blank(197031)			
Parameter	Result	Units	RDL
Mercury	<5.0	ng/L	5.0



Workorder: ES-SRIVER-01 (16063) Chain: L15904

### **QC** Results

QC Batch: TOXI/4056 Analysis Method: E3132

Preparation Method: E3132 Associated Lab IDs: 16063001

#### Method Blank(198010)

Parameter	Result	Units	RDL
Dichlorodifluoromethane	<0.50	μg/L	0.50
Chloromethane	<0.50	μg/L	0.50
Vinyl chloride (Chloroethene)	<0.20	μg/L	0.20
Bromomethane	<0.50	μg/L	0.50
Chloroethane	<0.50	μg/L	0.50
Trichlorofluoromethane	<0.50	μg/L	0.50
1,1-Dichloroethylene	<0.20	μg/L	0.20
Dichloromethane (DCM)	<0.20	μg/L	0.20
trans-1,2-Dichloroethylene	<0.20	μg/L	0.20
Methyl tert-butyl ether (MTBE)	<0.20	μg/L	0.20
1,1-Dichloroethane	<0.20	μg/L	0.20
Diisopropyl ether (DIPE)	<0.20	μg/L	0.20
cis-1,2-Dichloroethylene	<0.20	μg/L	0.20
Chloroform	8.30	μg/L	0.20
1,2-Dichloroethane	<0.20	μg/L	0.20
1,1,1-Trichloroethane	<0.20	μg/L	0.20
Carbon tetrachloride	<0.20	μg/L	0.20
Benzene	<0.20	μg/L	0.20
tert-Amyl methyl ether (TAME)	<0.20	μg/L	0.20
1,2-Dichloropropane	<0.20	μg/L	0.20
Trichloroethylene	<0.20	μg/L	0.20
Bromodichloromethane	7.84	μg/L	0.20
cis-1,3-Dichloropropylene	<0.20	μg/L	0.20
Methyl isobutyl ketone (MIBK)	<0.20	μg/L	0.20
trans-1,3-Dichloropropylene	<0.20	μg/L	0.20
1,1,2-Trichloroethane	<0.20	μg/L	0.20
Toluene	<0.20	μg/L	0.20
Chlorodibromomethane	4.25	μg/L	0.20
Ethylene dibromide	<0.20	μg/L	0.20
Tetrachloroethylene	<0.20	μg/L	0.20
1,1,1,2-Tetrachloroethane	<0.20	μg/L	0.20
Monochlorobenzene	<0.20	μg/L	0.20
Ethylbenzene	<0.20	μg/L	0.20
Bromoform	0.48	μg/L	0.20
m/p-Xylene	<0.20	μg/L	0.20



Workorder: ES-SRIVER-01 (16063) Chain: L15904

**QC** Results

QC Batch: TOXI/4056 Analysis Method: E3132

Preparation Method: E3132 Associated Lab IDs: 16063001

Parameter	Result	Units	RDL
Styrene	<0.20	μg/L	0.20
1,1,2,2-Tetrachloroethane	<0.20	μg/L	0.20
o-Xylene	<0.20	μg/L	0.20
Isopropylbenzene	<0.20	μg/L	0.20
n-Propylbenzene	<0.20	μg/L	0.20
3-Ethyltoluene	<0.20	μg/L	0.20
4-Ethyltoluene	<0.20	μg/L	0.20
1,3,5-Trimethylbenzene	<0.20	μg/L	0.20
2-Ethyltoluene	<0.20	μg/L	0.20
1,2,4-Trimethylbenzene	<0.20	μg/L	0.20
1,3-Dichlorobenzene	<0.20	μg/L	0.20
1,4-Dichlorobenzene	<0.20	μg/L	0.20
Isopropyltoluene	<0.20	μg/L	0.20
1,2,3-Trimethylbenzene	<0.20	μg/L	0.20
1,2-Dichlorobenzene	<0.20	μg/L	0.20
1,3-Diethylbenzene	<0.20	μg/L	0.20
1,4-Diethylbenzene	<0.20	μg/L	0.20
1,2-Diethylbenzene	<0.20	μg/L	0.20
Trihalomethanes-total	20.9	μg/L	0.20
Xylenes-total	<0.20	μg/L	0.20

### **Surrogates**

Parameter	Units	Recovery	Control Limits
4-Bromofluorobenzene (S)	%	92.2	70 - 130
Fluorobenzene (S)	%	94	70 - 130
Toluene-d8 (S)	%	99.4	70 - 130

#### **QC Sample Comments**

#### Method Blank - 198010

Toronto tap water used as the Method Blank. Limits are not defined as values vary for batches. Values are acceptable.



Workorder: ES-SRIVER-01 (16063) Chain: L15904

Chain o	f Custody													0	ntai	rio (	8
Submitt Pho	D: ES-SRIVER-01 er: Erin Spires ne: te: LaSB		(	Client: Northern Compliar Contact: Sherry lie Phone: Email: sherry.ile	nce ersich		Water			Minis	try of		Enviro	125 Foront Phon	nt, Co Resou o ON	nserv and f rces M9F 235-	ration Parks Road 9 3V6 5743
					Collect	ed					Cont	aine	rs				
Pos	Field ID	Collection Site	Matrix	Collector	Date	Time	Total Number of Containers	B-126	B-147	B-149	B-210	в-сарн	V-040A	V-040B			
1	Inspection of Municipal WTP (S		WD	Erin Spires	06/25/2024	13:16	16	3	1	4	1	1	3	3			
Transfers	Released By		D.	nte/Time	Beesiwad By							l Da	ite/Ti				_
1 ransiers	Released by		Da	ite/Time	Received By							Da	ite/II	me			_
2					1							+					—
3												1					_
4																	
5																	
Delivery Me Airbill No:	thod:		-														

HORIZON'



Tuesday, June 25, 2024 4:55:10 PM
Dates and times are displayed using (-04:00) America/New\_York.
Page 1 of 8





Workorder: ES-SRIVER-01 (16063) Chain: L15904

**Chain of Custody** 

L15904

Workorder ID: ES-SRIVER-01 Client:

Inspection of Municipal WTP (S

Containers

Container ID: 855665

Container Type: B-CAPH - BOTTLE: CAPH3501, 40mL Amber Vial with Preservative: PCHPLUS - Precharged+Sodium thiosulphate

Potassium Citrate Monobasic Preservative.

Tests Requested:

CAPH3501 - CAPH in Water by LC-MS/MS

Container ID: 855666

Container Type: V-040A - VIAL: EPA VOA Amber preclean glass vial, Preservative: Na2S2O3 - 25% w/v Sodium Thiosulphate

40mL, 0.125" low bleed septa, ...... EACH ... (CASE = 72)

Tests Requested:

CPA3552 - CPPA in Water by LC-MS/MS

Container ID: 855667

Container Type: V-040A - VIAL: EPA VOA Amber preclean glass vial, Preservative: Na2S2O3 - 25% w/v Sodium Thiosulphate

40mL, 0.125" low bleed septa, ...... EACH ... (CASE = 72)

No tests were requested.

Tuesday, June 25, 2024 4:55:10 PM
Dates and times are displayed using (-04:00) America/New\_York.
Page 2 of 8





**Workorder:** ES-SRIVER-01 (16063) **Chain:** L15904

**Chain of Custody** 

L15904

Workorder ID: ES-SRIVER-01 Client:

Inspection of Municipal WTP (S

Containers

Container ID: 855668

Container Type: B-149 - BOTTLE: Clear round PET, 500mL wide mouth, Preservative: NONE - None

63mm unlined PP cap, w/label (cs120)

Tests Requested:

DISNUT3364 - DISSOLVED NUTRIENTS

F3172 - FLUORIDE BY IC

Container ID: 855669

Container Type: B-149 - BOTTLE: Clear round PET, 500mL wide mouth, Preservative: Na2S2O3 - 25% w/v Sodium Thiosulphate

63mm unlined PP cap, w/label (cs120)

Tests Requested:

GLY3500 - GLY in Water by LC-MS/MS

Container ID: 855670

Container Type: B-210 - BOTTLE: GLASS, "French Square", 250mL, Preservative: 6MHCl - 6 molar (50% v/v) HCl Acid

43mm neck

Tests Requested:

HG3526 - MERCURY IN SAMPLES BY CV-AFS

Tuesday, June 25, 2024 4:55:10 PM
Dates and times are displayed using (-04:00) America/New\_York.
Page 3 of 8





**Workorder:** ES-SRIVER-01 (16063) **Chain:** L15904

**Chain of Custody** 

L15904

Workorder ID: ES-SRIVER-01 Client:

Inspection of Municipal WTP (S

Containers

Container ID: 855671

Container Type: B-149 - BOTTLE: Clear round PET, 500mL wide mouth, Preservative: HNO3 - Nitric Acid to pH < 2

63mm unlined PP cap, w/label (cs120)

Tests Requested:

MET3565 - METALS IN WATER BY ICPMS

Container ID: 855672

Container Type: V-040A - VIAL: EPA VOA Amber preclean glass vial, Preservative: Na2S2O3 - 25% w/v Sodium Thiosulphate

40mL, 0.125" low bleed septa,

...... EACH ... (CASE = 72)

Tests Requested:

OPTRI3553 - OPTRI in Water by LC-MS/MS

Container ID: 855673

Container Type: B-126 - BOTTLE: 1 L AMBER FLINT GLASS, Boston Round, narrow mouth, w/Teflon Lined Cap, MECP Label

Tests Requested:

PAH3480 - PAHs In Water by GC/MS

Tuesday, June 25, 2024 4:55:10 PM
Dates and times are displayed using (-04:00) America/New\_York.
Page 4 of 8





**Workorder:** ES-SRIVER-01 (16063) **Chain:** L15904

**Chain of Custody** 

1 15904

Workorder ID: ES-SRIVER-01 Client:

Inspection of Municipal WTP (S

Containers

Container ID: 855674

Container Type: B-126 - BOTTLE: 1 L AMBER FLINT GLASS, Boston Preservative: NONE - None

Round, narrow mouth, w/Teflon Lined Cap, MECP Label

Tests Requested:

PCBC3488 - PCBs in Water by GCxGC-ECD

Container ID: 855675

Container Type: B-149 - BOTTLE: Clear round PET, 500mL wide mouth, Preservative: Na2S2O3 - 25% w/v Sodium Thiosulphate

63mm unlined PP cap, w/label (cs120)

Tests Requested:

QUAT3503 - QUAT in Water by LC-MS/MS

Container ID: 855676

Container Type: B-147 - BOTTLE: 300 ml. Clear square PET, str/sod w Preservative: PRE-CHAR - Pre-Charged

red MOE label (bulk cs216)

Tests Requested:

TCEC3571WD - TCEC in WD with Colilert

Tuesday, June 25, 2024 4:55:10 PM
Dates and times are displayed using (-04:00) America/New\_York.
Page 5 of 8





Workorder: ES-SRIVER-01 (16063) Chain: L15904

**Chain of Custody** 

L15904

Workorder ID: ES-SRIVER-01 Client:

Inspection of Municipal WTP (S

Containers

Container ID: 855677

Container Type: B-126 - BOTTLE: 1 L AMBER FLINT GLASS, Boston Preservative: NONE - None

Round, narrow mouth, w/Teflon Lined Cap, MECP Label

Tests Requested:

TRI3488 - Trifluralin in Water by GCxGC

Container ID: 855678

Container Type: V-040B - VIAL: EPA Clear Glass vial, 40mL, PC, 24mm Preservative: PBIOS - Pre-Charged with Bisulphate

low bleed septa, Sodium Bisulphate Preservative,

.... EACH ... (CASE = 72)

Tests Requested:

VOL3132 - VOLATILES IN WATER BY PT-GC/MS

Container ID: 855679

Container Type: V-040B - VIAL: EPA Clear Glass vial, 40mL, PC, 24mm Preservative: PBIOS - Pre-Charged with Bisulphate

No tests were requested.

Tuesday, June 25, 2024 4:55:10 PM
Dates and times are displayed using (-04:00) America/New\_York.
Page 6 of 8





**Workorder:** ES-SRIVER-01 (16063) **Chain:** L15904

	1110	-	C	-	4.
Cha	un	OI 1	∪u	รเบ	uv



Workorder ID:

Client:

Inspection of Municipal WTP (S

ES-SRIVER-01

Containers

Container ID: 855680

Container Type: V-040B - VIAL: EPA Clear Glass vial, 40mL, PC, 24mm Preservative: PBIOS - Pre-Charged with Bisulphate

low bleed septa, Sodium Bisulphate Preservative,

..... EACH ... (CASE = 72)

No tests were requested.

**Additional Data** 

Regulation: Reg170

Drinking Water System No.: 220013562

**Drinking Water System Name:** South River Drinking Water System

 DWS or Well Address:
 28 Howard Street, South River, ON P0A 1X0

 Water System Owner:
 The Corporation of the Village of South River

 Contact Telephone No:
 705-303-9767

 Water System Operator:
 Don Michaud

 Public Health Unit:
 North Bay

 Water for human consumption?:
 Y

Drinking Water Type: TREATED
Free Chlorine (mg/L): 2.00

Total Chlorine (mg/L): Name of School / Day Nursery:

Type of School:

Tuesday, June 25, 2024 4:55:10 PM
Dates and times are displayed using (-04:00) America/New\_York.
Page 7 of 8





Ontario 🗑

Workorder: ES-SRIVER-01 (16063) Chain: L15904

**Chain of Custody** 

115004

Client:

Inspection of Municipal WTP (S

**Additional Data** 

Workorder ID:

**Zone:** 17

ES-SRIVER-01

 Northing:
 5077795.18

 Easting:
 627160.41

 NAD:
 83

**Location Description:** 

Tuesday, June 25, 2024 4:55:10 PM
Dates and times are displayed using (-04:00) America/New\_York.
Page 8 of 8