

March 31, 2023

Mark Smith, Water Compliance Supervisor
Ministry of the Environment and Climate Change
3rd floor, 101 17th Street East
Owen Sound, Ontario
N4K 0A5

RE: 2022 Annual Performance Report, Requirement for Wiarton Sewage Lagoon System under the following Environmental Compliance Approval ECA 6045-ARDJS7

Dear Mr. Smith,

The Ontario Clean Water Agency entered into an agreement with the Town of South Bruce Peninsula to operate and maintain the Wiarton Wastewater Treatment System.

Please see attached for the 2022 Annual Performance Report for the Wiarton Sewage Lagoon System which covers the reporting period of January 1, 2022 to December 31, 2022. This report was completed in accordance with the requirements set out in ECA 6045-ARDJS7.

Should you require further clarification of information regarding this report, please feel free to contact me.

Sincerely,



Leo-Paul Frigault
Senior Operations Manager
Ontario Clean Water Agency
Grey Bruce Hub



ONTARIO CLEAN WATER AGENCY
AGENCE ONTARIENNE DES EAUX

WIARTON
WASTEWATER TREATMENT PLANT

ANNUAL PERFORMANCE REPORT

For the period of
JANUARY 1, 2022 TO DECEMBER 31, 2022

Prepared by the Ontario Clean Water Agency
For The Corporation of the Town of South Bruce Peninsula

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1. System Description

The Wiarton Wastewater Treatment System began operating in its present configuration in 2016. The facility includes a three (3)-cell Moving Bed Bioreactor System (MBBR), a three (3)-cell (6ha.) waste stabilization lagoon system that is aerated and operated in series configuration, a Dynasand Filtration System and a UV disinfection System.

The collection system serves the former Town of Wiarton. All raw sewage, including waste from the Wiarton Water Filtration Plant sewage pump station is collected at Sewage Pump Station no. 1 (SPS no.1) located at the intersection of George and Taylor Street. SPS no.1 is equipped with two (2) 60 hp 1775 rpm sewage pumps located in a dry well each with a rated capacity of 103.0 L/s at a TDH of 29.0 m (one duty, one standby) and a combined rated capacity of 130 L/s at a TDH of 39.0 m. The dry well is equipped with a forcemain air relief and vacuum relief valve. The sewage is then pumped to Sewage Pump Station no.2 (SPS no.2) located at the intersection of Taylor and Elm Street. SPS no.2 is equipped with three (3) 90 hp sewage pumps located in a wet well each with a rated capacity of 116 L/s at a TDH of 30.5 m (one (1) duty, two (2) standby), and two pumps in parallel having a rated capacity of 164.81 L/sec at a TDH of 36.68m (two (2) duty, one (1) standby). From there, the raw sewage is pumped to a three (3)-cell MBBR System and then flows to a three (3)-cell waste stabilization lagoon system which provides effluent polishing. Coagulant is injected at the MBBR effluent to provide precipitation of phosphorous in the lagoons. The discharge from lagoon cell #3 is continuous.

The Septage Receiving Station has controlled access and a magnetic flow meter to record volumes of septage being received. The Septage Receiving Station discharges to the MBBR.

Sodium Hypochlorite solution dosing is performed (before filtration and UV disinfection) for seasonal chlorination of lagoon effluent for control of algae growth between May and September of each year.

Disinfection that utilizes the UV disinfection system is only required from May 15 to September 15 but is currently being operated year round.

Discharge from the lagoon filter building is directed to Colpoy Bay through a 300 mm discharge pipe on Mary Street and Isaac Street (original). A 200mm backup effluent discharge pipe is located on Taylor Street. Both pipes intersect at the discharge pipe located at George and Tyson Streets.

An overview of the Wiarton Wastewater Treatment System can be found in Table 1 and a summary of the monitoring program can be found in Table 2.

Table 1. Wiarton Wastewater Treatment System Overview

Facility Name	Wiarion Wastewater Treatment Plant
Facility Type	MBBR 3-cell, Aerated Lagoon3-cell, Sand Filtration, UV disinfection with pumping stations (3)
Plant Classification	II
Works Number	110000819
Rated Capacity	4,400 m ³ /day
Number of Households	1,100
Receiving Water	Colpoy's Bay (Georgian Bay)
Environmental Compliance Approval	ECA 6045-ARDJS7 Issued November 23, 2017
Certificate of Approval	8-1028-99-006 (Air)

Table 2. Monitoring Program for Warton WWTP

Source	Parameter	Frequency	Method
Influent	Flow (m ³)	Daily	Flow Meter
	BOD ₅ , TSS, TP, TKN	Bi-Weekly	External Analysis
Effluent	Flow (m ³)	Daily	Flow Meter
	CBOD ₅ , TSS, TKN, Total Ammonia Nitrogen (TAN), Total Phosphorus	Bi-Weekly	External Analysis
	E. Coli	Bi-Weekly	External Analysis
	pH, Temperature	Bi-Weekly	In-House & External Analysis
	Temperature	Bi-Weekly	In-House & External Analysis
	Un-ionized Ammonia (WSER)	Quarterly	External Analysis
Septage	Flow (m ³)	Daily	Flow Meter
	BOD ₅ , Total Suspended Solids, Total Phosphorous, Total Kjeldahl Nitrogen, Total Ammonia Nitrogen (TAN), Chemical Oxygen Demand Organics: Acetone, Benzene, Ethylbenzene, Isopropyl alcohol, Methyl alcohol, Methylene Chloride, Methyl ethyl, ketone, Toluene, Xylene	Monthly	External Analysis
	Metals: Aluminum, Arsenic, Barium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Nickel, Potassium, Selenium, Silver, Sodium, Tin, Zinc	Quarterly	External Analysis
MBBR	DO, pH, Temperature, Ammonia*	Daily	Online analyzers
	BOD, TSS, Alkalinity, Total Phosphorous*	Bi-Weekly	External Analysis

*Not required by ECA 6045-ARDJS7

2. Monitoring Data

ECA 6045-ARDJS7, Section 11.4 requires

- (a). a summary and interpretation of all Influent and Imported Sewage monitoring data, including sewage characteristics, flow rates and a comparison to the values used in the design of the Works;
- (b). a summary and interpretation of all Final Effluent monitoring data, including concentration, flow rates, loading and a comparison to the design objectives and compliance limits in this Approval, including an overview of the success and adequacy of the Works;

2.1 Sampling Frequency

Both raw sewage and effluent are sampled on a regular basis. The sampling types and frequencies are summarized in Table 3, 4 and 5. The sampling frequencies either meet or exceed the requirements set out in ECA 6045-ARDJS7.

Table 3. Raw Sewage Monitoring – Sampling Frequencies as Required

Parameter	Sample Type	Frequency
BOD ₅	Grab	Monthly
Total Suspended Solids	Grab	Monthly
Total Phosphorous	Grab	Monthly
Total Kjeldahl Nitrogen	Grab	Monthly

Table 4. Effluent Sampling Monitoring – Sampling Frequencies as Required

Parameters	Sample Type	Frequency
CBOD ₅	8-hr Composite	Bi-weekly
Total Suspended Solids	8-hr Composite	Bi-weekly
Total Phosphorous	8-hr Composite	Bi-weekly
Total Ammonia Nitrogen (TAN)	8-hr Composite	Bi-weekly
E. Coli	Grab	Bi-weekly
pH	Grab	Bi-weekly
Temperature	Grab	Bi-weekly

Table 5. Imported Sewage Monitoring – Sampling Frequencies as Required by Schedule D of ECA 6045-ARDJS7

Parameters	Sample Type	Frequency
BOD ₅	Grab	Monthly
Total Suspended Solids	Grab	Monthly
Total Phosphorous	Grab	Monthly
Total Kjeldahl Nitrogen	Grab	Monthly
Total Ammonia Nitrogen (TAN)	Grab	Monthly
Chemical Oxygen Demand	Grab	Monthly
Organics: Acetone, Benzene, Ethylbenzene, Isopropyl alcohol, Methyl alcohol, Methylene chloride, Methyl ethyl, ketone, Toluene, Xylene	Grab	Monthly
Metals: Aluminum, Arsenic, Barium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Nickel, Potassium, Selenium, Silver, Sodium, Tin, Zinc	Grab	Quarterly

2.2 Effluent Limits

The effluent limits that are to be met as per ECA 6045-ARDJS7 for the Warton Sewage Treatment Lagoon are found in Table 6.

Table 6. Effluent Limits as per ECA 6045-ARDJS7.

Effluent Parameter	Monthly Average Concentration (mg/L) *	Monthly Average Waste Loading (kg/day)
CBOD ₅	15	66
Total Suspended Solids	15	66
Total Phosphorous as P	0.3	1.32
Total Ammonia Nitrogen (May 1 to October 31)	3	13.2
Total Ammonia Nitrogen (November 1 to April 30)	6	26.4
pH	Maintained between 6.0 to 9.5, inclusive, at all times	
E. Coli	Not to exceed 200 cfu/100 mL geometric mean density from May 15 to September 15	

**Under ECA 6045-ARDJS7 "Monthly Average Effluent Concentration" means the arithmetic mean of all Single Sample Results of the concentration of a contaminant in the Final Effluent sampled or measured during a calendar month, weighted by the quantity of the Final Effluent discharged per the days deemed to be represented by each sample*

2.3 Comparison of Data to Limits/Design Values

Analytical and monitoring data for the Wiarton Wastewater Treatment System is stored in OCWA’s WISKI7 data management system. Annual and monthly averages for flows, CBOD, BOD₅, Suspended Solids, Total Phosphorous as P, Nitrogen-series and E.coli can be found in Appendix A. Comparisons of analytical data from effluent samples to the effluent limits show the following removal efficiencies:

Table 7. 2022 Effluent Annual Average Concentrations and Removal Efficiencies

Parameter	Annual Average Concentration	Annual Average Removal Efficiency
CBOD ₅	2.33	n/a
Total Suspended Solids	4.89	95.8%
Total Phosphorous	0.03	95.0%

The following is a summary and interpretation of all monitoring data and a comparison to the effluent limits outlined in Table 8.

Table 8. Comparison of Wiarton Wastewater Treatment System Monitoring Data to Effluent Limits, 2022

2022	CBOD ₅				Total Suspended Solids				Total Phosphorous				Total Ammonia Nitrogen (TAN)				E. Coli	
	Monthly Average (mg/L)	Within Limits (15 mg/L)	Monthly Average Loading (kg/d)	Within Limits (66 kg/day)	Monthly Average (mg/L)	Within Limits (15 mg/L)	Monthly Average Loading (kg/d)	Within Limits (66 kg/day)	Monthly Average (mg/L)	Within Limits (0.3 mg/L)	Monthly Average Loading (kg/d)	Within Limits (1.32 kg/day)	Monthly Average (mg/L)	Within Limits (Nov 1 to Apr 1 - 6.0 mg/L & May 1 to Oct 31 - 3.0 mg/L)	Monthly Average Loading (kg/d)	Within Limits (Nov 1 to Apr 1 - 13.2 kg/day & May 1 to Oct 31 - 26.4 kg/day)	Mean Geometric Density (cfu/100 mL)	Within Limits (200 cfu/100 mL)
January	2.0	Yes	1.8	Yes	5.4	Yes	4.7	Yes	0.03	Yes	0.03	Yes	0.14	Yes	0.12	Yes	<2.0	Yes
February	3.9	Yes	4.5	Yes	8.9	Yes	10.3	Yes	0.03	Yes	0.03	Yes	0.97	Yes	0.85	Yes	<2.0	Yes
March	2.5	Yes	5.0	Yes	8.0	Yes	15.7	Yes	0.05	Yes	0.04	Yes	1.01	Yes	0.89	Yes	<2.0	Yes
April	2.4	Yes	4.8	Yes	9.3	Yes	18.4	Yes	0.03	Yes	0.06	Yes	0.11	Yes	0.22	Yes	<2.0	Yes
May	3.6	Yes	2.2	Yes	5.8	Yes	3.5	Yes	0.03	Yes	0.02	Yes	0.14	Yes	0.08	Yes	3.96	Yes
June	3.3	Yes	2.4	Yes	3.7	Yes	2.7	Yes	0.03	Yes	0.02	Yes	0.10	Yes	0.07	Yes	<2.0	Yes
July	2.0	Yes	1.7	Yes	2.4	Yes	2.0	Yes	0.03	Yes	0.03	Yes	0.10	Yes	0.09	Yes	<2.0	Yes
August	2.0	Yes	2.1	Yes	3.7	Yes	3.8	Yes	0.03	Yes	0.03	Yes	0.13	Yes	0.10	Yes	<2.0	Yes
September	2.0	Yes	1.3	Yes	3.5	Yes	2.4	Yes	0.03	Yes	0.02	Yes	0.13	Yes	0.08	Yes	<2.0	Yes
October	2.0	Yes	3.7	Yes	2.9	Yes	5.3	Yes	0.03	Yes	0.06	Yes	0.12	Yes	0.23	Yes	<2.0	Yes
November	2.0	Yes	2.0	Yes	4.0	Yes	4.1	Yes	0.03	Yes	0.03	Yes	0.23	Yes	0.24	Yes	1.4	Yes
December	2.0	Yes	3.7	Yes	4.0	Yes	7.4	Yes	0.03	Yes	0.06	Yes	0.33	Yes	0.60	Yes	<2.0	Yes

*"Monthly Average Effluent Concentration" means the arithmetic mean of all Single Sample Results of the concentration of a contaminant in the Final Effluent sampled or measured during a calendar month, weighted by the quantity of the Final Effluent discharged per the days deemed to be represented by each sample

During the reporting period there was no reportable instance where the sewage lagoon system exceeded the effluent limits set out in the ECA.

Another measure of effluent quality is pH, as per ECA 6045-ARDJS7 the effluent pH is to remain within the range of 6.0 and 9.5 at all times. In 2022, the effluent was within the effluent limits and ranged from 7.34 to 8.95 with an annual average of 8.24. A monthly summary of pH can be found in Table 9.

Table 9. Monthly Summary of pH for the Wiarton Wastewater Treatment System, 2022

	Average	Minimum	Maximum
January	8.54	8.39	8.68
February	8.25	8.09	8.40
March	8.43	8.33	8.54
April	8.82	8.61	8.95
May	8.56	8.46	8.60
June	8.19	8.03	8.31
July	8.23	7.70	8.65
August	8.13	7.76	8.45
September	7.82	7.45	8.14
October	8.19	7.95	8.31
November	7.74	7.34	8.14
December	7.88	7.39	8.14

2.4 Effluent Objectives

The effluent objectives as per ECA 6045-ARDJS7 for the Wiarton Wastewater Treatment Lagoon are found in Table 10.

Table 10. Effluent Objectives as per ECA 6045-ARDJS7.

Effluent Parameter	Monthly Average Concentration (mg/L) *	Monthly Average Waste Loading (kg/day)
CBOD ₅	10	n/a
Total Suspended Solids	10	n/a
Total Phosphorous as P	0.15	n/a
Total Ammonia Nitrogen (May 1 to October 31)	3	n/a
Total Ammonia Nitrogen (November 1 to April 30)	6	n/a

**Under ECA 6045-ARDJS7 "Monthly Average Effluent Concentration" means the arithmetic mean of all Single Sample Results of the concentration of a contaminant in the Final Effluent sampled or measured during a calendar month, weighted by the quantity of the Final Effluent discharged for the days deemed to be represented by each sample*

2.5 Comparison of Data to Effluent Objectives

ECA 6045-ARDJS7, Section 11.4 requires:

b) a summary and interpretation of all Final Effluent monitoring data, including concentration, flow rates, loading and a comparison to the design objectives and compliance limits in this Approval, including an overview of the success and adequacy of the Works;

g) a summary of efforts made to achieve the design objectives;

The Owner shall make an assessment of the issues and recommendations for pro-active actions if any is required under the following situations and include in the annual report to the Water Supervisor:

- a. when any of the design objectives is not achieved more than 50% of the time in a year;*

During the reporting period, the CBOD₅ monthly averages remained within the effluent objective of 10 mg/L 100% of the time producing an annual average of 2.48 mg/L and an annual average loading of 2.93 kg/d. During the 2015 reporting periods while operating without the MBBR, the Lagoon system produced an average CBOD₅ of 7.39 mg/L and an average loading of 13.30 kg/d. The addition of the MBBR process has helped decrease the annual average concentration by 66% and the average loading of CBOD₅ by 78%.

During the reporting period, the Total Suspended Solids monthly averages remained within the effluent objective of 10 mg/L, 100% of the time, producing an annual average of 5.13 mg/L and an annual average loading of 6.69 kg/d. During the 2015 reporting periods while operating without the MBBR, the Lagoon system produced an average Total Suspended Solids result of 11.89 mg/L and an average loading of 17.50 kg/d.

The MBBR process helped eliminating approximately 57% of the annual average concentration and approximately 62% of the average loading of Total Suspended Solids.

During the reporting period, the Total Phosphorus monthly averages remained within the system objective of 0.15 mg/L, 100% of the time, producing an annual average of 0.03 mg/L and an annual average loading of 0.04 kg/day. During the 2015 reporting periods while operating without the MBBR, the Lagoon system produced an average Total Phosphorus result of 0.31 mg/L and an average loading of 0.36 kg/day. The MBBR process helped eliminating approximately 90% of the annual average concentration and approximately 89% of the average loading of Total Phosphorus.

During the reporting period, the Total Ammonia Nitrogen monthly averages remained within the system objectives of 3 mg/L and 6 mg/L, 100% of the time, producing an annual average of 0.29 mg/L and an average loading of 0.30 kg/day. During the 2015 reporting period while operating without the MBBR, the Lagoon system produced an annual average Total Ammonia Nitrogen result of 4.20 mg/L and an average of 6.56 kg/day. The MBBR process helped eliminating approximately 93% of the annual average concentration and approximately 95% of the average loading of Total Ammonia Nitrogen.

All of the design objectives in the ECA were achieved 100% of the time during the reporting period.

Refer to Table 11 for detailed laboratory analysis results in comparison to the effluent objectives.

Table 11. Comparison of Wiarton Wastewater Treatment System Monitoring Data to Effluent Objectives, 2022

2022	CBOD ₅		Total Suspended Solids		Total Phosphorous		Total Ammonia Nitrogen (TAN)	
	Monthly Average* (mg/L)	Within Objective (10 mg/L)	Monthly Average* (mg/L)	Within Objective (10 mg/L)	Monthly Average* (mg/L)	Within Objective (0.15 mg/L)	Monthly Average* (mg/L)	Within Objective**
January	2.0	Yes	5.4	Yes	0.03	Yes	0.14	Yes
February	3.9	Yes	8.9	Yes	0.03	Yes	0.97	Yes
March	2.5	Yes	8.0	Yes	0.05	Yes	1.01	Yes
April	2.4	Yes	9.3	Yes	0.03	Yes	0.11	Yes
May	3.6	Yes	5.8	Yes	0.03	Yes	0.14	Yes
June	3.3	Yes	3.7	Yes	0.03	Yes	0.10	Yes
July	2.0	Yes	2.4	Yes	0.03	Yes	0.10	Yes
August	2.0	Yes	3.7	Yes	0.03	Yes	0.13	Yes
September	2.0	Yes	3.5	Yes	0.03	Yes	0.13	Yes
October	2.0	Yes	2.9	Yes	0.03	Yes	0.12	Yes
November	2.0	Yes	4.0	Yes	0.03	Yes	0.23	Yes
December	2.0	Yes	4.0	Yes	0.03	Yes	0.33	Yes

*"Monthly Average Effluent Concentration" means the arithmetic mean of all Single Sample Results of the concentration of a contaminant in the Final Effluent sampled or measured during a calendar month, weighted by the quantity of the Final Effluent discharged per the days deemed to be represented by each sample

**TAN Objectives are: Nov 1 to Apr 1 - 6.0 mg/L & May 1 to Oct 31 – 3.0 mg/L

2.6 Effluent Monitoring

The total effluent flow in 2022 was 453,418 m³ with an annual average daily flow of 1,246 m³/day.

Total effluent flows in 2022 have slightly increased in comparison to 2021, while the annual average daily flow has slightly decreased (448,909 m³ and 1,230 m³/day).

2.7 Influent Monitoring

ECA 6045-ARDJS7, Section 11.4. a) a summary and interpretation of all Influent and Imported Sewage monitoring data, including sewage characteristics, flow rates and a comparison to the values used in the design of the Works;

Table 12: Influent Characteristics

Parameter	Minimum	Average	Maximum
BOD5 (mg/L)	10	102.9	375
TSS (mg/L)	32	134.8	332
TKN (mg/L)	0.8	14.5	37.3
Total Phosphorous	0.06	2.00	5.10

In 2022, approximately 2,467 m³ of septage was received by the Wiarton Wastewater Treatment System. This is higher than 2021 (2,110 m³) and 2020 (1,642 m³) volumes. ECA 6045-ARDJS7 requires monthly septage samples to be tested for BOD₅, Total Suspended Solids, Total Phosphorous, Total Kjeldahl Nitrogen, Total Ammonia Nitrogen (TAN), Chemical Oxygen Demand, Organics and Metals (Quarterly). Biochemical Oxygen Demand (BOD₅), Total Phosphorus and Chemical Oxygen Demand are fairly stable; Total Suspended Solids, Total Kjeldahl Nitrogen (TKN) and Total Ammonia seem to vary significantly between samples. Refer to Appendix E for Septage Laboratory Results.

Table 13: Septage Receiving Characteristics

Parameter	Minimum	Maximum
Biochemical Oxygen Demand (BOD5) [mg/L]	455	3,300
Total Suspended Solids [mg/L]	158	6,810
Chemical Oxygen Demand [mg/L]	1,380	15,100
Ammonia+Ammonium (N) [mg/L]	1.2	429
Total Kjeldahl Nitrogen [as N mg/L]	48.8	563
Phosphorus (total) [mg/L]	5.2	69.4
Isopropyl Alcohol [µg/L]	<5000	<5000
Methyl alcohol [µg/L]	<5000	6,700
Acetone [µg/L]	92	<1200
Benzene [µg/L]	<0.5	<20
Ethylbenzene [µg/L]	<0.5	<20
Methylene Chloride [ug/L]	<0.5	<20
Methyl ethyl ketone [µg/L]	89	<800
Toluene [µg/L]	15.3	116

Xylene (total) [$\mu\text{g/L}$]	<0.5	<20
o-xylene [$\mu\text{g/L}$]	<0.5	<20
m/p-xylene [$\mu\text{g/L}$]	<0.5	<20
Aluminum (mg/L)	0.25	1.49
Arsenic (mg/L)	0.002	0.006
Barium (mg/L)	0.05	0.15
Cadmium (mg/L)	0.000	0.003
Calcium (mg/L)	79.8	151
Chromium (mg/L)	0.001	0.006
Cobalt (mg/L)	0.000	0.004
Copper (mg/L)	0.09	0.82
Iron (mg/L)	5.00	9.69
Lead (mg/L)	0.002	0.009
Magnesium (mg/L)	26.5	43.9
Manganese (mg/L)	0.18	0.38
Mercury (mg/L)	0.0000	0.0001
Nickel (mg/L)	0.004	0.013
Potassium (mg/L)	41.1	173
Selenium (mg/L)	0.001	0.002
Silver ($\mu\text{g/L}$)	<0.05	3.00
Zinc (mg/L)	0.16	2.69

2.8 Additional Monitoring Parameters

The following parameters do not have effluent limits or objectives but are monitored on a regular basis (see Section 2.1 for sampling frequency) as required by ECA 6045-ARDJS7.

2.8.1 Flows

The Owner shall make an assessment of the issues and recommendations for pro-active actions if any is required under the following situations and include in the annual report to the Water Supervisor:

- *b. when the Annual Average Daily Influent Flow reaches 80% of the Rated Capacity.*

The total influent flow in 2022 was 528,904 m³ with an annual average daily flow of 1,503 m³/day, which is 34.2% of the recommended rated capacity of 4,400 m³/day. Total influent flows in 2022 has slightly decreased while the average daily flow has slightly increased in comparison to 2021 (569,090 m³ and 1,490 m³/day). The daily influent flow remained within the recommended rated capacity 98.6% (i.e. 346 out of 351 days) of the time during 2022.

A summary of the average and maximum daily flows (not including the Septage Receiving and MBBR Bypasses) on a monthly basis can be found in Table 14. It should be noted that a maximum or average day flow for the month does not indicate that the rated capacity was exceeded for every day of the entire month. Daily flows which exceeded the recommended rated capacity were typically due to high precipitation. For more detailed information regarding flows, refer to Appendix A.

Table 14. Average Daily Raw Sewage Flows by Month for 2022

2022	Maximum Daily Raw Sewage Flow (m ³ /d)	Average Daily Raw Sewage Flow (m ³ /d)	Annual Average (m ³ /d)	Within Limits of Rated Capacity (4,400 m ³ /d)
January	1,361	1,029	1,501	Yes
February	2,611	1,373		
March	5,780	2,680		
April	2,708	2,038		
May	1,705	1,124		
June	1,542	1,094		
July	1,031	901		
August	3,098	1,225		
September	4,446	1,046		
October	3,775	1,716		
November	4,541	1,616		
December	6,064	2,010		

2.8.2 TKN

A parameter which is monitored on a regular basis but does not have effluent limits or objectives is TKN. The annual average TKN has slightly increased from 2021. Values still remain lower than 2015 (0.78 mg/L in 2021, 0.99 mg/L in 2020, 1.01 mg/L in 2019, 0.83 mg/L in 2018, 1.16 mg/L in 2017, 3.46 mg/L in 2016, and 4.75 mg/L in 2015).

Table 15. Monitoring Parameters for Wiarton Wastewater Treatment System, 2022

Parameters	Average	Minimum	Maximum
Total Kjeldahl Nitrogen (N mg/L)	0.80	0.50	2.10

2.9 Success & Adequacy of the System

Based upon a review of the analytical and monitoring data in comparison to the effluent limits and objectives it can be concluded that the Wiarton Wastewater Treatment System is performing adequately and successfully. The system shows a high removal efficiency and was within effluent limits. Regular monitoring and necessary process changes will continue to be made to best optimize the system and enable the system to be within the effluent objectives for a greater period of time.

3. Operating Challenges & Corrective Actions

ECA 6045-ARDJS7, Section 11.4. c) a summary of all operating issues encountered and corrective actions taken;(ECA 6045-ARDJS7)

All required bypass reporting was completed and Operations staff were able to maintain good overall performance of the sewage lagoon system. See Section 10 for more information and Appendix D for Bypass Reports.

4. Major Maintenance & Emergency Repairs

ECA 6045-ARDJS7, Section 11.4. d) requires a summary of all normal and emergency repairs and maintenance activities carried out on any major structure, equipment, apparatus or mechanism forming part of the Works;

- MBBR maintenance – Drained to clean screens

5. Effluent Quality Assurance/Control Measures

ECA 6045-ARDJS7, Section 11.4. e) requires a summary of any effluent quality assurance or control measures undertaken;

All laboratory raw sewage and effluent samples (Section 3.1) are analyzed by SGS Canada Inc., which is an ISO 17025 accredited laboratory. Calibrations and preventative maintenance are performed on facility equipment and monitoring equipment, see Section 6 for more details. In addition to sample analysis, preventative maintenance is scheduled for key equipment in the sewage lagoon system and pumping stations on at least a monthly basis. Maintenance activities were scheduled within the work management system.

OCWA as the Operating Authority (on behalf of the Owner) has made best efforts to control the effluent quality in a manner that it remains within the Effluent Objectives in the ECA. The measures taken to support these efforts include:

- Continuous monitoring equipment
- Regular plant inspections/checks
- Laboratory (3rd party) analysis of influent, effluent and septage receiving samples
- Data review
- Process optimization and adjustments (as required)
- Scheduled/preventative maintenance
- Repairs (as necessary)

6. Calibration & Maintenance

ECA 6045-ARDJS7, Section 11.4.f. requires a summary of the calibration and maintenance carried out on all Influent, Imported Sewage and Final Effluent monitoring equipment;

All in-house monitoring equipment was calibrated as per manufacturer's recommendations. Monitoring and metering equipment was also calibrated by a third party and is done so on an annual basis. In addition to sample analysis, preventative maintenance is scheduled for all equipment at the sewage lagoon system and pumping stations on at least a monthly basis. Maintenance activities were scheduled within the work management system (WMS).

On June 14, 2022, Indus Controls performed an annual third party instrument verification of the influent, final effluent, Septage Receiving and sewage pumping station #1 and #2 flowmeters. All flow meters passed the annual verification with percent errors of less than 5%. All records for calibrations/ verifications can be found in Appendix B. On May 3, 2022, HACH performed an annual third party instrument verification of the DO probes, and pH analyzers. All

instrumentation passed the annual verification. All records for calibrations/verifications can be found in Appendix B.

7. Sludge Generation and Handling

ECA 6045-ARDJS7, Section 11.4.h) requires a tabulation of the volume of sludge generated, an outline of anticipated volumes to be generated in the next reporting period and a summary of the locations to where the sludge was disposed;

Since the facility is a sewage lagoon system, accumulated sludge is stored in the lagoon cells. No sludge was disposed of in 2022 and no sludge is expected to be removed in 2023.

8. Septage Receiving Works

In 2022, approximately 2,467 m³ of septage was received by the Wiarton Wastewater Treatment System. The septage was received from various sources including:

- Owen Sound Septic Services
- Grey Bruce Septic Services
- Bluewater Sanitation

The total monthly volume of septage received can be found in Table 16.

Table 16. Total Volume of Septage Received in 2022

Month	Total Volume of Septage Received (m ³)
January	205.77
February	261.15
March	288.94
April	129.34
May	167.95
June	160.97
July	91.16
August	155.95
September	102.97
October	131.60
November	118.36
December	181.72

9. Community Complaints

ECA 6045-ARDJS7, Section 11.4.i) a summary of any complaints received and any steps taken to address the complaints;

During 2022, ten (10) community complaints for the Wiarton Wastewater Treatment System were received. The majority of complaints are due to blocked sewer laterals. A detailed summary of the community complaints and the steps taken to address the complaint can be found in Appendix C.

10. By-passes, Spills, Overflows and Abnormal Discharge Events

ECA 6045-ARDJS7, Section 11.4.j) requires a summary of all Bypasses, Overflows, spills within the meaning of Part X of EPA and abnormal discharge events, and other abnormal operating conditions;

There was zero (0) spills in 2022 at the Wiarton Wastewater Treatment System. During the reporting period, three (3) bypasses of final effluent (total volume of 21,167 m³) being discharged without receiving all of the required treatment were reported. One (1) overflow of raw sewage (total volume of 65 m³) was reported. All required information was recorded and the appropriate notifications were made to the Spills Action Centre, Ministry of Environment, Conservation and Parks (MECP), Ministry of Health and Long Term Care, the Town of South Bruce Peninsula and Environment Canada. Refer to Table 17 and Table 18 for a summary and Appendix D for detailed bypass and overflow reports.

ECA 6045-ARDJS7 requires that Quarterly bypass/overflow reports are to be submitted to the Water Supervisor. All 2022 quarterly reports were submitted to the Water Supervisor by the deadlines specified in the ECA and have been included in Appendix D.

Table 17. Bypass Events

Date	Time		Duration	Volume	Treatment Process Bypassed	Samples Collected	Reason for Bypass	Impact of Event	Mitigation
	Start	End	HH:MM	(m ³)					
March 28- April 5, 2022	March 28 14:20 PM	April 5 14:30 PM	72 Hours	21, 062	MBBR	Yes	The screens between MBBR cell 1 and 2 were plugged. The MBBR was shut down and bypassed before it spilled over.	Raw sewage discharge from the (3)-cell MBBR System bypass was directed to the (3)-cell waste stabilization lagoon system which provides effluent polishing. Flow from the lagoons was then directed into the sand filtration system and through the UV disinfection system before it was released into Colpoy's Bay.	The screens and the cells of the MBBR were cleaned before being put back online

April 13, 2022	April 13 01:05 AM	April 13 01:40 AM	35 minutes	74.67	UV disinfection	Yes	Power failure causing UV system failure	Filter treated effluent released to effluent outfall	n/a
May 21, 2022	May 21, 2022 04:22 AM	May 21, 2022 05:10 AM	48 minutes	30	UV disinfection	Yes	Power failure causing UV system failure	Filter treated effluent released to effluent outfall	n/a

Table 18. Overflow Events

Date	Time		Duration	Volume	Treatment Process Bypassed	Samples Collected	Reason for Bypass	Impact of Event	Mitigation
	Start	End	HH:MM	(m ³)					
August 7, 2022	12:30	14:05	1 hour 35 minutes	65	Colpoy's Bay	Raw sewage	Yes	Power bump caused issues with MCC components. This caused the pumps at pump station #1 to fail and air lock following a high flow event.	n/a

11. Notice of Modifications

ECA 6045-ARDJS7, Section 11.4. k.) a copy of all Notice of Modifications to Sewage Works submitted to the Water Supervisor under paragraph 1.d. of Condition 10, with a summary report on status of implementation of all modification.

No Notices of Modifications were submitted to the Water Supervisor during the reporting period.



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Appendix A

Performance Assessment Report

5620 WIARTON WASTEWATER TREATMENT LAGOON 110000819

	1/ 2022	2/ 2022	3/ 2022	4/ 2022	5/ 2022	6/ 2022	7/ 2022	8/ 2022	9/ 2022	10/ 2022	11/ 2022	12/ 2022	<--Total-->	<--Avg-->	<--Max-->	<-Criteria-->
Flows																
Raw Flow: Total - Raw Sewage m³/d	31,906.90	39,811.97	83,076.61	61,127.92	34,831.27	18,602.97	27,943.06	37,974.74	31,385.31	52,791.24	46,480.16	62,299.80	528,231.95			0.00
Raw Flow: Avg - Raw Sewage m³/d	1,029.25	1,372.83	2,679.89	2,037.60	1,123.59	1,094.29	901.39	1,224.99	1,046.18	1,702.94	1,602.76	2,009.67		1,504.93		4,400.00
Raw Flow: Max - Raw Sewage m³/d	1,360.59	2,611.07	5,779.70	2,707.68	1,705.36	1,541.67	1,031.28	3,097.81	4,445.76	3,761.04	4,527.04	6,064.14			6,064.14	0.00
Raw Flow: Count - Raw Sewage m³/d	31.00	28.00	31.00	30.00	31.00	17.00	31.00	31.00	30.00	31.00	29.00	31.00	351.00			0.00
Eff. Flow: Total - Effluent m³/d	27,275.00	32,480.00	60,717.00	59,226.00	18,506.00	22,066.00	26,576.00	42,493.00	20,142.00	57,174.00	29,535.00	57,228.00	453,418.00			0.00
Eff. Flow: Avg - Effluent m³/d	879.84	1,160.00	1,958.61	1,974.20	596.97	735.53	857.29	1,370.74	671.40	1,844.32	1,018.45	1,846.06		1,242.24		4,400.00
Eff. Flow: Max - Effluent m³/d	1,311.00	1,922.00	3,354.00	4,083.00	1,645.00	3,182.00	2,518.00	3,342.00	1,702.00	4,127.00	3,013.00	5,710.00			5,710.00	0.00
Eff Flow: Count - Effluent m³/d	31.00	28.00	31.00	30.00	31.00	30.00	31.00	31.00	30.00	31.00	30.00	31.00	365.00			0.00
Carbonaceous Biochemical Oxygen Demand: CBOD																
Eff: Avg cBOD5 - Effluent mg/L	< 2.00	< 3.50	< 2.20	< 2.40	< 3.20	< 2.00	< 2.00	< 2.00	< 2.00	< 2.00	< 2.00	< 2.00		< 2.33	< 3.50	20.00
Eff: # of samples of cBOD5 - Effluent	2.00	2.00	5.00	5.00	5.00	2.00	3.00	3.00	2.00	2.00	2.00	3.00	36.00			0.00
Loading: cBOD5 - Effluent kg/d	< 1.760	< 4.060	< 4.309	< 4.738	< 1.910	< 1.471	< 1.715	< 2.741	< 1.343	< 3.689	< 1.969	< 3.692		< 2.78	< 4.74	
Biochemical Oxygen Demand: BOD5																
Raw: Avg BOD5 - Raw Sewage mg/L	145.00	< 104.00	40.67	135.50	90.00	151.67	127.00	< 108.67	< 19.00	< 11.00	53.00	252.50		103.17	252.50	0.00
Raw: # of samples of BOD5 - Raw Sewage	2.00	2.00	3.00	2.00	2.00	3.00	2.00	3.00	2.00	2.00	2.00	2.00	27.00			0.00
Total Suspended Solids: TSS																
Raw: Avg TSS - Raw Sewage mg/L	126.00	168.50	91.67	140.50	119.00	205.00	174.50	125.00	38.00	61.00	103.00	256.50		134.06	256.50	0.00
Raw: # of samples of TSS - Raw Sewage	2.00	2.00	3.00	2.00	2.00	3.00	2.00	3.00	2.00	2.00	2.00	2.00	27.00			0.00
Eff: Avg TSS - Effluent mg/L	5.50	8.50	6.40	8.00	3.60	4.00	< 2.33	4.00	3.50	3.00	4.00	< 3.33		4.89	8.50	24.00
Eff: # of samples of TSS - Effluent	2.00	2.00	5.00	5.00	5.00	2.00	3.00	3.00	2.00	2.00	2.00	3.00	36.00			0.00
Loading: TSS - Effluent kg/d	4.839	9.860	12.535	15.794	2.149	2.942	< 2.000	5.483	2.350	5.533	3.938	< 6.154		6.13	15.79	
Percent Removal: TSS - Raw Sewage %	95.63	94.96	93.02	94.31	96.97	98.05	98.66	96.80	90.79	95.08	96.12	98.70			98.70	0.00
Total Phosphorus: TP																
Raw: Avg TP - Raw Sewage mg/L	3.26	2.65	0.90	2.69	2.84	3.07	2.39	2.36	0.11	0.28	1.15	2.22		1.99	3.26	0.00
Raw: # of samples of TP - Raw Sewage	2.00	2.00	3.00	2.00	2.00	3.00	2.00	3.00	2.00	2.00	2.00	2.00	27.00			0.00
Eff: Avg TP - Effluent mg/L	< 0.03	< 0.04	< 0.04	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.04	< 0.03	< 0.03	< 0.03		< 0.03	< 0.04	0.50
Eff: # of samples of TP - Effluent	2.00	2.00	5.00	5.00	5.00	2.00	3.00	3.00	2.00	2.00	2.00	3.00	36.00			0.00
Loading: TP - Effluent kg/d	< 0.026	< 0.041	< 0.078	< 0.059	< 0.019	< 0.022	< 0.026	< 0.041	< 0.023	< 0.055	< 0.030	< 0.055		< 0.04	< 0.08	

Percent Removal: TP - Raw Sewage %	99.08	98.68	95.56	98.88	98.87	99.02	98.74	98.73	66.67	89.29	97.38	98.65			99.08	0.00
Nitrogen Series																
Raw: Avg TKN - Raw Sewage mg/L	22.60	20.25	6.93	17.70	22.40	23.33	16.20	19.43	1.15	2.30	1.80	16.50		14.22	23.33	0.00
Raw: # of samples of TKN - Raw Sewage	2.00	2.00	3.00	2.00	2.00	3.00	2.00	3.00	2.00	2.00	2.00	2.00	27.00			0.00
Eff: Avg TAN - Effluent mg/L	< 0.15	0.90	0.60	< 0.10	< 0.14	< 0.10	< 0.10	< 0.10	< 0.15	< 0.10	0.25	0.27		< 0.25	< 0.90	8.00
Eff: # of samples of TAN - Effluent	2.00	2.00	5.00	5.00	5.00	2.00	3.00	3.00	2.00	2.00	2.00	3.00	36.00			0.00
Loading: TAN - Effluent kg/d	< 0.132	1.044	1.175	< 0.197	< 0.084	< 0.074	< 0.086	< 0.137	< 0.101	< 0.184	0.246	0.492		< 0.33	< 1.18	
Eff: Avg NO3-N - Effluent mg/L	5.02	5.92	5.45	3.07	0.76	< 0.12	0.29	0.13	< 0.16	2.56	2.84	5.18		2.62	5.92	0.00
Eff: # of samples of NO3-N - Effluent	2.00	2.00	5.00	5.00	5.00	2.00	3.00	3.00	2.00	2.00	2.00	3.00	36.00			0.00
Eff: Avg NO2-N - Effluent mg/L	< 0.04	0.29	< 0.11	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.05	< 0.04	0.09		< 0.07	< 0.29	0.00
Eff: # of samples of NO2-N - Effluent	2.00	2.00	5.00	5.00	5.00	2.00	3.00	3.00	2.00	2.00	2.00	3.00	36.00			0.00
Disinfection																
Eff: GMD E. Coli - Effluent cfu/100mL	2.00	2.00	1.78	1.68	3.96	2.00	2.00	2.00	2.00	2.00	1.41	2.00				



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Appendix B

Calibration Reports



Hach ServicePlus™

FIELD SERVICE REPORT / RAPPORT DE SERVICE DE TERRAIN

Account Number / No. de Compte: 40302465

Contact Name / Nom du Contact: LEO-PAUL FRIGAULT

Customer / Client: ONTARIO CLEAN WATER AGENCY

Fax:

Phone / Téléphone: 519-534-1610

Email Address / Adresse: lfrigault@ocwa.com

Location: ONTARIO CLEAN WATER AGENCY, 897 BAYVIEW ST, WIARTON,
Ontario, N0H 2T0, CA

Technician / Technicien: Stephen Bilton

Purchase Order / Bon de Commande: 5844/5620

Work Order Number / Numéro de Commande: WO-01272464 - Visit - PPV

Date of Service / Date de service: 5/3/2022

Product / Produit	Product / Produit Description	Serial Number / No. de Série	Asset Tag
LPV417.99.00002	1720E LR TURBIDITY SENSOR, HACH	040100000409	Filter 2 Turbidity
Notes			
as found reading: 0.022 ntu, gain 0.67, cleaned, inspected, replaced lamp, photocell and cable, confirmed lamp voltage, zeroed electronics, calibrated with Hach formazin standard at 20 ntu (Lot A1270 exp sep23), new gain 0.62, verified with Hach formazin standard at 1 ntu (Lot A2013 exp feb24), reads 0.987, as left reading: 0.042 ntu, unit is performing to specifications			

Product / Produit	Product / Produit Description	Serial Number / No. de Série	Asset Tag
LPV417.99.00002	1720E LR TURBIDITY SENSOR, HACH	041000004817	Raw Water Turbidity
Notes			
as found reading: 0.239 ntu, gain 0.69, cleaned, inspected, replaced lamp, and cable, confirmed lamp voltage, zeroed electronics, calibrated with Hach formazin standard at 20 ntu (Lot A1270 exp sep23), new gain 0.59, verified with Hach formazin standard at 1 ntu (Lot A2013 exp feb24), reads 0.978, as left reading: 0.206 ntu, unit is performing to specifications			

Product / Produit	Product / Produit Description	Serial Number / No. de Série	Asset Tag
LPV417.99.00002	1720E LR TURBIDITY SENSOR, HACH	040200000688	Filter 1 Turbidity
Notes			
as found reading: 0.021 ntu, gain 0.74, cleaned, inspected, replaced lamp, and cable, confirmed lamp voltage, zeroed electronics, calibrated with Hach formazin standard at 20 ntu (Lot A1270 exp sep23), new gain 0.61, verified with Hach formazin standard at 1 ntu (Lot A2013 exp feb24), reads 0.911, as left reading: 0.046 ntu, unit is performing to specifications			

Product / Produit	Product / Produit Description	Serial Number / No. de Série	Asset Tag
4700000	oo 2100N LAB TURB, EPA 1821	05070C020466	211066
Notes			
as found: condition good, firmware version 2.1, cleaned, inspected internally, replaced lamp and calibrated with Hach formazin standards (Lot A1264 exp dec22), as left standards read: <0.1: 0.036, 20: 20.3, 200: 201, 1000: 1009, 4000: 4015, 7500: 7554, empty cell: 0.012, unit is performing within specifications			

Product / Produit	Product / Produit Description	Serial Number / No. de Série	Asset Tag
4650000	oo 2100P PORTABLE TURBIDIMETER	021100028695	211065
Notes			
As found, the condition of the turbidimeter was good The turbidimeter was inspected, the exterior and the optics chamber were cleaned, the batteries were replaced, and the turbidimeter was calibrated using StablCal standards (lot A1256 exp Jan23). The turbidimeter was verified with DI water (0.09), 10 NTU (10.1) and 800 NTU (801) Stablcal standards. After PM service was completed, the as left empty cell reading of the turbidimeter was 0.01. The turbidimeter has been restored to normal operation, and performance and condition were within specifications.			

Product / Produit	Product / Produit Description	Serial Number / No. de Série	Asset Tag
LXV440.53.10002	AISE SC W RFID (USA)	1653164	Ait-207/tit-206
Notes			
As found, the condition of the probe was expired cartridge and the sample readings were: 161.3 mg/L NH4-N and 198.2 K. The probe was cleaned, inspected, and replaced the sensor cartridge and gasket were replaced. A new sensor code was entered, and the electronic operation was verified using a test cartridge. After PM service was completed, the as left reading of the analyzer was 3.0 mg/L NH4-N and 9.9 K. The probe has been restored to normal operation, and its performance and condition were within specifications.			

Product / Produit	Product / Produit Description	Serial Number / No. de Série	Asset Tag
5440000	oo CL17 FINAL ASSEMBLY W/KITS	030800007905	Finished Water Clearwell Free
Notes			
As found, the condition of the CL17 was good, the firmware version was 1.4, and the instrument reading was 1.71 mg/L. A new maintenance kit was installed, and the colorimeter was cleaned and inspected. Tubing, fittings, and the stir magnet were replaced. The results of a grab sample were: DR900 read 1.65 mg/L, analyzer read 1.71 mg/L. The results were within the acceptable tolerance. After PM service was completed, the firmware version was 1.4, the as left reading of the analyzer was 1.70 mg/L. The analyzer has been restored to normal operation, and its performance and condition were within specifications.			

Product / Produit	Product / Produit Description	Serial Number / No. de Série	Asset Tag
5440000	oo CL17 FINAL ASSEMBLY W/KITS	031000008358	Raw Water Total chlorine
Notes			
As found, the condition of the CL17 was good, the firmware version was 1.4, and the instrument reading was 0.86 mg/L. A new maintenance kit was installed, and the colorimeter was cleaned and inspected. Tubing, fittings, and the stir magnet were replaced. The results of a grab sample were: DR900 read 1.65 mg/L, analyzer read 0.78 mg/L. The results were within the acceptable tolerance. After PM service was completed, the firmware version was 1.4, the as left reading of the analyzer was 0.86 mg/L. The analyzer has been restored to normal operation, and its performance and condition were within specifications.			

Product / Produit	Product / Produit Description	Serial Number / No. de Série	Asset Tag
DPD1P1	Digital pH Sensor, PEEK, Convertible	000907430223	Raw Water ph
Notes			
As found, the condition of the probe was good, the firmware version was 3.40, and the sample reading was 7.81. The probe was cleaned, inspected, the salt bridge was replaced, and the probe was refilled with standard cell solution. Following PM service, the probe was calibrated using certified pH buffer standards. The calibration slope after PM was -47.0 mV/pH. The measurement performance of the probe following service and calibration was verified using certified pH standards. Their values were: 4.01 - 4.01, 7 - 7.00, 10 - 10.01. After PM service, calibration, and verification were completed, the firmware version was 3.40 and the as left reading of the probe was 7.35. The probe has been restored to normal operation, and its performance and condition were within specifications.			

Product / Produit	Product / Produit Description	Serial Number / No. de Série	Asset Tag
DPD1R1	Digital pH Sensor, Ryton, Convertible	1603440861	Ait-205
Notes			
As found, the condition of the probe was good, the firmware version was 3.40, and the sample reading was 7.01. The probe was cleaned, inspected, the salt bridge was replaced, and the probe was refilled with standard cell solution. Following PM service, the probe was calibrated using certified pH buffer standards. The calibration slope after PM was -55.92 mV/pH. The measurement performance of the probe following service and calibration was verified using certified pH standards. Their values were: 4.01 - 4.01, 7 - 7.00, 10 - 10.01. After PM service, calibration, and verification were completed, the firmware version was 3.40 and the as left reading of the probe was 7.25. The probe has been restored to normal operation, and its performance and condition were within specifications.			

Product / Produit	Product / Produit Description	Serial Number / No. de Série	Asset Tag
5940060	oo DR/2400 PORTABLE, NO POWER	020800000418	
Notes			
as found the condition of the meter was good, I cleaned optic cup area, tested operation and verified wavelength accuracy using DR Check secondary standards Lot A1067 Mar23. Verification results were as follows: 420nm: Std1 0.667 (0.627 ±0.050), Std2 1.244 (1.219 ±0.100), Std3 1.812 (1.795 ±0.150); 520nm: Std1 0.664 (0.651 ±0.050), Std2 1.291 (1.260 ±0.100), Std3 1.894 (1.870 ±0.150); 560nm: Std1 0.662 (0.646 ±0.050), Std2 1.269 (1.259 ±0.100), Std3 1.867 (1.852 ±0.150); 610nm: Std1 0.611 (0.607 ±0.050), Std2 1.187 (1.177 ±0.100), Std3 1.740 (1.730 ±0.150). Unit is performing within specifications			

Product / Produit	Product / Produit Description	Serial Number / No. de Série	Asset Tag
DR2700-01	oo db DR2700 SPECTROPHOTOMETER	1297470	
Notes			
As found, the condition of the instrument was good and the firmware version was 1.07. The instrument was cleaned, the VIS lamp was replaced, and a field service inspection procedure was performed. The optical performance was verified using LZV537 Filters. (kit 5123 exp 31Oct23) Certification results were as follows: KV450/3 >2.8 Abs = 3.006, NG 9/1 @ 1.555 Abs +/- 3% = 1.557, NG 5/2 @ 0.619 Abs +/- 3% = 0.621, NG 11/2 @ 0.320 Abs +/- 3% = 0.322, HO @ 360.9 nm +/- 2 nm = 360.2 nm, BG 20/2 @ 807.0 +/- 2nm = 807.0 nm. After PM service, the analyzer was restored to normal operation and its performance and condition were within specifications.			

Product / Produit	Product / Produit Description	Serial Number / No. de Série	Asset Tag
HQ40D	vv oo HQ40d MULTI PORTABLE METER	210100038474	
Notes			
as found: in new condition, cleaned, inspected, replaced batteries, calibrated pn probe sn 221302562394, slope 57.92, as left reads 4ph: 4.06, 7ph: 7.01, 10ph: 10.10. also serviced LDO probe sn 072062595291, replaced ldo kit, set to factory calibration, as left reads 8.80 mg/l in air. unit performing as expected			

Product / Produit	Product / Produit Description	Serial Number / No. de Série	Asset Tag
NONHACHINSTR	FIELD SERVICE USE ONLY-NonHach Serialized Instr	7107857	DEPOLOX 5 Finished Water
Notes			
W&T Depolox chlorine analyzer: as found reading: 1.32 mg/l, verified calibration within 5% with Hach DR900 standard			

Product / Produit	Product / Produit Description	Serial Number / No. de Série	Asset Tag
9020000	ASSY, PROBE, LDO MODEL 2, HACH	160630000026	Ait-204
Notes			
As found, the condition of the probe was good,, the sample reading was 8.61 O2. The probe was cleaned, inspected, and the sensor cap and gasket were replaced. A new calibration code was transferred to the probe via RFID calibration cap. An air calibration was performed, and the recorder output was confirmed. After PM service was completed the as left reading of the probe was 7.19 O2 and the gain factor was 0.98. The probe has been restored to normal operation, and its performance and condition were within specifications.			

Product / Produit	Product / Produit Description	Serial Number / No. de Série	Asset Tag
9020000	ASSY, PROBE, LDO MODEL 2, HACH	160630000028	Ait-202
Notes			
As found, the condition of the probe has a broken mount and is out of sample and reading was 10.09 O2. The probe was cleaned, inspected, and the sensor cap and gasket were replaced. A new calibration code was transferred to the probe via RFID calibration cap. An air calibration was performed, and the recorder output was confirmed. After PM service was completed the as left reading of the probe was 7.15 O2 and the gain factor was 0.88. The probe has been restored to normal operation, and its performance and condition were within specifications.			

Product / Produit	Product / Produit Description	Serial Number / No. de Série	Asset Tag
9020000	ASSY, PROBE, LDO MODEL 2, HACH	160630000021	Ait-203
Notes			
As found, the condition of the probe was good,, the sample reading was 5.63 O2. The probe was cleaned, inspected, and the sensor cap and gasket were replaced. A new calibration code was transferred to the probe via RFID calibration cap. An air calibration was performed, and the recorder output was confirmed. After PM service was completed the as left reading of the probe was 4.58 O2 and the gain factor was 0.93. The probe has been restored to normal operation, and its performance and condition were within specifications.			

Product / Produit	Product / Produit Description	Serial Number / No. de Série	Asset Tag
4677000	oo POCKET COLOR. CHLORINE REPL.INST	OCWA-XXXX839	
Notes			
As found, the condition of the meter was good. The exterior, sample compartment, and optics were cleaned. The meter was inspected, including the interference filter (replaced), sample cup, and sample cell retaining springs. The batteries were replaced, and the battery terminals were inspected. The operation was tested, the factory default calibration was restored, and wavelength accuracy was verified using PCII SpecCheck Secondary Standard. (Parameter of PC) Lot A1271 oct23. Verification of secondary standards results as follows: Std1: 0.22 (0.22 +/- 0.09) Std2: 0.87 (0.84 +/-0.10) , Std3: 1.50 (1.48 +/- 0.14). After service was completed, the meter was restored to normal operation, and performance and condition were within specifications.			

Product / Produit	Product / Produit Description	Serial Number / No. de Série	Asset Tag
5870000	rr oo POCKET CLRMTR II CHLORINE SYSTEM	031000003585	
Notes			
As found, the condition of the meter was good. The exterior, sample compartment, and optics were cleaned. The meter was inspected, including the interference filter, sample cup, and sample cell retaining springs. The batteries were replaced, and the battery terminals were inspected. The operation was tested, the factory default calibration was restored, and wavelength accuracy was verified using PCII SpecCheck Secondary Standard. (Parameter of PCII) Lot A1271 oct23. Verification of secondary standards results as follows: Std1: 0.23 (0.24 +/- 0.09) Std2: 0.91 (0.91 +/-0.10) , Std3: 1.60 (1.60 +/- 0.14). After service was completed, the meter was restored to normal operation, and performance and condition were within specifications.			

Product / Produit	Product / Produit Description	Serial Number / No. de Série	Asset Tag
5870000	rr oo POCKET CLRMTR II CHLORINE SYSTEM	17030E324555	
Notes			
As found, the condition of the meter was good. The exterior, sample compartment, and optics were cleaned. The meter was inspected, including the interference filter, sample cup, and sample cell retaining springs. The batteries were replaced, and the battery terminals were inspected. The operation was tested, the factory default calibration was restored, and wavelength accuracy was verified using PCII SpecCheck Secondary Standard. (Parameter of PCII) Lot A1271 oct23. Verification of secondary standards results as follows: Std1: 0.24 (0.24 +/- 0.09) Std2: 0.94 (0.91 +/-0.10) , Std3: 1.59 (1.60 +/- 0.14). After service was completed, the meter was restored to normal operation, and performance and condition were within specifications.			

Product / Produit	Product / Produit Description	Serial Number / No. de Série	Asset Tag
4677000	oo POCKET COLOR. CHLORINE REPL.INST	OCWA-XXX35484	WIARTON WTP
Notes			
As found, the condition of the meter was good. The exterior, sample compartment, and optics were cleaned. The meter was inspected, including the interference filter (replaced), sample cup, and sample cell retaining springs. The batteries were replaced, and the battery terminals were inspected. The operation was tested, the factory default calibration was restored, and wavelength accuracy was verified using PClI SpecCheck Secondary Standard. (Parameter of PC) Lot A1271 oct23. Verification of secondary standards results as follows: Std1: 0.23 (0.22 +/- 0.09) Std2: 0.85 (0.84 +/-0.10) , Std3: 1.47 (1.48 +/- 0.14). After service was completed, the meter was restored to normal operation, and performance and condition were within specifications.			

Product / Produit	Product / Produit Description	Serial Number / No. de Série	Asset Tag
LXV445.99.10112	db ee TU5300sc TURB,EPA	2012678	Wiarion WTP Finished Water
Notes			
As found, the condition of the analyzer was good, the firmware version was 1.39(current) and sample reading was 0.045 NTU. The sample cell, cell compartment, and the analytical unit were inspected and cleaned. The sample vial and desiccant were replaced. A calibration using 20 NTU StablCal (Vaa961 Lot a1270 exp mar23) was performed. The gain values were within specifications. After service was completed, the TU5300 sample reading was. 0.018 NTU. The analyzer has been restored to normal operation, and the performance and condition are within specifications.			

Product / Produit	Product / Produit Description	Serial Number / No. de Série	Asset Tag
Notes			

Product / Produit	Product / Produit Description	Serial Number / No. de Série	Asset Tag
Notes			

Product / Produit	Product / Produit Description	Serial Number / No. de Série	Asset Tag
Notes			

Product / Produit	Product / Produit Description	Serial Number / No. de Série	Asset Tag
Notes			

Product / Produit	Product / Produit Description	Serial Number / No. de Série	Asset Tag
Notes			



Induscontrol Inc
3170 Ridgeway Drive Unit 11
Mississauga, ON, L5L 5R4

VERIFICATION REPORT - **KHRONE**
ELECTRO-MAGNETIC FLOW MEASUREMENT

Customer Name: OCWA- Grey Bruce Hub
Plant Name: Warton -PS1
Site/Plant Address: Taylor Street, Warton, ON

Device Information
Make: Khrone
Model: IFC10D
Order Code: NA
Serial No.: A9911651
Tag: NA
Job Location: PS#1
Asset ID: 165372

Service Information
Date: June 14, 2022
Report No: CO1338-2206-20
Job No: CO1338-2206

Sensor Details
Line size: 8 Inch
GKL: 4.505
Mounting: Remote

Flow Details
Unit: LPS
Flow Range: 0-200
Current Output: 4-20 mA
4 mA Set Point: 0
20 mA Set Point: 200

Inst. Reading	AS FOUND	AS LEFT
TOTALIZER (m3)	7366831	7366835
FLOW (L/S)	-0.22	-0.23

Maintenance Checklist	Remarks
Visual Inspection: <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOT OK	
Electrical Inspection: <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOT OK	
Sensor Installation: <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOT OK	
Transmitter Installation: <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOT OK	

Instrument Test Information and Results					
Set-Point as Per Calibration KIT	Calculated Flow (L/S)	Calculated O/P (mA)	UUT Display (L/S)	UUT Measured Output (mA)	Deviation (L/S)
0	0.00	4.00	0.02	4.03	-0.02
A	10.78	4.86	10.91	4.96	-0.13
B	21.57	5.73	21.67	5.79	-0.10
C	43.14	7.45	43.34	7.57	-0.20
D	107.84	12.63	108.12	12.71	-0.28

Information of Tools used for Verification of the Instruments			
Details	Tool/Kit 1	Tool/Kit 2	Tool/Kit 3
Device Description:	Calibrator	Electrical Multimeter	N/A
Manufacturer:	Khrone	Fluke	N/A
Model No:	GS8B	179	N/A

* Refer Calibration Tools Certificates submittal for more Information

Verification Test Result: Passed Fail Not Verified

Overall Remarks: Measurement Works within Specification.

Service Technician : Pavan Patel
Printed Date: June 14, 2022
Stamp/Signature:



Induscontrol Inc
3170 Ridgeway Drive Unit 11
Mississauga, ON, L5L 5R4

VERIFICATION REPORT - KHRONE ELECTRO-MAGNETIC FLOW MEASUREMENT

Customer Name: OCWA- Grey Bruce Hub
Plant Name: Warton -PS2

Site/Plant Address: Taylor Street, Warton, ON

Device Information
Make: Khrone
Model: IFC10D
Order Code: NA
Serial No.: A9817181
Tag: NA
Job Location: PS#2
Asset ID: 165385

Service Information
Date: June 14, 2022
Report No: CO1338-2206-21
Job No: CO1338-2206

Sensor Details
Line size: 10 Inch
GKL: 4.544
Mounting: Remote

Flow Details
Unit: L/SEC
Flow Range: 0-250
Current Output: 4-20 mA
4 mA Set Point: 0
20 mA Set Point: 250

Inst. Reading	AS FOUND	AS LEFT
TOTALIZER (m3)	2166941	2166945
FLOW (L/S)	-1.13	-1.03

Maintenance Checklist	Remarks
Visual Inspection: <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOT OK	
Electrical Inspection: <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOT OK	
Sensor Installation: <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOT OK	
Transmitter Installation: <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOT OK	

Instrument Test Information and Results					
Set-Point as Per Calibration KIT	Calculated Flow (L/S)	Calculated O/P (mA)	UUT Display (L/S)	UUT Measured Output (mA)	Deviation (L/S)
0	0.00	4.00	0.05	4.06	-0.05
A	17.00	5.09	16.83	5.01	0.17
B	33.99	6.18	33.23	6.07	0.76
C	67.99	8.35	67.63	8.24	0.36
D	169.97	14.88	169.40	14.67	0.57

Information of Tools used for Verification of the Instruments			
Details	Tool/Kit 1	Tool/Kit 2	Tool/Kit 3
Device Description:	Calibrator	Electrical Multimeter	N/A
Manufacturer:	Khrone	Fluke	N/A
Model No:	GS8B	179	N/A

* Refer Calibration Tools Certificates submittal for more Information

Verification Test Result: **Passed** **Fail** **Not Verified**

Overall Remarks: Measurement Works within Specification.

Service Technician : Pavan Patel Stamp/Signature 
Printed Date: June 14, 2022

Verification report flowmeter

Plant operator	Induscontrol Inc
Device information	
Location Wiaraton WWTP	Device tag FIT-104
Module name Promag L	Nominal diameter DN300 / 12"
Device name Promag 400	Order code 5L4C3H-2RW5/0
Serial number KC1E9919000	Firmware version 01.05.05
Calibration	
Calibration factor 1.3133	Zero point -4

Verification information	
Operating time 2225d04h59m02s	Date/time 14.06.22 09:32
Verification ID 7	
Verification results	
Overall result	 Passed
Detailed results	See next page

Overall result: Result of the complete device functionality test via Heartbeat Technology

Notes

Validity of the verification report is only given:

For devices with the Heartbeat Verification enabled software option

For verifications, carried out by the Endress+Hauser Service, or an authorized Endress+Hauser service provider

14.06.22

Date



Inspectors signature

Operator's signature

Verification report flowmeter

Serial number: KC1E9919000

Verification detailed results Verification ID 7

Sensor		Passed
Coil current shot time		Passed
Coil hold voltage		Passed
Coil current		Passed
Sensor electronic module		Passed
Reference voltage		Passed
Linearity of electrode measuring circuit		Passed
Offset of electrode measuring circuit		Passed
I/O module		Passed

Verification report flowmeter

Plant operator	Induscontrol Inc
Device information	
Location Wiaraton WWTP	Device tag FIT-105
Module name Promag L	Nominal diameter DN200 / 8"
Device name Promag 400	Order code 5L4C2H-3K91/0
Serial number KC1E9819000	Firmware version 01.05.05
Calibration	
Calibration factor 1.0880	Zero point 0

Verification information	
Operating time 2224d21h29m05s	Date/time 14.06.22 09:40
Verification ID 9	
Verification results	
Overall result	 Passed
Detailed results	See next page

Overall result: Result of the complete device functionality test via Heartbeat Technology

Notes

Validity of the verification report is only given:

For devices with the Heartbeat Verification enabled software option

For verifications, carried out by the Endress+Hauser Service, or an authorized Endress+Hauser service provider

14.06.22

Date



Inspectors signature

Operator's signature

Verification report flowmeter

Serial number: KC1E9819000

Verification detailed results Verification ID 9

Sensor		Passed
Coil current shot time		Passed
Coil hold voltage		Passed
Coil current		Passed
Sensor electronic module		Passed
Reference voltage		Passed
Linearity of electrode measuring circuit		Passed
Offset of electrode measuring circuit		Passed
I/O module		Passed

Verification report flowmeter

Serial number: KC1EF119000

Verification detailed results Verification ID 7

Sensor		Passed
Coil current shot time		Passed
Coil hold voltage		Passed
Coil current		Passed
Sensor electronic module		Passed
Reference voltage		Passed
Linearity of electrode measuring circuit		Passed
Offset of electrode measuring circuit		Passed
I/O module		Passed



Induscontrol Inc
3170 Ridgeway Drive Unit 11
Mississauga, ON, L5L 5R4

VERIFICATION REPORT- PARSHALL FLUME OPEN CHANNEL FLOW MEASUREMENT

Customer Name: OCWA-Grey Bruce Hub
Plant Name: STP

Site/Plant Address: 59 Park St,
Ripley, Ontario N0G 2R0

Device Information
Make: Milltronics
Model: Multiranger Plus
Order Code: N/A
Serial No.: 050W023466
Tag: NA
Job Location: Final Effluent Discharge

Service Information
Date: June 14, 2022
Report No: CO1338-2206-25
Job No: CO1338-2206

Inst. Reading	AS FOUND	AS LEFT
TOTALIZER (m3)	6153	6153
FLOW (m3/h)	137.9	137.2

Flow Details
Unit: m3/h
Flow Range: 0-591.9 m3/h
Current Output: 4-20 mA
4 mA Set Point: 0 m3/h
20 mA Set Point: 591.9 m3/h

Maintenance Checklist			Remarks
Visual Inspection:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK	
Electrical Inspection:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK	

Programming Parameter of Instrument					
Parameter	Discription	Value	Parameter	Discription	Value
F0	Access Code	2.71828	P40	Parshall Flume	1.00
P1	Dimension Unit (cm)	2.000	P41	flow rate (per hr)	3.00
P2	Mode	5	P42	OCM exponent	1.50
P3	Empty Distance	50.38 cm	P43	Flume dimension	0
P4	Span	20 cm	P45	Maximum head	20 cm
P5	near blanking	30	P46	Maximum flow rate	591.9 m3/hr

Instrument Test Information and Results					
Input (%)	Calculated Flow(m3/h)	Calculated Input (mA)	Flow on Panel Meter Display (m3/h)	UUT Measured Output (mA)	Deviation (%)
0	0.00	4.00	0.00	4.00	0.00
25	147.98	8.00	148.07	8.05	0.00
50	295.95	12.00	294.87	11.96	0.01
75	443.93	16.00	442.95	15.94	0.01
100	591.90	20.00	591.76	19.99	0.00

Information of Tools used for Verification of the Instruments			
Device Description:	Manufacturer	Model	Serial No:
Electrical Multimeter	Fluke	179	As per Provided

Verification Test Result: **Passed** **Fail** **Not Verified**

Overall Remarks: Program parameters verified. Measurement works as per specification.

Service Technician : Pavan Patel
Printed Date: June 14, 2022

Stamp/Signature 



ONTARIO CLEAN WATER AGENCY
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Appendix C

Community Complaints

WIARTON WWTL Logbook

Entry Time	Label	Entry Text	Operator	Created Time
2022-01-22 00:00:00		00:00-23:59 ORO: James Learn (jlearn) 08:20-11:00 OIC: Billy Shearer (bshearer) 14:00-15:30 OIC: Billy Shearer (bshearer)	Billy Shearer	Jan 22, 2022 3:26 PM
2022-01-22 11:21:00		Preformed system checks at PS1, PS2, MBBR, blower and filter bindings.	Billy Shearer	Jan 22, 2022 11:23 AM
2022-01-22 15:26:00		Called for blocked service at 448 Scott street. Cleared blockage then inspected with camera. Found root infiltration, will need to be addressed.	Billy Shearer	Jan 22, 2022 3:28 PM

WIARTON WWTL Logbook

Entry Time	Label	Entry Text	Operator	Created Time
2022-03-16 00:00:00		00:00-23:59 ORO: James Learn (jlearn) 07:00-15:30 Duty OIC: Daniel Caesar (dcaesar) 07:00-11:03 OIT: Meet Patel (mpatel)	Meet Patel	Mar 16, 2022 8:10 AM
2022-03-16 08:11:00	Facility Checks	System checks and operational readings complete at pumping station - #1, - #2, blower building, filter building and MBBR building. Reviewed daily report and drained compressors. Cleaned the DO probe for Cell 1 at MBBR. pH sensor under maintenance alarm at MBBR.	Meet Patel	Mar 17, 2022 8:07 AM
2022-03-16 11:45:00	Facility Checks	DO's, pH, temperature taken from lagoon cells 1, 2 and 3.	Daniel Caesar	Mar 16, 2022 11:48 AM
2022-03-16 16:00:00	Maintenance	Received a call for 495 Scott St for sanitary sewer back up. Restored flow for homeowner. Was unable to see cause of blockage due to sitting water. Will follow up tomorrow.	Daniel Caesar	Mar 16, 2022 4:08 PM
2022-03-17 00:00:00		00:00-23:59 ORO: James Learn (jlearn) 07:00-15:30 Duty OIC: Daniel Caesar (dcaesar) 07:00-11:00 OIT: Meet Patel (mpatel)	Meet Patel	Mar 17, 2022 7:53 AM
2022-03-17 08:06:00	Facility Checks	System checks and operational readings complete at pumping station - #1, - #2, blower building, filter building and MBBR building. Reviewed daily report and drained compressors. Cleaned the DO probe for Cell 1 at MBBR.	Meet Patel	Mar 17, 2022 8:07 AM
2022-03-17 09:30:00	Maintenance	Power auger and camera sewer lateral at 495 Scott St. cleared blockage but 1 meter section of no corrode pipe still needs to be replaced.	Daniel Caesar	Mar 17, 2022 2:04 PM
2022-03-17 12:30:00	Maintenance	Adjustment made to cells 1,2 and 3, air flow. Will monitor for next little while.	Daniel Caesar	Mar 17, 2022 2:05 PM
2022-03-17 14:00:00	Maintenance	Bar screen cleaning complete at PS 1, with Cole H.	Daniel Caesar	Mar 17, 2022 2:06 PM

WIARTON WWTL Logbook

Entry Time	Label	Entry Text	Operator	Created Time
2022-05-26 00:00:00		00:00-23:59 ORO: James Learn (jlearn) 07:00-15:30 Duty OIC: Daniel Caesar (dcaesar) 07:00-10:00 OIT: Meet Patel (mpatel) 18:30-04:00 OIC: Billy Shearer (bshearer)	Billy Shearer	May 27, 2022 10:16 AM
2022-05-26 07:40:00	Facility Checks	System checks and operational readings complete at pumping station - #1, - #2, blower -, MBBR - and filter - building. Reviewed daily report.	Meet Patel	May 26, 2022 12:48 PM
2022-05-26 10:17:00		Called in by community complaint of sewage seeping up from force main. Drained force main and repair with 12" repair clamp.	Billy Shearer	May 27, 2022 10:33 AM
2022-05-26 11:00:00	Sampling	By weekly samples collected for sewage. Raw and MBBR effluent was collected due to Filter Building being offline.	Daniel Caesar	May 26, 2022 11:22 AM
2022-05-26 14:30:00	Maintenance	Bar screen cleaning complete at PS 1.	Daniel Caesar	May 26, 2022 2:30 PM

WIARTON WWTL Logbook

Entry Time	Label	Entry Text	Operator	Created Time
2022-06-09 00:00:00		00:00-23:59 ORO: James Learn (jlearn) 07:00-15:30 Duty OIC: Daniel Caesar (dcaesar) 09:00-12:00 OIT: Meet Patel (mpatel)	Meet Patel	Jun 9, 2022 1:09 PM
2022-06-09 10:00:00	Inspection	Performed a sewer lateral camera inspection for Mary street project.	Meet Patel	Jun 9, 2022 1:11 PM
2022-06-09 11:00:00	Community Complaint, Inspection	Addressed sewer backup at 495 Scott street. Performed a camera inspection and removed the blockage.	Meet Patel	Jun 9, 2022 1:14 PM
2022-06-09 12:00:00	Facility Checks	System checks and operational readings complete at pumping station -#1, -#2, blower-, MBBR- and filter- building. Reviewed daily report.	Meet Patel	Jun 9, 2022 1:09 PM

WIARTON WWTL Logbook

Entry Time	Label	Entry Text	Operator	Created Time
2022-07-10 00:00:00		00:00-23:59 ORO: James Learn (jlearn) 09:00-11:00 Duty OIC: Billy Shearer (bshearer) 21:45-00:00 OIC: Billy Shearer (bshearer)	Billy Shearer	Jul 11, 2022 6:05 AM
2022-07-10 06:06:00		Called to 489 Frank st for blocked sewer. Got camera in to 70 ft, then it goes black. Tried push snake unsuccessfully.	Billy Shearer	Jul 11, 2022 6:07 AM
2022-07-10 09:37:00		Performed system checks at PS1,PS2, MBBR, blower and filter buildings, cleaned cell 2 DO sensor	Billy Shearer	Jul 10, 2022 9:38 AM
2022-07-11 00:00:00		00:00-23:59 ORO: James Learn (jlearn) 07:00-08:00 OIT: Meet Patel (mpatel) 07:00-15:30 Duty OIC: Daniel Caesar (dcaesar) 11:30-15:30 OIT: Meet Patel (mpatel)	Meet Patel	Jul 11, 2022 3:16 PM
2022-07-11 07:45:00	Facility Checks	System checks and operational readings complete at pumping station -#1, -#2, blower-, MBBR- and filter- building. Reviewed daily report and drained compressors.	Meet Patel	Jul 11, 2022 8:14 AM
2022-07-11 07:55:00	Maintenance	Cleaned DO probe for cell #2 and adjusted air flow to cells at MBBR. Cleaned blower air intake screen.	Meet Patel	Jul 11, 2022 8:15 AM
2022-07-11 13:00:00	Maintenance	Corrected sanitary sewer blockage at 489 Frank St. Fiber optics conduit hit the sewer lateral and collapsed it. Replaced approx 4 ft of pipe. flow has been restored.	Daniel Caesar	Jul 11, 2022 1:11 PM
2022-07-11 15:15:00	Maintenance	Locate sanitary sewer main on Mary street between Brown and Hunter. Sanitary sewer laterals are marked.	Daniel Caesar	Jul 11, 2022 3:20 PM

WIARTON WWTL Logbook

Entry Time	Label	Entry Text	Operator	Created Time
2022-07-24 00:00:00		00:00-23:59 ORO: James Learn (jlearn) 07:00-15:30 Duty OIC: Andrew Bellamy (abellamy) 08:00-09:00 OIT: Meet Patel (mpatel) 16:35-21:30 OIT: Meet Patel (mpatel)	Meet Patel	Jul 24, 2022 9:33 PM
2022-07-24 09:00:00	Facility Checks	System checks and operational readings complete at pumping station -#1, -#2, blower-, MBBR- and filter- building. Reviewed daily report and drained compressors.	Meet Patel	Jul 24, 2022 8:36 PM
2022-07-24 21:30:00	Call-in, Community Complaint, Wiarton WWTL	Received a call for sewer backup at 244 Division street. Arrived on site and talked to homeowner. Pre inspection performed by plumber but exact location of blockage was unknown. Removed the toilet and accessed the sewer lateral for camera inspection. Found 2 clean outs installed. Found a thick patch of FOG at the junction of lateral and sanitary. Cleaned and restored access to sanitary.	Meet Patel	Jul 24, 2022 9:41 PM

WIARTON WWTL Logbook

Entry Time	Label	Entry Text	Operator	Created Time
2022-08-05 00:00:00		00:00-23:59 ORO: James Learn (jlearn) 07:00-15:30 Duty OIC: Daniel Caesar (dcaesar)	Daniel Caesar	Aug 5, 2022 2:19 PM
2022-08-05 11:00:00	Facility Checks	Daily operations complete at PS 1, PS 2, Blower Building, MBBR and Filter Building. Review daily report and drain compressors.	Daniel Caesar	Aug 5, 2022 2:20 PM
2022-08-05 17:35:00	Call-in	Received call for 429 Claude St, for a backed up sewer. Homeowner wanted the lateral inspected. Responded to call and camera lateral. Pipe is pulled from coupling where municipal meets private. Offset pipe is right inline with new fiber optics conduit.	Daniel Caesar	Aug 5, 2022 5:36 PM

WIARTON WWTL Logbook

Entry Time	Label	Entry Text	Operator	Created Time
2022-10-17 00:00:00		00:00-23:59 ORO: James Learn (jlearn) 07:00-15:30 Duty OIC: Andrew Bellamy (abellamy) 07:00-15:30 OIT: Meet Patel (mpatel)	Meet Patel	Oct 17, 2022 10:31 AM
2022-10-17 00:00:00	Community Complaint	Resident at 307 Berford street concerned about sewer backup. Sewer not backing up at this moment.	Meet Patel	Oct 17, 2022 10:32 AM
2022-10-17 09:00:00	Facility Checks	System checks and operational readings complete at pumping station -#1, -#2, blower-, filter-, and MBBR building. Reviewed daily report and drained compressors.	Meet Patel	Oct 17, 2022 2:30 PM

From: [Léo-Paul Frigault](#)
To: [Brianna Collins](#); [Karen Cameron \(karen.cameron@southbrucepeninsula.com\)](#)
Cc: [Matthew Fraser](#); [Daniel Caesar](#); [Billy Shearer](#); [Karla Young](#)
Subject: Sewer lateral blockage - 509 Berford Street Warton
Date: November-22-22 4:23:31 PM
Attachments: [509 Berford Sanitary Drawing Overview.pdf](#)

Good afternoon Brianna and Karen,

The Town of South Bruce Peninsula reported a sewer backup occurring at 509 Berford Street this morning at 11:40 AM. Operators contacted the owners who confirmed that a plumber had already been onsite and determined that the blockage was a municipal issue. Operators gathered tools and equipment and arrived on site at approximately 12:15 PM and exposed the sewer cleanout located on the North side of the building (see drawing attached). Operators then pushed the sewer camera and located blockage at approximately 52 feet from the cleanout (under municipal concrete sidewalk). The sewer push rod was then used to dislodge the soft blockage and re-establish sewer flow. The sewer lateral was then re-inspected using the sewer camera and confirmed that soft blockage was caused by root infiltration at a pipe joint. Operators then used the power auger to clear remaining roots and soft blockage and re-inspected the lateral using the sewer camera.

Regards,

Leo

Léo-Paul Frigault
Senior Operations Manager
Grey Bruce Hub
897 Bayview Street
Warton, ON
TEL: 519 534 1610
CELL: 519 379 2225

WIARTON WWTL Logbook

Entry Time	Label	Entry Text	Operator	Created Time
2022-11-23 00:00:00		00:00-23:59 ORO: James Learn (jlearn) 07:00-15:30 Duty OIC: Daniel Caesar (dcaesar) 07:00-15:30 OIC: Matthew Fraser (mfraser2)	Matthew Fraser	Nov 23, 2022 7:09 AM
2022-11-23 09:15:00	Facility Checks	Daily operation of plant and readings complete at PS 1, PS 2, Blower Building, MBBR and Filter Building. Review daily report and drain compressors.	Matthew Fraser	Nov 23, 2022 9:31 AM
2022-11-23 11:00:00	Maintenance	Restored flow for 525 Frank St sewer later. Offset pipe at the clean out causing the blockage. Used mechanical auger and camera sewer later to the main to verify blockage was removed. ALL OK.	Daniel Caesar	Nov 23, 2022 11:12 AM
2022-11-23 12:30:00	Maintenance	Cleaned bar rack at PS1 with D. Caesar and C. Hutchinson.	Matthew Fraser	Nov 23, 2022 12:53 PM
2022-11-23 14:45:00	Maintenance	Cleaned UV sensor at Filter Building. Adjustment made to Filter Building influent valve. ALL OK.	Daniel Caesar	Nov 23, 2022 2:51 PM



ONTARIO CLEAN WATER AGENCY
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Appendix D

Effluent By-Pass Reports

From: Karla Young
To: ["Graham, Robert G. \(MECP\)"; "Smith, Mark \(MECP\)"](#)
Cc: [Leo-Paul Frigault](#); [Camille Leung](#); [Mike Mortimer](#)
Subject: 2022 Q1 - Bypass Overflow Event Summary - Wiarton WWTP (110000819) - Town of South Bruce Peninsula
Date: May-13-22 1:14:00 PM
Attachments: [2022.03.28 WiartonWPCP Bypass of MBBR EI#6665-CCXPUN.pdf](#)
[LabResults.pdf](#)

Good Afternoon,

Under ECA 6045-ARDJS7, a quarterly summary report shall be submitted for Bypass Event(s) and Overflows that occur at the Wiarton Wastewater Treatment Plant.

Bypass Events

The ECA requires the submission of a summary report of the Bypass Event(s) to the Water Supervisor on a quarterly basis, no later than each of the following dates for each calendar year: February 15, May 15, August 15, and November 15.

The summary reports shall contain, at a minimum:

- the date and time of the beginning of the Bypass;
- the location of the Bypass and the treatment process(es) bypassed;
- the reason(s) for the Bypass;
- the date and time of the end of the Bypass;
- the measured or estimated volume of Bypass;
- Samples collected;
- Assessment of the impact of the Event(s) on Final Effluent, plant operation and the receiver;
- Planned mitigation strategies, as appropriate.

Date	Time		Duration HH:MM	Volume (M ³)	Treatment Process Bypassed	Samples Collected	Reason for Bypass	Impact of Event	Mitigation
	Start	End							
March 28-April 5, 2022	March 28 14:20 PM	April 5 14:30 PM	72 Hours	21,062 m ³	MBBR	Yes	The screens between MBBR cell 1 and 2 were plugged. The MBBR was shut down and bypassed before it spilled over.	Raw sewage discharge from the (3)-cell MBBR System bypass was directed to the (3)-cell waste stabilization lagoon system which provides effluent polishing. Flow from the lagoons was then directed into the sand filtration system and through the UV disinfection system before it was released into Colpoys Bay.	The screens and the cells of the MBBR were cleaned before being put back online

Overflow Events

The ECA requires the submission of a summary report of the Overflow Event(s) to the Water Supervisor on a quarterly basis, no later than each of the following dates for each calendar year:

February 15, May 15, August 15, and November 15.

The summary reports shall contain, at a minimum:

- the date and time of the beginning of the Overflow;
- the location of the Overflow and the receiver and disinfection status of the Overflow;
- the reason(s) for the Overflow;
- the date and time of the end of the Overflow;
- the measured or estimated volume of Overflow;
- the mitigation measures taken;
- Samples collected;
- Assessment of the impact of the Event(s) on plant operation and the receiver;
- Planned mitigation strategies, as appropriate.

Date	Time		Duration	Volume	Receiver	Disinfection Status of Overflow	Samples Collected	Reason for Overflow	Impact of Event	Mitigation: Taken and Planned
	Start	End	HH:MM	(M ³)						
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Thanks,

Karla

Karla Young
Process & Compliance Technician
Grey-Bruce/Bruce Hubs
Georgian Highlands Region
Ontario Clean Water Agency
kyoung@ocwa.com
(519) 374 - 5782

Ontario Clean Water Agency Environmental Incident Report

Facility ID: 5620 EIncidentReport
Facility Name: Warton Wastewater Treatment Lagoon
Address: 441048 Elm St
City: Warton
Province: Ontario
Postal Code: NOH 2T0
Date of Occurrence: 03/28/2022
Time of Occurrence: 02:20:00 PM

Nature of the Incident

Level 1 Contingency Level 2 Contingency Level 3 Contingency [Click here To Show the Definitions](#)

Incident affected: Air Water Land Nothing

What was discharged or emitted?

- | | |
|----------------------------------------------------------------|------------------------------------------------------------------------|
| <input type="checkbox"/> Chlorine | <input type="checkbox"/> Oil/Diesel/Gas |
| <input type="checkbox"/> Sodium Hypochlorite | <input checked="" type="checkbox"/> Untreated or partly treated sewage |
| <input type="checkbox"/> Calcium Chloride | <input type="checkbox"/> Odours |
| <input type="checkbox"/> Aluminum Compounds (Specify in Other) | <input type="checkbox"/> Water |
| <input type="checkbox"/> Arsenic | <input type="checkbox"/> Iron Coagulants |
| <input type="checkbox"/> Fluoride | |

Other: _____

If this was a discharge, spill or emission...

If a liquid, approximately what quantity was released?: 21062000 Litres

If a gas, approximately what quantity was released?: _____

If a solid, approximately what quantity was released?: _____ Kg

What was the source of release?:

Needed to bypass MBBR (Moving Bed Biofilm Reactor) due to screens between cell 1 and 2 plugging up to avoid a spill.

Where did the release go?:

Raw sewage discharge from the (3)-cell MBBR System bypass was directed to the (3)-cell waste stabilization lagoon system which provides effluent polishing. Flow from the lagoons was then directed into the sand filtration system and through the UV disinfection system before it was released into

Colpoy's Bay.

If it entered a watercourse: Yes No

If it went off site: Yes No

Duration of the release?: 4 days and then the effluent was shut down and the sewage retained in the lagoons.

Is the release now stopped?: Yes No

Was there any damage? (i.e. property and/or environmental): Yes No N/A

If "Yes", describe below and fill out "Insurance Claim" report

Action(s) Taken

What actions were taken to control the incident?

Raw wastewater flow was diverted from the MBBR process to allow for MBBR cells inspection and flow restriction remediation.

What actions have been taken to remediate the incident?

MBBR cells were pumped down and the screens between cells 1, 2 and 3 were cleaned. Air flow to all cells was maintained during the process. Lower wastewater levels in cell 1 allowed for more media movement and eventually air flow to diffusers was re-established. Effluent to Colpoy's Bay was stopped on Thursday, March 31st and wastewater was retained in lagoons until MBBR back online. Samples were taken daily while releasing effluent. Wastewater went through all other processes before being released.

Was this a reportable spill or discharge?: Yes No

If "Yes", at what time was it first reported to the MOE?

SAC was called at 14:28 pm on March 28, 2022 and was reported to Akiko.

Was it reported to the MOE district office?: Yes No

If "Yes", which office/location and who was the contact?: A voicemail outlining the issue was left with Bob Graham from the Owen Sound MECP Regional office.

Was it reported to MOE SAC?: Yes No

If "Yes", at what time was it reported to MOE SAC?:

SAC was called at 14:28 pm on March 28, 2022 and was reported to Akiko.

Was it reported to Municipality?: Yes No

If "Yes", at what time was it reported to Municipality?:

It was reported to Lara Widdifield (Public Works Manager) at the Town of South Bruce Peninsula at 13:23 pm.

External Assistance/Involvement

Was corporate or area office assistance requested?: Yes No

If "Yes", was it received?: Yes No

Was external emergency assistance requested?: Yes No

If "Yes", from who?: Fire Department Equipment Suppliers Canutec
 Ambulance or Hospital MOE Coast Guard
 Police Municipality

Other: _____

Was there any media involvement?: Yes No

If "Yes", who?: _____

Was the public affected?: Yes No

If "Yes", how?: _____

Updated By: Karla Young 04/19/2022 10:35:13 AM

Comments:

March 28, 2022

-Bypass started at 14:20pm when MBBR was shut down
-needed to shutdown MBBR and bypass process due to the screen between cell #1 and cell #2 of MBBR being plugged and concern of cell #1 overflowing and causing a spill

March 29, 2022

-draining of MBBR cells to the lagoons
-was thought that diffuser was broken and needed to be replaced in cell #1 (turned out that since the screens were blocked that was causing a heavy blanket of sediment on top of the diffusers which then, in turn, caused the media to be immobile)

March 30, 2022

-still draining the cells and talked to manufacturer about issues
-determined it would not be fixed until early next week
-updated SAC (Jon Kowba) at 14:27pm about MBBR still being down and would not be fixed until next week

March 31, 2022

-after discussions with Bob Graham at MECP decided to shut down effluent flow and retain sewage in lagoons in order to have relief from sampling over weekend due to shipping constraints
-shut down effluent flow

April 5, 2022

-MBBR put back online at 12:50pm
-Volume of bypass calculated at 21,062 m3
-updated SAC at 14:17pm that MBBR was back online and normal operations had resumed

-sent email to Bob Graham at MECP to let him know that normal operations had resumed
April 19, 2022
-all sample results were recieved



SGS Canada Inc.

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

Works #: 110000819

Project : PO#017018

30-March-2022

OCWA-Grey Bruce (Warton WPCP)

Attn : Karla Young

Date Rec. : 29 March 2022

LR Report: CA15785-MAR22

P.O. Box 760
Southampton, ON
N0H 2L0, Canada

Copy: #1

Phone: 519-797-2561

Fax:pdf

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	9: Eff Eff-Effluent (Grab)
Sample Date & Time					28-Mar-22 14:25
Temperature Upon Receipt [°C]	---	---	---	---	11.0
Field pH [no unit]					8.42
Field Temperature [celcius]					2.1
E. Coli [cfu/100mL]	29-Mar-22	10:58	30-Mar-22	09:43	0

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

Ontario Clean Water Agency - Request for Laboratory Services and CHAIN OF CUSTODY - SEWAGE (BYPASS)

Waterworks/Project # **110000819**
 Laboratory Section **MAR 30 2022**
 Date Rec'd: **MAR 30 2022**
 Sample condition upon receipt: _____
 Initials: **ca**

Facility Name **Wiarthon WWTP**
 Org. # **5620**
 Date Rec'd: _____
 Sample condition upon receipt: _____
 Initials: _____

Quote # _____
 Attached Parameter List: No Yes
 Temperature Upon Receipt: **10, 10** °C

Requested Turnaround Time: 24-48 h 5-7d 7-10d Other Specify: _____

Identification of Regulation under which the sample(s) fall: No Requirement to Report Sample Results Under Any Regulation for Wastewater Treatment

Report to: Megan Edney
 18 Caroline Street
 Southampton, ON
 N0H 2L0
 Telephone: 519-374-5782
 Fax: 519-797-3080
 Email: medney2@ocwa.com

Data Transfer Contact: Megan Edney
 136 Main St. E
 Shelburne, ON
 L9V 3K5
 (519) 925-1938
 (519) 925-0322
 apwesthighlands@ocwa.com

Laboratory: SGS Lakefield Research Ltd
 185 Concession St.
 Lakefield, ON
 K0L 2H0
 705-652-2000
 705-652-6365
 carrie.greenlaw@sgs.com

Station Acronym	Station Number (Short Name)	Sample Location Name	Date & Time Collected	# of Bottles	CI Residual (mg/L)	Total	Free	Combined (mg/L)	Total Suspended Solids	Total Phosphorous	E. Coli	CBOD ₅	TKN	Total Ammonia Nitrogen	Nitrite	Nitrate	Nitrite + Nitrate	Comments	Upload to MOE	Upload to OCWA
Eff	Effluent (Grab)		MAR 28 2022	1							X								Yes <input checked="" type="checkbox"/>	Yes <input checked="" type="checkbox"/>
Eff	Effluent (Composite)		22:30	2					X	X	(X)	X	X	X	X	X	X		Yes <input checked="" type="checkbox"/>	Yes <input checked="" type="checkbox"/>
																			Yes <input type="checkbox"/>	Yes <input type="checkbox"/>
																			Yes <input type="checkbox"/>	Yes <input type="checkbox"/>
																			Yes <input type="checkbox"/>	Yes <input type="checkbox"/>
																			Yes <input type="checkbox"/>	Yes <input type="checkbox"/>
																			Yes <input type="checkbox"/>	Yes <input type="checkbox"/>
																			Yes <input type="checkbox"/>	Yes <input type="checkbox"/>

Station Acronym: Cell - Cell Contents, Dis - Disinfection, Down - Downstream, Eff - Final Effluent, PRey - Primary Bypass, Raw - Raw Sewage, SCoB - Secondary Bypass, Up - Upstream, Well - Monitoring Well, Aer - Aeration, Bris - Biosolids Thickening, Bpd - Biosolids primary digestion, Bed - Biosolids sec. digestion, Bps - Biosolids pri. super, Bss - Biosolids sec. super, Bsq - Biosolids sludge quality, Bsoq - Biosolids soil quality, DAF - Dissolved Air Flocculation, Grit - Primary Treatment/Grit, P1E1 - Primary Treatment, RAS - Return Activated Sludge, SBR - Secondary Treatment/SBRs, SdE1 - Secondary Effluent, TWAS - Thickened Waste Activated Sludge, WAS - Waste Activated Sludge, InoW - Industrial Wastewater, P2Sin - Pump Stn, Sept - Septage, Lcht - Leachate, P1Tr - Primary Treatment, Allo - Acltic, TeBy - Tertiary Bypass, Hold - Holding Tank, CSO - Combined Sewer Overflow, SSO - Sanitary Sewer Overflow

Revision #6
 Revised: 2018-09-21

Requester Signature: **DAN CAESAR**
 Date: **10:30**
 Initials: **ca**



SGS Canada Inc.

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

Works #: 110000819

Project : PO#017018

11-April-2022

OCWA-Grey Bruce (Warton WPCP)

Attn : Karla Young

Date Rec. : 30 March 2022

LR Report: CA15617-MAR22

P.O. Box 760
Southampton, ON
N0H 2L0, Canada

Copy: #1

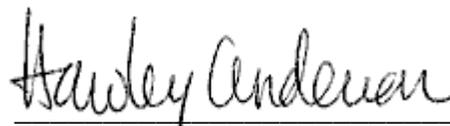
Phone: 519-797-2561
Fax:pdf

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	6: Client Limits Nov to April	8: Client Objective Nov to April	9: Eff Eff-Effluent (Composite)
Sample Date & Time							28-Mar-22 22:30
Temperature Upon Receipt [°C]	---	---	---	---	---	---	10.0
Carbonaceous Biochemical Oxygen Demand [(CBOD5) mg/L]	31-Mar-22	16:56	05-Apr-22	13:19	15.0	10.0	< 2
Total Suspended Solids [mg/L]	31-Mar-22	07:49	01-Apr-22	07:50	15.0	10.0	4
Phosphorus (total) [mg/L]	01-Apr-22	21:13	04-Apr-22	11:21	0.3	0.15	< 0.03
Total Kjeldahl Nitrogen [as N mg/L]	01-Apr-22	21:44	05-Apr-22	09:42	---	---	0.8
Ammonia+Ammonium (N) [as N mg/L]	30-Mar-22	17:00	31-Mar-22	10:34	6.0	6.0	0.3
Nitrite (as N) [mg/L]	01-Apr-22	20:01	08-Apr-22	16:28	---	---	0.05
Nitrate (as N) [mg/L]	01-Apr-22	20:01	08-Apr-22	16:28	---	---	4.63
Nitrate + Nitrite (as N) [mg/L]	01-Apr-22	20:01	08-Apr-22	16:28	---	---	4.68
E. Coli [cfu/100mL]	30-Mar-22	15:41	01-Apr-22	14:34	---	---	< 2

Note: E. Coli was analyzed from a unsterilized 500mL PET bottle as per client's request.



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



SGS Canada Inc.

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

OCWA-Grey Bruce (Warton WPCP)

Attn : Karla Young

P.O. Box 760
Southampton, ON
N0H 2L0, Canada

Phone: 519-797-2561
Fax:pdf

Works #: 110000819
Project : PO#017018

06-April-2022

Date Rec. : 31 March 2022
LR Report: CA14734-MAR22

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	6: Client Limits Nov to April	8: Client Objective Nov to April	9: Raw Raw-Raw Sewage @ Pump Station #2	10: Eff Eff-Effluent (Grab)	11: Eff Eff-Effluent (Composite)
Sample Date & Time							30-Mar-22 11:00	30-Mar-22 11:20	30-Mar-22 11:15
Temperature Upon Receipt [°C]	---	---	---	---	---	---	12.0	12.0	12.0
Field pH [no unit]					6.0-9.5	---	---	8.54	---
Field Temperature [celcius]					---	---	---	2.4	---
Biochemical Oxygen Demand (BOD5) [mg/L]	01-Apr-22	16:09	06-Apr-22	12:59	---	---	76	---	---
Carbonaceous Biochemical Oxygen Demand [(CBOD5) mg/L]	01-Apr-22	14:24	06-Apr-22	14:27	15.0	10.0	---	---	2
Total Suspended Solids [mg/L]	01-Apr-22	07:40	04-Apr-22	11:39	15.0	10.0	80	---	4
Alkalinity [mg/L as CaCO3]	01-Apr-22	06:27	01-Apr-22	13:07	---	---	277	---	---
Phosphorus (total) [mg/L]	01-Apr-22	21:13	05-Apr-22	14:24	0.3	0.15	1.70	---	0.03
Total Kjeldahl Nitrogen [as N mg/L]	01-Apr-22	21:44	04-Apr-22	09:09	---	---	15.6	---	0.8
Ammonia+Ammonium (N) [as N mg/L]	01-Apr-22	17:27	04-Apr-22	10:43	6.0	6.0	---	---	0.2
Nitrite (as N) [mg/L]	02-Apr-22	12:30	04-Apr-22	22:14	---	---	---	---	< 0.03
Nitrate (as N) [mg/L]	02-Apr-22	12:30	04-Apr-22	22:14	---	---	---	---	4.72
Nitrate + Nitrite (as N) [mg/L]	02-Apr-22	12:30	04-Apr-22	22:14	---	---	---	---	4.72
E. Coli [cfu/100mL]	31-Mar-22	15:20	04-Apr-22	08:25	---	---	---	< 2	---



SGS Canada Inc.

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

Works #: 110000819
Project : PO#017018
LR Report : CA14734-MAR22

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

Waterworks/Project # **110000819**
 Facility Name **Warton WWTP**
 Org. # **5620**
 Quote # _____
 Attached Parameter List No Yes
 Laboratory Section _____
 Date Rec'd: **APR 01 2022**
 Time Rec'd: _____
 Sample condition upon receipt _____
 Initials **CA**
 Temperature Upon Receipt **12.3** °C
 Identification of Regulation under which the sample(s) fall: No Requirement to Report Sample Results Under Any Regulation for Wastewater Treatment

Requested Turnaround Time: 24-48 h 5-7d 7-10d Other _____ Specify: _____
 App. Req'd _____
 Report to: Megan Edney
 18 Caroline Street
 Southampton, ON
 N0H 2L0
 519-374-5782
 (519) 797-3080
 medney2@ocwa.com
 Invoice To: Ontario Clean Water Agency
 136 Main St. E
 Shelburne, ON
 L9V 3K5
 (519) 925-1938
 (519) 925-0322
 apwesthighlands@ocwa.com
 Laboratory: SGS Lakeland Research Ltd
 185 Concession St.
 Lakeland, ON
 K0L 2H0
 705-652-2000
 705-652-6365
 carrie.greenlaw@sgs.com

Station Acronym	Station Number (Short Name)	Sample Location Name	Date & Time Collected	# of Bottles	CI Residual (mg/L)	Free	Total	Combined (mg/L)	Parameters	Comments	Upload to MRF	Upload to OCWA
Eff	Eff	Effluent (Grab)	MAR 31 2022 09:10	1					Total Suspended Solids Total Phosphorus E. Coli CBOD ₅ TKN Total Ammonia Nitrite Nitrate Nitrite + Nitrate	pH = 8.51 Temperature (C) = 2.7°C	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Eff	Eff	Effluent (Composite)	09:00	2							Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
											Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
											Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
											Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
											Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
											Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
											Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>

Sampler Name: **DAN CAESAR**
 Sampler Signature: *[Signature]*

* Station Acronym: Cell - Cell Contents, Dis - Disinfection, Down - Downstream, Eff - Effluent, Pfl - Primary Bypass, Raw - Raw Sewage, Seb - Secondary Bypass, Up - Upstream, Well - Monitoring Well, Aer - Aeration, Bre - Biosolids raw sludge, Bth - Biosolids thickening, Bpd - Biosolids primary digestion, Bsd - Biosolids sec. digestion, Bps - Biosolids pri super, Bss - Biosolids sec super, Bslq - Biosolids sludge quality, Bsoq - Biosolids soil quality, DNF - Dissolved Air Flotation, Glt - Primary Treatment/Glt, PEI - Primary Effluent, BAS - Return Activated Sludge, SBR - Secondary Treatment/SBRs, SdE - Secondary Effluent, TVAS - Thickened Waste Activated Sludge, WAS - Waste Activated Sludge, indW - Industrial Wastewater, PStm - Pump Stn, Sdpt - Seepage, Lcht - Leachate, PflT - Primary treatment, Rnd - Re-aeration, Tert - Tertiary Treatment, Allo - Aclillo, Tely - Tertiary Bypass, Hold - Holding Tank, CSO - Combined Sewer Overflow, SSO - Sanitary Sewer Overflow

Revision #8
 Revised: 2016-09-21

608027635 2ab Rtn, 10:15



SGS Canada Inc.

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

OCWA-Grey Bruce (Warton WPCP)

Attn : Karla Young

P.O. Box 760
Southampton, ON
N0H 2L0, Canada

Phone: 519-797-2561
Fax:pdf

Works #: 110000819
Project : PO#017018

07-April-2022

Date Rec. : 01 April 2022
LR Report: CA13005-APR22

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	6: Client Limits Nov to April	8: Client Objective Nov to April	9: Eff Eff-Effluent (Grab)	10: Eff Eff-Effluent (Comp)
Sample Date & Time							31-Mar-22 09:10	31-Mar-22 09:00
Temperature Upon Receipt [°C]	---	---	---	---	---	---	12.0	12.0
Field pH [no unit]	---	---	---	---	6.0-9.5	---	8.51	---
Field Temperature [celcius]	---	---	---	---	---	---	2.7	---
Carbonaceous Biochemical Oxygen Demand [(CBOD5) mg/L]	01-Apr-22	14:24	06-Apr-22	13:55	15.0	10.0	---	< 2
Total Suspended Solids [mg/L]	02-Apr-22	09:44	04-Apr-22	14:23	15.0	10.0	---	6
Phosphorus (total) [mg/L]	04-Apr-22	16:57	06-Apr-22	11:03	0.3	0.15	---	0.04
Total Kjeldahl Nitrogen [as N mg/L]	02-Apr-22	07:54	04-Apr-22	09:31	---	---	---	< 0.5
Ammonia+Ammonium (N) [as N mg/L]	04-Apr-22	19:35	05-Apr-22	12:48	6.0	6.0	---	0.2
Nitrite (as N) [mg/L]	02-Apr-22	11:05	07-Apr-22	14:08	---	---	---	< 0.03
Nitrate (as N) [mg/L]	02-Apr-22	11:05	07-Apr-22	14:08	---	---	---	4.59
Nitrate + Nitrite (as N) [mg/L]	02-Apr-22	11:05	07-Apr-22	14:08	---	---	---	4.59
E. Coli [cfu/100mL]	01-Apr-22	15:35	04-Apr-22	09:44	---	---	< 2	---



SGS Canada Inc.

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

Works #: 110000819
Project : PO#017018
LR Report : CA13005-APR22

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

Waterworks/Project # **110000819**
 C of C LIMS No: **APR12207**
 Facility Name **Warton WWTP**
 Laboratory Section **APR 06 2022**
 Org. # **5620**
 Date Rec'd: _____
 Sample condition upon receipt: _____
 Initials: **ed**
 Quote # _____
 Attached Parameter List No Yes
 Temperature Upon Receipt **15** °C
 Time Rec'd: _____

Identification of Regulation under which the sample(s) fall: No Requirement to Report Sample Results Under Any Regulation for Wastewater Treatment
 Requested Turnaround Time: 24-48 h 5-7d 7-10d Other _____ Specify: _____
 App. Req'd: 24-48 h 5-7d 7-10d Other _____ Specify: _____

Report to: Megan Edney
 Data Transfer Contact: Megan Edney
 Invoice To: Ontario Clean Water Agency
 Laboratory: SGS Lakefield Research Ltd
 Address: 18 Caroline Street, Southampton, ON N0H 2L0
 136 Main St. E, Shelburne, ON L9V 3K5
 185 Concession St, Lakefield, ON K0L 2H0
 Telephone: 519-374-5782
 519-374-5782
 705-652-2000
 Fax: 519-797-3080
 519-797-3080
 705-652-6365
 Email: medney2@ocwa.com
 medney2@ocwa.com
 apwesthighlands@ocwa.com
 carrie.greenlaw@sus.com

Station Acronym	Station Number (Short Name)	Sample Location Name	Date & Time Collected	# of Bottles	CI Residual (mg/L)	Total	Free	Combined (mg/L)	Total Suspended Solids	Total Phosphorus	E. Coli	CBOD ₅	TKN	Total Ammonia Nitrogen	Nitrite	Nitrate	Nitrite + Nitrate	Comments	Upload to MOE	Upload to OCWA
Eff	Eff	Effluent (Grab)	2022/04/05 14:15	1					X		X	X	X	X	X	X	X	pH = 8.65 Temperature (C) = 3.8°C	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Eff	Eff	Effluent (Composite)	walked down at 13:15 DC	2					X	X	X	X	X	X	X	X	X		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
																			Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
																			Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
																			Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
																			Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
																			Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>

Sampler Name: **DAN CAESAR**
 Sampler Signature: **Dan Caesar**
 Revision #6
 Revised: 2018-09-21
 CM Healthcare Rtn 10.30
 P: 608 054 619424

* Station Acronym: Cell - Cell Contents, Dis - Disinfection, Down - Downstream, Eff - Final Effluent, PBy - Primary Bypass, Raw - Raw Sewage, SCSy - Secondary Bypass, Up - Upstream, Well - Monitoring Well, Air - Aeration, Bts - Biosolids-raw sludge, Bth - Biosolids thickening, Bpd - Biosolids primary digestion, Bcd - Biosolids sec. digestion, Bps - Biosolids pt super, Bss - Biosolids sec super, Bslq - Biosolids sludge quality, Bseq - Biosolids sludge quality, DAF - Dissolved Air Flotation, Grit - Primary Effluent, RAS - Return Activated Sludge, SBR - Secondary Treatment/SBRs, SOEF - Secondary Effluent, TWAS - Thickened Waste Activated Sludge, WAS - Waste Activated Sludge, IndW - Industrial Wastewater, PStn - Pump Stn, Sept - Septage, Lchl - Leachate, PrTr - Primary Treatment, ReAr - Re-aeration, Tert - Tertiary Treatment, Allo - Aciflo, TeBy - Tertiary Bypass, Hold - Holding Tank, CSO - Combined Sewer Overflow, SSO - Sanitary Sewer Overflow



SGS Canada Inc.

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

Works #: 110000819

Project : PO#017018

07-April-2022

OCWA-Grey Bruce (Warton WPCP)

Attn : Karla Young

Date Rec. : 06 April 2022

LR Report: CA12207-APR22

P.O. Box 760
Southampton, ON
N0H 2L0, Canada

Copy: #1

Phone: 519-797-2561

Fax:pdf

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	9: Eff Eff-Effluent Grab
Sample Date & Time					05-Apr-22 14:15
Temperature Upon Receipt [°C]	---	---	---	---	15.0
Field pH [no unit]					8.65
Field Temperature [celcius]					3.8
E. Coli [cfu/100mL]	06-Apr-22	17:17	07-Apr-22	16:15	< 2

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



SGS Canada Inc.

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

Works #: 110000819

Project : PO#017018

19-April-2022

OCWA-Grey Bruce (Warton WPCP)

Attn : Karla Young

Date Rec. : 07 April 2022

LR Report: CA13136-APR22

P.O. Box 760
Southampton, ON
N0H 2L0, Canada

Copy: #1

Phone: 519-797-2561
Fax:pdf

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	6: Client Limits Nov to April	8: Client Objective Nov to April	9: Eff Eff-Effluent (Composite)
Sample Date & Time							05-Apr-22 22:15
Temperature Upon Receipt [°C]	---	---	---	---	---	---	13.0
Carbonaceous Biochemical Oxygen Demand [(CBOD5) mg/L]	08-Apr-22	14:31	13-Apr-22	14:57	15.0	10.0	3
Total Suspended Solids [mg/L]	08-Apr-22	14:36	12-Apr-22	11:22	15.0	10.0	6
Phosphorus (total) [mg/L]	08-Apr-22	17:18	11-Apr-22	19:53	0.3	0.15	< 0.03
Total Kjeldahl Nitrogen [as N mg/L]	08-Apr-22	16:03	12-Apr-22	13:45	---	---	0.6
Ammonia+Ammonium (N) [as N mg/L]	08-Apr-22	22:41	11-Apr-22	20:51	6.0	6.0	< 0.1
Nitrite (as N) [mg/L]	08-Apr-22	19:46	14-Apr-22	15:46	---	---	< 0.03
Nitrate (as N) [mg/L]	08-Apr-22	19:46	14-Apr-22	15:46	---	---	3.87
Nitrate + Nitrite (as N) [mg/L]	08-Apr-22	19:46	14-Apr-22	15:46	---	---	3.87

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

From: Karla Young
To: ["Graham, Robert G. \(MECP\)"; "Smith, Mark \(MECP\)"](#)
Cc: [Leo-Paul Frigault](#); [Camille Leung](#)
Subject: 2022 Q2 - Bypass Overflow Event Summary - Wiarion WWTP (110000819) - Town of South Bruce Peninsula
Date: August-12-22 3:18:00 PM

Good Afternoon,

Under ECA 6045-ARDJS7, a quarterly summary report shall be submitted for Bypass Event(s) and Overflows that occur at the Wiarion Wastewater Treatment Plant.

Bypass Events

The ECA requires the submission of a summary report of the Bypass Event(s) to the Water Supervisor on a quarterly basis, no later than each of the following dates for each calendar year: February 15, May 15, August 15, and November 15.

The summary reports shall contain, at a minimum:

- the date and time of the beginning of the Bypass;
- the location of the Bypass and the treatment process(es) bypassed;
- the reason(s) for the Bypass;
- the date and time of the end of the Bypass;
- the measured or estimated volume of Bypass;
- Samples collected;
- Assessment of the impact of the Event(s) on Final Effluent, plant operation and the receiver;
- Planned mitigation strategies, as appropriate.

Date	Time		Duration HH:MM	Volume (m ³)	Treatment Process Bypassed	Samples Collected	Reason for Bypass	Impact of Event	Mitigation
	Start	End							
March 28- April 5, 2022	March 28 14:20 PM	April 5 14:30 PM	72 Hours	21,062	MBBR	Yes	The screens between MBBR cell 1 and 2 were plugged. The MBBR was shut down and bypassed before it spilled over.	Raw sewage discharge from the (3)-cell MBBR System bypass was directed to the (3)-cell waste stabilization lagoon system which provides effluent polishing. Flow from the lagoons was then directed into the sand filtration system and through the UV disinfection system before it was released into Colpoys Bay.	The screens and the cells of the MBBR were cleaned before being put back online
April 13, 2022	April 13 01:05 AM	April 13 01:40 AM	35 minutes	74.67	UV disinfection	Yes	Power failure causing UV system failure	Filter treated effluent released to effluent outfall	n/a
May 21, 2022	May 21, 2022 04:22 AM	May 21, 2022 05:10 AM	48 minutes	30	UV disinfection	Yes	Power failure causing UV system failure	Filter treated effluent released to effluent outfall	n/a

Overflow Events

The ECA requires the submission of a summary report of the Overflow Event(s) to the Water

Supervisor on a quarterly basis, no later than each of the following dates for each calendar year: February 15, May 15, August 15, and November 15.

The summary reports shall contain, at a minimum:

- the date and time of the beginning of the Overflow;
- the location of the Overflow and the receiver and disinfection status of the Overflow;
- the reason(s) for the Overflow;
- the date and time of the end of the Overflow;
- the measured or estimated volume of Overflow;
- the mitigation measures taken;
- Samples collected;
- Assessment of the impact of the Event(s) on plant operation and the receiver;
- Planned mitigation strategies, as appropriate.

Date	Time		Duration	Volume	Receiver	Disinfection Status of Overflow	Samples Collected	Reason for Overflow	Impact of Event	Mitigation: Taken and Planned
	Start	End	HH:MM	(M ³)						
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Thanks,

Karla

Karla Young
 Process & Compliance Technician
 Grey-Bruce/Bruce Hubs
 Georgian Highlands Region
Ontario Clean Water Agency
kyoung@ocwa.com
 (519) 374 - 5782



SGS Canada Inc.

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

Works #: 110000819

Project : PO#017018

27-April-2022

OCWA-Grey Bruce (Warton WPCP)

Attn : Karla Young

Date Rec. : 21 April 2022

LR Report: CA12826-APR22

P.O. Box 760
Southampton, ON
N0H 2L0, Canada

Copy: #2

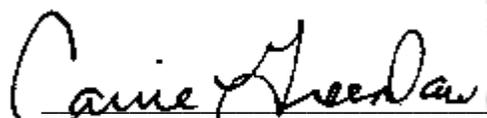
Phone: 519-797-2561
Fax:pdf

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	6: Client Limits Nov to April	8: Client Objective Nov to April	9: Eff Eff-Effluent Grab
Sample Date & Time							13-Apr-22 01:40
Temperature Upon Receipt [°C]	---	---	---	---	---	---	12.0
Carbonaceous Biochemical Oxygen Demand [(CBOD5) mg/L]	21-Apr-22	17:49	26-Apr-22	13:48	15.0	10.0	<2 UAL
Total Suspended Solids [mg/L]	22-Apr-22	13:53	26-Apr-22	13:01	15.0	10.0	13
Phosphorus (total) [mg/L]	25-Apr-22	14:18	27-Apr-22	11:13	0.3	0.15	< 0.03
Total Kjeldahl Nitrogen [as N mg/L]	22-Apr-22	15:35	25-Apr-22	11:42	---	---	0.7
Ammonia+Ammonium (N) [as N mg/L]	22-Apr-22	21:03	25-Apr-22	11:05	6.0	6.0	0.1
Nitrite (as N) [mg/L]	23-Apr-22	16:39	27-Apr-22	10:15	---	---	< 0.03
Nitrate (as N) [mg/L]	23-Apr-22	16:39	27-Apr-22	10:15	---	---	3.35
Nitrate + Nitrite (as N) [mg/L]	23-Apr-22	16:39	27-Apr-22	10:15	---	---	3.35

Note: CBOD, TSS, Ni tri te and Ni trate were received after the recommended holding time of 7 days. Results may be unreliable. Samples were processed with client's approval.
UAL - Unreliable: Sample Age Exceeds Normal Limit


Carrie Greenlaw
Project Specialist,
Environment, Health & Safety



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

Works #: 110000819

Project : PO#017018

02-June-2022

OCWA-Grey Bruce (Warton WPCP)

Attn : Karla Young

Date Rec. : 26 May 2022

LR Report: CA15548-MAY22

P.O. Box 760
Southampton, ON
N0H 2L0, Canada

Copy: #1

Phone: 519-797-2561
Fax:pdf

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: Client Limits May to Oct	7: Client Objectives May to Oct	9: Eff Eff-Effluent (Composite)
Sample Date & Time							20-May-22 23:30
Temperature Upon Receipt [°C]	---	---	---	---	---	---	18.0
Carbonaceous Biochemical Oxygen Demand [(CBOD5) mg/L]	27-May-22	18:01	01-Jun-22	15:20	15.0	10.0	< 2
Total Suspended Solids [mg/L]	27-May-22	08:42	29-May-22	11:44	15.0	10.0	2
Phosphorus (total) [mg/L]	31-May-22	16:16	01-Jun-22	13:11	0.3	0.15	< 0.03
Total Kjeldahl Nitrogen [as N mg/L]	30-May-22	17:10	01-Jun-22	14:29	---	---	0.6
Ammonia+Ammonium (N) [as N mg/L]	31-May-22	12:45	01-Jun-22	09:35	3.0	3.0	0.1
Nitrite (as N) [mg/L]	27-May-22	14:32	01-Jun-22	09:10	---	---	< 0.03
Nitrate (as N) [mg/L]	27-May-22	14:32	01-Jun-22	09:10	---	---	0.38
Nitrate + Nitrite (as N) [mg/L]	27-May-22	14:32	01-Jun-22	09:10	---	---	0.38

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



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OCWA-Grey Bruce (Warton WPCP)

Attn : Karla Young

P.O. Box 760
Southampton, ON
N0H 2L0, Canada

Phone: 519-797-2561
Fax:pdf

Works #: 110000819
Project : PO#017018

02-June-2022

Date Rec. : 26 May 2022
LR Report: CA15549-MAY22

Copy: #1

CERTIFICATE OF ANALYSIS Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: Client Limits May to Oct	7: Client Objectives May to Oct	9: Eff Eff-Effluent (Grab)
Sample Date & Time							21-May-22 05:05
Temperature Upon Receipt [°C]	---	---	---	---	---	---	19.0
Carbonaceous Biochemical Oxygen Demand [(CBOD5) mg/L]	27-May-22	18:01	01-Jun-22	15:20	15.0	10.0	< 2
Total Suspended Solids [mg/L]	27-May-22	08:42	29-May-22	11:44	15.0	10.0	3
Phosphorus (total) [mg/L]	31-May-22	16:16	01-Jun-22	13:11	0.3	0.15	< 0.03
Total Kjeldahl Nitrogen [as N mg/L]	30-May-22	17:10	01-Jun-22	14:29	---	---	< 0.5
Ammonia+Ammonium (N) [as N mg/L]	31-May-22	12:45	01-Jun-22	09:35	3.0	3.0	< 0.1
Nitrite (as N) [mg/L]	27-May-22	21:21	01-Jun-22	09:42	---	---	< 0.03
Nitrate (as N) [mg/L]	27-May-22	21:21	01-Jun-22	09:42	---	---	0.35
Nitrate + Nitrite (as N) [mg/L]	27-May-22	21:21	01-Jun-22	09:42	---	---	0.35
E. Coli [cfu/100mL]	26-May-22	16:36	30-May-22	13:20	200 (May 15-Sep15)	---	122 UAL

Note: E. coli was received after the recommended holding time of 48 hours and was processed with client's approval. UAL - Unreliable: Sample Age Exceeds Normal Limit



SGS Canada Inc.

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

Works #: 110000819
Project : PO#017018
LR Report : CA15549-MAY22

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

From: Karla Young
To: ["Graham, Robert G. \(MECP\)"; "Smith, Mark \(MECP\)"](#)
Cc: [Leo-Paul Frigault](#); [Camille Leung](#)
Subject: 2022 Q3 - Bypass Overflow Event Summary - Warton WWTP (110000819) - Town of South Bruce Peninsula
Date: November-15-22 11:12:00 AM
Attachments: [Report CA12289-AUG22.pdf](#)

Good Morning,

Under ECA 6045-ARDJS7, a quarterly summary report shall be submitted for Bypass Event(s) and Overflows that occur at the Warton Wastewater Treatment Plant.

Bypass Events

The ECA requires the submission of a summary report of the Bypass Event(s) to the Water Supervisor on a quarterly basis, no later than each of the following dates for each calendar year: February 15, May 15, August 15, and November 15.

The summary reports shall contain, at a minimum:

- the date and time of the beginning of the Bypass;
- the location of the Bypass and the treatment process(es) bypassed;
- the reason(s) for the Bypass;
- the date and time of the end of the Bypass;
- the measured or estimated volume of Bypass;
- Samples collected;
- Assessment of the impact of the Event(s) on Final Effluent, plant operation and the receiver;
- Planned mitigation strategies, as appropriate.

Date	Time		Duration	Volume	Treatment Process Bypassed	Samples Collected	Reason for Bypass	Impact of Event	Mitigation
	Start	End	HH:MM	(m ³)					
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Overflow Events

The ECA requires the submission of a summary report of the Overflow Event(s) to the Water Supervisor on a quarterly basis, no later than each of the following dates for each calendar year: February 15, May 15, August 15, and November 15.

The summary reports shall contain, at a minimum:

- the date and time of the beginning of the Overflow;
- the location of the Overflow and the receiver and disinfection status of the Overflow;
- the reason(s) for the Overflow;
- the date and time of the end of the Overflow;
- the measured or estimated volume of Overflow;
- the mitigation measures taken;
- Samples collected;
- Assessment of the impact of the Event(s) on plant operation and the receiver;
- Planned mitigation strategies, as appropriate.

Date	Time		Duration	Volume	Receiver	Disinfection Status of Overflow	Samples Collected	Reason for Overflow	Impact of Event	Mitigation: Taken and Planned
	Start	End	HH:MM	(M ³)						
August 7, 2022	12:30	14:05	1 hour 35 minutes	65	Colpoy's Bay	Raw sewage	yes	Power bump caused issues with MCC components. This caused the pumps at pump station #1 to fail and air lock following a high flow event.	n/a	The air was bled out of the pump lines and restarted

Thanks,

Karla

Karla Young
 Process & Compliance Technician
 Grey-Bruce/Bruce Hubs
 Georgian Highlands Region
Ontario Clean Water Agency
kyoung@ocwa.com
 (519) 374 - 5782



SGS Canada Inc.

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

Works #: 110000819

Project : PO#017018

15-August-2022

OCWA-Grey Bruce (Warton WPCP)

Attn : Karla Young

Date Rec. : 09 August 2022

LR Report: CA12289-AUG22

P.O. Box 760
Southampton, ON
N0H 2L0, Canada

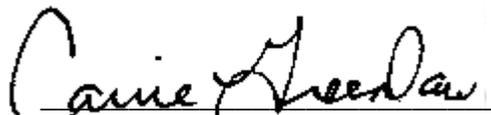
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CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	9: CSO CSO-PS# 1 Overflow (Grab)
Sample Date & Time					07-Aug-22 13:30
Temperature Upon Receipt [°C]	---	---	---	---	17.0
Biochemical Oxygen Demand (BOD5) [mg/L]	10-Aug-22	17:10	15-Aug-22	15:24	25
Total Suspended Solids [mg/L]	10-Aug-22	14:29	11-Aug-22	14:16	125
Phosphorus (total) [mg/L]	10-Aug-22	16:10	11-Aug-22	13:39	1.18
Total Kjeldahl Nitrogen [as N mg/L]	09-Aug-22	17:46	10-Aug-22	12:46	10.8



Carrie Greenlaw
Project Specialist,
Environment, Health & Safety

From: Karla Young
To: ["Graham, Robert G. \(MECP\)"; "Smith, Mark \(MECP\)"; "Shannon, Rhonda \(MECP\)"](#)
Cc: [Leo-Paul Frigault; Camille Leung](#)
Subject: 2022 Q4 - Bypass Overflow Event Summary - Wiarton WWTP (110000819) - Town of South Bruce Peninsula
Date: February-13-23 10:19:00 AM

Good Morning,

Under ECA 6045-ARDJS7, a quarterly summary report shall be submitted for Bypass Event(s) and Overflows that occur at the Wiarton Wastewater Treatment Plant.

Bypass Events

The ECA requires the submission of a summary report of the Bypass Event(s) to the Water Supervisor on a quarterly basis, no later than each of the following dates for each calendar year: February 15, May 15, August 15, and November 15.

The summary reports shall contain, at a minimum:

- the date and time of the beginning of the Bypass;
- the location of the Bypass and the treatment process(es) bypassed;
- the reason(s) for the Bypass;
- the date and time of the end of the Bypass;
- the measured or estimated volume of Bypass;
- Samples collected;
- Assessment of the impact of the Event(s) on Final Effluent, plant operation and the receiver;
- Planned mitigation strategies, as appropriate.

Date	Time		Duration	Volume	Treatment Process Bypassed	Samples Collected	Reason for Bypass	Impact of Event	Mitigation
	Start	End	HH:MM	(m ³)					
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Overflow Events

The ECA requires the submission of a summary report of the Overflow Event(s) to the Water Supervisor on a quarterly basis, no later than each of the following dates for each calendar year: February 15, May 15, August 15, and November 15.

The summary reports shall contain, at a minimum:

- the date and time of the beginning of the Overflow;
- the location of the Overflow and the receiver and disinfection status of the Overflow;
- the reason(s) for the Overflow;
- the date and time of the end of the Overflow;
- the measured or estimated volume of Overflow;
- the mitigation measures taken;
- Samples collected;
- Assessment of the impact of the Event(s) on plant operation and the receiver;
- Planned mitigation strategies, as appropriate.

Date	Time		Duration HH:MM	Volume (M ³)	Receiver	Disinfection Status of Overflow	Samples Collected	Reason for Overflow	Impact of Event	Mitigation: Taken and Planned
	Start	End								
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Thanks,

Karla

Karla Young
 Process & Compliance Technician
 Grey-Bruce/Bruce Hubs
 Georgian Highlands Region
Ontario Clean Water Agency
kyoung@ocwa.com
 (519) 374 - 5782



ONTARIO CLEAN WATER AGENCY
AGENCE ONTARIENNE DES EAUX

Appendix E

Septage Laboratory Results



SGS Canada Inc.

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

Works #: 110000819

Project : PO#017018

31-January-2022

OCWA-Grey Bruce (Warton WPCP)

Attn : Karla Young

Date Rec. : 25 January 2022

LR Report: CA13848-JAN22

P.O. Box 760
Southampton, ON
N0H 2L0, Canada

Copy: #1

Phone: 519-797-2561

Fax:pdf

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: Sept Sept-Septage-Hol ding Tank
Sample Date & Time					24-Jan-22 11:20
Temperature Upon Receipt [°C]	---	---	---	---	5.0
Aluminum (total) [mg/L]	27-Jan-22	12:41	28-Jan-22	15:35	0.47
Arsenic (total) [mg/L]	27-Jan-22	12:41	28-Jan-22	15:35	< 0.002
Barium (total) [mg/L]	27-Jan-22	12:41	28-Jan-22	15:35	0.0824
Cadmium (total) [mg/L]	27-Jan-22	12:41	28-Jan-22	15:35	< 0.00003
Calcium (total) [mg/L]	27-Jan-22	12:41	28-Jan-22	15:35	151
Chromium (total) [mg/L]	27-Jan-22	12:41	28-Jan-22	15:35	0.0017
Cobalt (total) [mg/L]	27-Jan-22	12:41	28-Jan-22	15:35	0.00021
Copper (total) [mg/L]	27-Jan-22	12:41	28-Jan-22	15:35	0.108
Iron (total) [mg/L]	27-Jan-22	12:41	28-Jan-22	15:35	6.61
Lead (total) [mg/L]	27-Jan-22	12:41	28-Jan-22	15:35	0.0018
Magnesium (total) [mg/L]	27-Jan-22	12:41	28-Jan-22	15:35	43.9
Manganese (total) [mg/L]	27-Jan-22	12:41	28-Jan-22	15:35	0.194
Mercury (total) [mg/L]	26-Jan-22	12:12	28-Jan-22	15:35	< 0.0001
Nickel (total) [mg/L]	27-Jan-22	12:41	28-Jan-22	15:35	0.005
Potassium (total) [mg/L]	27-Jan-22	12:41	28-Jan-22	15:35	41.1
Selenium (total) [mg/L]	27-Jan-22	12:41	28-Jan-22	15:35	0.0005
Silver (total) [mg/L]	27-Jan-22	12:41	28-Jan-22	15:35	0.0030
Sodium (total) [mg/L]	27-Jan-22	12:41	28-Jan-22	15:35	374
Tin (total) [mg/L]	27-Jan-22	12:41	28-Jan-22	15:35	< 0.0006
Zinc (total) [mg/L]	27-Jan-22	12:41	28-Jan-22	15:35	0.17

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



SGS Canada Inc.

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

Works #: 110000819

Project : PO#017018

11-February-2022

OCWA-Grey Bruce (Warton WPCP)

Attn : Karla Young

Date Rec. : 25 January 2022

LR Report: CA13852-JAN22

P.O. Box 760
Southampton, ON
N0H 2L0, Canada

Copy: #1

Phone: 519-797-2561
Fax:pdf

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: Sept Sept-Septage-Hol ding Tank
Sample Date & Time					24-Jan-22 11:30
Temperature Upon Receipt [°C]	---	---	---	---	5.0
Biochemical Oxygen Demand (BOD5) [mg/L]	26-Jan-22	16:26	01-Feb-22	14:06	1480
Total Suspended Solids [mg/L]	26-Jan-22	11:03	27-Jan-22	11:07	207
Chemical Oxygen Demand [mg/L]	01-Feb-22	10:07	01-Feb-22	14:06	2350
Ammonia+Ammonium (N) [as N mg/L]	26-Jan-22	18:14	28-Jan-22	13:05	1.2
Total Kjeldahl Nitrogen [as N mg/L]	26-Jan-22	08:15	28-Jan-22	13:34	51.0
Phosphorus (total) [mg/L]	26-Jan-22	08:15	27-Jan-22	13:27	6.7
Isopropyl Alcohol [mg/L]	08-Feb-22	12:37	11-Feb-22	10:14	< 5
Methyl alcohol [mg/L]	08-Feb-22	12:37	11-Feb-22	10:14	< 5
Acetone [ug/L]	26-Jan-22	20:45	28-Jan-22	10:36	< 1200
Benzene [ug/L]	26-Jan-22	20:45	28-Jan-22	10:36	< 20
Ethylbenzene [ug/L]	26-Jan-22	20:45	28-Jan-22	10:36	< 20
Dichloromethane [ug/L]	26-Jan-22	20:45	28-Jan-22	10:36	< 20
Methyl ethyl ketone [ug/L]	26-Jan-22	20:45	28-Jan-22	10:36	< 800
Toluene [ug/L]	26-Jan-22	20:45	28-Jan-22	10:36	< 20
Xylene (total) [ug/L]	26-Jan-22	20:45	28-Jan-22	10:36	< 20
o-xylene [ug/L]	26-Jan-22	20:45	28-Jan-22	10:36	< 20
m/p-xylene [ug/L]	26-Jan-22	20:45	28-Jan-22	10:36	< 20

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

Feb 13 2022

Waterworks/Project # **110000819** C of C LIMS No: _____
 Facility Name **Warton WWTP** Laboratory Section _____
 Org. # **5620** Date Recd: _____
 Sample condition upon receipt _____
 Initials *my*
 Bottle # _____ Time Recd: _____
 Attached Parameter List No Yes Temperature Upon Receipt **FEB 10 2022 9:45** °C
 Identification of Regulation under which the sample(s) fall: No Requirement to Report Sample Results Under Any Regulation for Wastewater Treatment

Requested Turnaround Time: _____
 App. Req' 24-48 h 5-7d 7-10d Other _____
 Report to: Megan Edney Data Transfer Contact: Megan Edney Laboratory: SGS Lakeland Research Ltd
 Address: 18 Caroline Street 136 Main St. E 185 Concession St.
 Southampton, ON Shelburne, ON Lakefield, ON
 N0H 2L0 N0H 2L0 L9V 3K5
 Telephone: 519-374-5782 (519) 925-1938 (519) 925-2000
 Fax: (519) 797-3080 (519) 757-3080 (519) 925-0322 705-652-6365
 Email: madnev2@ocwa.com apweshighlands@ocwa.com gearlie.greenlaw@sgs.com

Station Acronym	Station Number (Short Name)	Sample Location Name	Date & Time Collected	# of Bottles	Parameters													Comments	Upload to MOE	Upload to OCWA	
					BOD ₅	Total Suspended Solids	Total Phosphorous	TKN	Total Ammonia Nitrogen	Chemical Oxygen Demand	Acetone	Benzene	Ethylbenzene	Isopropyl Alcohol	Methyl Alcohol	Methylene Chloride	Methyl Ethyl Ketone				Methylene Chloride
Sept	Sept	Septage - Holding Tank	FEB 09 2022 09:45	7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	2 - 500 mL PET bottles, 1 - 60 mL plastic w/ sulphuric acid preservative, 2 - 40 mL EPA vials unpreserved (no headspace), 2 - 40 mL EPA vials w/ sodium bisulphate preservative (no headspace)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
																				Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
																				Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
																				Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
																				Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>

Sampler Name: **DAN CAESAR** Sampler Signature: *Dan Caesar*

* Station Acronym: Cell - Cell Contents, Dis - Disinfection, Down - Downstream, Eff - Final Effluent, Prib - Primary Bypass, Raw - Raw Sewage, Soby - Secondary Bypass, Up - Upstream, Well - Monitoring Well, Aer - Aeration, Bis - Biosolids thickening, Bpd - Biosolids primary digestion, Bsd - Biosolids sec. digestion, Bps - Biosolids pri super, Bss - Biosolids sec. super, Bsq - Biosolids sludge quality, Bspq - Biosolids sludge quality, DAF - Dissolved Air Flotation, Grt - Primary Treatment/Grtr, PTr - Primary Treatment, RAS - Return Activated Sludge, SBR - Secondary Treatment/SBRs, SCEL - Secondary Effluent, TWAS - Thickened Waste Activated Sludge, WAS - Waste Activated Sludge, IndW - Industrial Wastewater, PSh - Pump Station, Sept - Septage, Lcht - Leachate, PTr - Primary Treatment, RAR - Re-aeration, Ter - Tertiary Treatment, Allo - Acidiph, TsBy - Tertiary Bypass, Hold - Holding Tank, CSO - Combined Sewer Overflow, SSO - Sanitary Sewer Overflow

607887285 gms
15TN (BANKS)



SGS Canada Inc.

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

Works #: 110000819

Project : PO#017018

01-March-2022

OCWA-Grey Bruce (Warton WPCP)

Attn : Karla Young

Date Rec. : 10 February 2022

LR Report: CA13385-FEB22

P.O. Box 760
Southampton, ON
N0H 2L0, Canada

Copy: #1

Phone: 519-797-2561
Fax:pdf

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: Sept Sept-Septage-Hold ing Tank
Sample Date & Time					09-Feb-22 09:45
Temperature Upon Receipt [°C]	---	---	---	---	9.0
Biochemical Oxygen Demand (BOD5) [mg/L]	11-Feb-22	14:42	16-Feb-22	13:19	455
Total Suspended Solids [mg/L]	11-Feb-22	09:35	14-Feb-22	15:17	259
Chemical Oxygen Demand [mg/L]	11-Feb-22	17:12	16-Feb-22	12:46	2600
Ammonia+Ammonium (N) [as N mg/L]	14-Feb-22	17:32	16-Feb-22	11:22	1.3
Total Kjeldahl Nitrogen [as N mg/L]	11-Feb-22	09:12	14-Feb-22	10:29	48.8
Phosphorus (total) [mg/L]	11-Feb-22	09:12	15-Feb-22	10:39	5.2
Isopropyl Alcohol [mg/L]	24-Feb-22	13:38	01-Mar-22	10:09	< 5
Methyl alcohol [mg/L]	24-Feb-22	13:38	01-Mar-22	10:09	6.7
Acetone [ug/L]	11-Feb-22	13:18	15-Feb-22	12:27	< 1200
Benzene [ug/L]	11-Feb-22	13:18	15-Feb-22	12:27	< 20
Ethylbenzene [ug/L]	11-Feb-22	13:18	15-Feb-22	12:27	< 20
Dichloromethane [ug/L]	11-Feb-22	13:18	15-Feb-22	12:27	< 20
Methyl ethyl ketone [ug/L]	11-Feb-22	13:18	15-Feb-22	12:27	< 800
Toluene [ug/L]	11-Feb-22	13:18	15-Feb-22	12:27	< 20
Xylene (total) [ug/L]	11-Feb-22	13:18	15-Feb-22	12:27	< 20
o-xylene [ug/L]	11-Feb-22	13:18	15-Feb-22	12:27	< 20
m/p-xylene [ug/L]	11-Feb-22	13:18	15-Feb-22	12:27	< 20

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



SGS Canada Inc.

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

Works #: 110000819

Project : PO#017018

31-March-2022

OCWA-Grey Bruce (Warton WPCP)

Attn : Karla Young

Date Rec. : 10 March 2022

LR Report: CA12458-MAR22

P.O. Box 760
Southampton, ON
N0H 2L0, Canada

Copy: #1

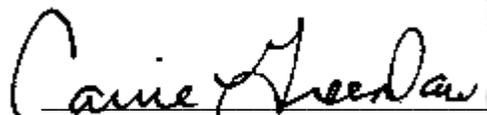
Phone: 519-797-2561
Fax:pdf

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: Sept Sept-Septage-Hold ing Tank
Sample Date & Time					09-Mar-22 09:15
Temperature Upon Receipt [°C]	---	---	---	---	11.0
Biochemical Oxygen Demand (BOD5) [mg/L]	11-Mar-22	13:00	16-Mar-22	14:17	1760
Total Suspended Solids [mg/L]	11-Mar-22	11:03	14-Mar-22	14:37	267
Chemical Oxygen Demand [mg/L]	11-Mar-22	11:50	16-Mar-22	14:18	2380
Ammonia+Ammonium (N) [as N mg/L]	10-Mar-22	20:23	14-Mar-22	12:45	5.3
Total Kjeldahl Nitrogen [as N mg/L]	11-Mar-22	08:45	15-Mar-22	14:11	58.9
Phosphorus (total) [mg/L]	11-Mar-22	08:45	16-Mar-22	09:11	9.6
Isopropyl Alcohol [mg/L]	29-Mar-22	11:44	30-Mar-22	16:37	< 5
Methyl alcohol [mg/L]	29-Mar-22	11:44	30-Mar-22	16:37	< 5
Acetone [ug/L]	11-Mar-22	14:59	14-Mar-22	13:59	92
Benzene [ug/L]	11-Mar-22	14:59	14-Mar-22	13:59	< 0.5
Ethylbenzene [ug/L]	11-Mar-22	14:59	14-Mar-22	13:59	< 0.5
Dichloromethane [ug/L]	11-Mar-22	14:59	14-Mar-22	13:59	< 0.5
Methyl ethyl ketone [ug/L]	11-Mar-22	14:59	14-Mar-22	13:59	89
Toluene [ug/L]	11-Mar-22	14:59	14-Mar-22	13:59	15.3
Xylene (total) [ug/L]	11-Mar-22	14:59	14-Mar-22	13:59	< 0.5
o-xylene [ug/L]	11-Mar-22	14:59	14-Mar-22	13:59	< 0.5
m/p-xylene [ug/L]	11-Mar-22	14:59	14-Mar-22	13:59	< 0.5

*Note - Isopropyl Alcohol and Methyl alcohol were processed after the recommended holding time of 15 days due to instrumentation delays.



Carrie Greenlaw
Project Specialist,
Environment, Health & Safety

Waterworks/Project # **110000819** C of C LIMS No: **APR 15 2025 NK**

Facility Name **Warton WWTP** Laboratory Section **Sample condition upon receipt**

Org. # **5620** Date Rec'd: **04/29/22** Time Rec'd: _____ Initials _____

Quote # _____ No Yes Temperature Upon Receipt **23** °C

Attached Parameter List _____ Identification of Regulation under which the sample(s) fall: No Requirement to Report Sample Results Under Any Regulation for Wastewater Treatment

Requested Turnaround Time: _____

App. 24-48 h 5-7d 7-10d Other _____ Specify: _____

Report to: Process & Compliance Technician (PCT) Invoice To: Ontario Clean Water Agency
 18 Caroline Street 136 Main St. E
 Southampton, ON Shelburne, ON
 N0H 2L0 L9V 3K5
 Telephone: 519-374-5782 519-374-5782 (519) 925-1938
 Fax: (519) 797-3080 (519) 797-3080 (519) 925-0322
 Email: kyoun@ocwa.com kyoun@ocwa.com @investhighlands@ocwa.com carrie.greenlaw@sgs.com

Station Acronym	Station Number (Short Name)	Sample Location Name	Date & Time Collected	# of Bottles	Parameters													Comments	Upload to MOR	Upload to OCWA			
					BOD ₅	Total Suspended Solids	Total Phosphorous	TKN	Total Ammonia Nitrogen	Chemical Oxygen Demand	Acetone	Benzene	Ethylbenzene	Isopropyl Alcohol	Methyl Alcohol	Methylene Chloride	Methyl Ethyl Ketone				Methylene Chloride	Toluene	Xylene
Sept	Sept	Septage - Holding Tank	APRIL 23, 2022 13:15	8	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	2 - 500 mL PET bottles, 2 - 60 mL plastic w/ sulphuric acid preservative, 2 - 10 mL EPA vials unpreserved (no headspace), 2 - 40 mL EPA vials w/ sodium bisulphate preservative (no headspace)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
																						Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
																						Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
																						Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
																						Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>

Sampler Name: **MEET PATEL** Sampler Signature: *Me Patel*

* Station Acronym: Cell - Cell Contents, Dis - Disinfection, Down - Downstream, Eff - Final Effluent, PBy - Primary Bypass, Raw - Raw Sewage, ScBy - Secondary Bypass, Up - Upstream, Well - Monitoring Well, Aer - Aeration, Bjs - Biosolids raw sludge, Bth - Biosolids thickening, Bpt - Biosolids primary digestion, Bsd - Biosolids sec. digestion, Bps - Biosolids pri super, Bss - Biosolids sec super, Bsq - Biosolids sec super, Bslq - Biosolids sludge quality, Bcoq - Biosolids soil quality, DAP - Dissolved Air Flotation, GRT - Primary Treatment, PAF - Primary Effluent, PAS - Return Activated Sludge, SBT - Secondary Treatment, SBRs, SCEL - Secondary Effluent, TWAS - Thickened Waste Activated Sludge, WAS - Waste Activated Sludge, IndW - Industrial Wastewater, PSm - Pump Sm, Sept - Septage, Lcht - Leachate, PRT - Primary Treatment, Rea - Re-aeration, Tert - Tertiary Treatment, Allo - Acclio, TeBy - Tertiary Bypass, Hold - Holding tank, CSO - Combined Sewer Overflow, SSO - Sanitary Sewer Overflow



SGS Canada Inc.

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

Works #: 110000819

Project : PO#017018

17-May-2022

OCWA-Grey Bruce (Warton WPCP)

Attn : Karla Young

Date Rec. : 29 April 2022

LR Report: CA15705-APR22

P.O. Box 760
Southampton, ON
N0H 2L0, Canada

Copy: #1

Phone: 519-797-2561
Fax:pdf

CERTIFICATE OF ANALYSIS

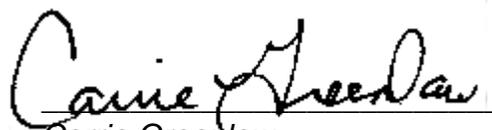
Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: Sept Sept-Septage-Hold ing Tank
Sample Date & Time					28-Apr-22 13:15
Temperature Upon Receipt [°C]	---	---	---	---	12.0
Biochemical Oxygen Demand (BOD5) [mg/L]	29-Apr-22	16:38	04-May-22	11:18	3300
Total Suspended Solids [mg/L]	04-May-22	14:27	05-May-22	09:53	6080
Chemical Oxygen Demand [mg/L]	03-May-22	09:04	03-May-22	12:52	12500
Ammonia+Ammonium (N) [as N mg/L]	29-Apr-22	16:30	04-May-22	10:29	429
Total Kjeldahl Nitrogen [as N mg/L]	02-May-22	08:28	06-May-22	13:09	563
Phosphorus (total) [mg/L]	05-May-22	17:06	06-May-22	14:26	39.6
Aluminum (total) [mg/L]	05-May-22	17:06	06-May-22	14:26	1.49
Arsenic (total) [mg/L]	05-May-22	17:06	06-May-22	14:26	0.0056
Barium (total) [mg/L]	05-May-22	17:06	06-May-22	14:26	0.147
Cadmium (total) [mg/L]	05-May-22	17:06	06-May-22	14:26	0.00260
Calcium (total) [mg/L]	05-May-22	17:06	06-May-22	14:26	130
Chromium (total) [mg/L]	05-May-22	17:06	06-May-22	14:26	0.00550
Cobalt (total) [mg/L]	05-May-22	17:06	06-May-22	14:26	0.00420
Copper (total) [mg/L]	05-May-22	17:06	06-May-22	14:26	0.816
Iron (total) [mg/L]	05-May-22	17:06	06-May-22	14:26	8.10
Lead (total) [mg/L]	05-May-22	17:06	06-May-22	14:26	0.00930
Magnesium (total) [mg/L]	05-May-22	17:06	06-May-22	14:26	30.0
Manganese (total) [mg/L]	05-May-22	17:06	06-May-22	14:26	0.375
Mercury (total) [ug/L]	04-May-22	10:11	05-May-22	14:22	0.06
Nickel (total) [mg/L]	05-May-22	17:06	06-May-22	14:27	0.0131
Potassium (total) [mg/L]	05-May-22	17:06	06-May-22	14:27	173
Selenium (total) [mg/L]	05-May-22	17:06	06-May-22	14:27	0.00160
Silver (total) [mg/L]	05-May-22	17:06	06-May-22	14:27	< 0.00005
Sodium (total) [mg/L]	05-May-22	17:06	06-May-22	14:27	853
Tin (total) [mg/L]	05-May-22	17:06	06-May-22	14:27	0.00120
Zinc (total) [mg/L]	05-May-22	17:06	06-May-22	14:27	2.69
Isopropyl Alcohol [mg/L]	11-May-22	14:24	16-May-22	16:03	< 5
Methyl alcohol [mg/L]	11-May-22	14:24	16-May-22	16:03	< 5
Acetone [ug/L]	04-May-22	18:00	05-May-22	10:56	< 1200
Benzene [ug/L]	04-May-22	18:00	05-May-22	10:56	< 20

Online LIMS

0002903071

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: Sept Sept-Septage-Hold ing Tank
Ethylbenzene [ug/L]	04-May-22	18:00	05-May-22	10:56	< 20
Dichloromethane [ug/L]	04-May-22	18:00	05-May-22	10:56	< 20
Methyl ethyl ketone [ug/L]	04-May-22	18:00	05-May-22	10:56	< 800
Toluene [ug/L]	04-May-22	18:00	05-May-22	10:56	56.8
Xylene (total) [ug/L]	04-May-22	18:00	05-May-22	10:56	< 20
o-xylene [ug/L]	04-May-22	18:00	05-May-22	10:56	< 20
m/p-xylene [ug/L]	04-May-22	18:00	05-May-22	10:56	< 20



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

Waterworks/Project # **1100008319** C of C LIMS No: **MAY 12 2012**

Facility Name **Warton WWTP** Laboratory Section

Org. # **5620** Date Rec'd: **MAY 18 2012**

Quote # Temperature Upon Receipt **15.3** °C

Attached Parameter List No Yes Sample condition upon receipt

Identification of Regulation under which the sample(s) fall: No Requirement to Report Sample Results Under Any Regulation for Wastewater Treatment Time Rec'd: _____

Initials **km**

Requested Turnaround Time: **b** 24-48 h 5-7d 7-10d Other Specify: _____

Report to: Process & Compliance Technician (PCT)	Data Transfer Contact: PCT	Invoice To: Ontario Clean Water Agency
Address: 18 Caroline Street Southhampton, ON N0H 2L0	18 Caroline Street Southhampton, ON N0H 2L0	136 Main St. E. Shelburne, ON L9V 3K5
Telephone: 519-374-5782	519-374-5782	(519) 925-1938
Fax: (519) 797-3080	(519) 797-3080	(519) 925-0322
Email: kyounq@ocwa.com	kyounq@ocwa.com	ajwesh@shelburne.com
		Laboratory: SGS Lakeland Research Ltd
		185 Concession St. Lakeland, ON K0L 2H0
		705-652-2000
		705-652-6385
		carne.greenlaw@sgs.com

Station Acronym	Station Number (Sheet Name)	Sample Location Name	Date & Time Collected	# of Bottles	Parameters											Comments	Upload to MOE	Upload to OCWA		
					BOD ₅	Total Suspended Solids	Total Phosphorous	TKN	Total Ammonia Nitrogen	Chemical Oxygen Demand	Acetone	Benzene	Ethylbenzene	Isopropyl Alcohol	Methyl Alcohol				Methylene Chloride	Methyl Ethyl Ketone
Sept	Sept	Septage - Holding Tank	MAY 17, 2012 15:25	8	X	X	X	X	X	X	X	X	X	X	X	X	X	2 - 500 mL PET bottles, 2 - 60 mL plastic w/ sulphuric acid preservative, 2 - 40 mL EPA vials unpreserved (for hexagone), 2 - 40 mL EPA vials w/ sodium bisulfate preservative (for hexagone)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
																			Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
																			Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
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																			Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>

Sampler Name: **MEET PATEL** Sampler Signature: *M Patel*

Station Acronym: Cell - Cell Contents, Dis - Disinfection, Down - Downstream, Eff - Final Effluent, PkBy - Primary Bypass, Flow - Raw Sewage, SCSy - Secondary Bypass, Up - Upstream, Wt - Monitoring Well, Aer - Aeration, Bis - Biosolids raw sludge, Bth - Biosolids thickening, Bpd - Biosolids primary digestion, Bsd - Biosolids sec. digestion, Bps - Biosolids pd super, Bsq - Biosolids sec. sludge, Bsqg - Biosolids sludge quality, DAF - Dissolved Air Flotation, Gfl - Primary Treatment/Gfl, PEI - Primary Effluent, FAS - Return Activated Sludge, SBR - Secondary Treatment/SBRs, SCS - Secondary Effluent, TMS - Thickened Waste Activated Sludge, WMS - Waste Activated Sludge, Psn - Pump Sta, Sept - Septage, Lch - Leachate, PTr - Primary Treatment, ReA - Re-aeration, Ter - Tertiary Treatment, Ato - Acolite, Tdy - Tertiary Bypass, Hold - Holding Tank, CSO - Combined Sewer Overflow, SSO - Sanitary Sewer Overflow

Revision #2
 Revised: 2012.02.17
 608103111969
 km 10:30
 BTW



SGS Canada Inc.

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

Works #: 110000819

Project : PO#017018

31-May-2022

OCWA-Grey Bruce (Warton WPCP)

Attn : Karla Young

Date Rec. : 18 May 2022

LR Report: CA12775-MAY22

P.O. Box 760
Southampton, ON
N0H 2L0, Canada

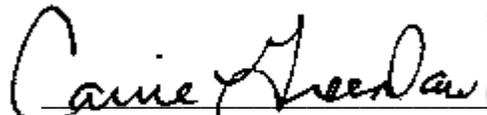
Copy: #1

Phone: 519-797-2561
Fax:pdf

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: Sept Sept-Septage-Hold ing Tank
Sample Date & Time					17-May-22 15:25
Temperature Upon Receipt [°C]	---	---	---	---	15.0
Biochemical Oxygen Demand (BOD5) [mg/L]	18-May-22	16:30	27-May-22	09:11	930
Total Suspended Solids [mg/L]	19-May-22	07:49	19-May-22	16:18	656
Chemical Oxygen Demand [mg/L]	20-May-22	18:20	27-May-22	09:11	1900
Ammonia+Ammonium (N) [as N mg/L]	20-May-22	21:42	24-May-22	16:04	27.4
Total Kjeldahl Nitrogen [as N mg/L]	19-May-22	15:41	25-May-22	12:17	73.7
Phosphorus (total) [mg/L]	19-May-22	15:41	25-May-22	10:04	7.9
Isopropyl Alcohol [mg/L]	19-May-22	11:57	24-May-22	14:08	< 5
Methyl alcohol [mg/L]	19-May-22	11:57	24-May-22	14:08	< 5
Acetone [ug/L]	20-May-22	09:23	31-May-22	14:22	< 1200
Benzene [ug/L]	20-May-22	09:23	31-May-22	14:22	< 20
Ethylbenzene [ug/L]	20-May-22	09:23	31-May-22	14:22	< 20
Dichloromethane [ug/L]	20-May-22	09:23	31-May-22	14:22	< 20
Methyl ethyl ketone [ug/L]	20-May-22	09:23	31-May-22	14:22	< 800
Toluene [ug/L]	20-May-22	09:23	31-May-22	14:22	< 20
Xylene (total) [ug/L]	20-May-22	09:23	31-May-22	14:22	< 20
o-xylene [ug/L]	20-May-22	09:23	31-May-22	14:22	< 20
m/p-xylene [ug/L]	20-May-22	09:23	31-May-22	14:22	< 20



Carrie Greenlaw
Project Specialist,
Environment, Health & Safety



Waterworks/Project # 110000819 **C of C LIMS No:** JUN 13 2022
Facility Name Warton WWTP **Laboratory Section**
Org. # 5620 **Date Recd:** JUN 22 2022 **Time Recd:**
Quote # **Temperature Upon Receipt** 18.3 °C **Initials**
Attached Parameter List No Yes **Identification of Regulation under which the sample(s) fall:** No Requirement to Report Sample Results Under Any Regulation for Wastewater Treatment

Requested Turnaround Time: b 24-48 h 5-7d 7-10d Other Specify: _____

Address: 18 Caroline Street, Southampton, ON N0H 2L0
Telephone: 519-374-5782
Fax: 519-797-3080
Email: kyounq@ocwa.com

Data Transfer Contact: PCT 18 Caroline Street, Southampton, ON N0H 2L0
Invoice To: Ontario Clean Water Agency 136 Main St. E, Shelburne, ON L9V 3K5
Laboratory: SGS Lakelield Research Ltd 185 Concession St., Lakelield, ON K0L 2H0
Report to: Process & Compliance Technician (PCT) 519-374-5782
519-925-1938
519-925-0322
519-797-3080
apweshighlands@ocwa.com
garrie.greenlaw@sgs.com

Station Acronym	Station Number (Short Name)	Sample Location Name	Date & Time Collected	# of Bottles	Parameters										Comments	Upload to MOE	Upload to OCWA						
Sept	Sept	Septage - Holding Tank	JUN 21 2022	8	BOD ₅	Total Suspended Solids	Total Phosphorous	TKN	Total Ammonia Nitrogen	Chemical Oxygen Demand	Acetone	Benzene	Ethylbenzene	Isopropyl Alcohol	Methyl Alcohol	Methylene Chloride	Methyl Ethyl Ketone	Methylene Chloride	Toluene	Xylene	2 - 500 mL PET bottles, 2 - 60 mL plastic w/ sulphuric acid preservative, 2 - 40 mL EPA vials unpreserved (no headspace), 2 - 40 mL EPA vials w/ sodium bisulphate preservative (no headspace)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
																						Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
																						Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
																						Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
																						Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
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																						Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
																						Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>

Sampler Name: DAN CAESAR **Sampler Signature:** Dan Caesar

* Station Acronym: Colr - Coll Contents; Dis - Disinfection; Down - Downstream; Etl - Final Effluent; P1B1 - Primary Bypass; Raw - Raw Sewage; S2B1 - Secondary Bypass; Up - Upstream; Well - Monitoring Well; Aer - Aeration; Bts - Biosolids thickening; Bot - Biosolids primary digestion; Btd - Biosolids sec. digestion; Bps - Biosolids pH super; Bse - Biosolids sec super; Bsh - Biosolids sludge quality; Bsq - Biosolids quality; DAF - Dissolved Air Flotation; C01 - Primary Treatment; P1E1 - Primary Effluent; RAS - Return Activated Sludge; SBR - Secondary Treatment; S2B2 - Secondary Effluent; WVA5 - Thickened Waste Activated Sludge; WVA5 - Waste Activated Sludge; MW - Industrial Wastewater; F3In - Pump Sln; S2P1 - Septage; Lch1 - Leachate; P1T1 - Primary Treatment; ReA - Re-aeration; Ter1 - Tertiary Treatment; Ato - Aeration; TeB1 - Tertiary Bypass; Htd - Holding Tank; CSD - Combined Sewer Overflow; SSD - Sanitary Sewer Overflow

kn 10/15



SGS Canada Inc.

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

Works #: 110000819

Project : PO#017018

29-June-2022

OCWA-Grey Bruce (Warton WPCP)

Attn : Karla Young

Date Rec. : 22 June 2022

LR Report: CA13722-JUN22

P.O. Box 760
Southampton, ON
N0H 2L0, Canada

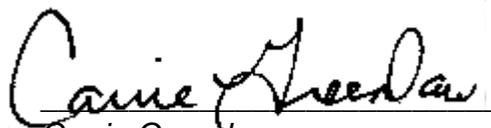
Copy: #1

Phone: 519-797-2561
Fax:pdf

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: Sept Sept-Septage-Hold ing Tank
Sample Date & Time					21-Jun-22 10:20
Temperature Upon Receipt [°C]	---	---	---	---	18.0
Biochemical Oxygen Demand (BOD5) [mg/L]	23-Jun-22	17:07	28-Jun-22	13:40	1490
Total Suspended Solids [mg/L]	28-Jun-22	07:53	29-Jun-22	15:42	158
Chemical Oxygen Demand [mg/L]	23-Jun-22	12:53	28-Jun-22	13:40	1720
Ammonia+Ammonium (N) [as N mg/L]	24-Jun-22	21:59	29-Jun-22	08:31	86.2
Total Kjeldahl Nitrogen [as N mg/L]	23-Jun-22	16:42	27-Jun-22	11:16	109
Phosphorus (total) [mg/L]	23-Jun-22	16:42	28-Jun-22	12:24	9.1
Isopropyl Alcohol [mg/L]	23-Jun-22	13:26	24-Jun-22	12:34	< 5
Methyl alcohol [mg/L]	23-Jun-22	13:26	24-Jun-22	12:34	< 5
Acetone [ug/L]	24-Jun-22	12:28	27-Jun-22	13:27	< 1200
Benzene [ug/L]	24-Jun-22	12:28	27-Jun-22	13:27	< 20
Ethylbenzene [ug/L]	24-Jun-22	12:28	27-Jun-22	13:27	< 20
Dichloromethane [ug/L]	24-Jun-22	12:28	27-Jun-22	13:27	< 20
Methyl ethyl ketone [ug/L]	24-Jun-22	12:28	27-Jun-22	13:27	< 800
Toluene [ug/L]	24-Jun-22	12:28	27-Jun-22	13:27	42.7
Xylene (total) [ug/L]	24-Jun-22	12:28	27-Jun-22	13:27	< 20
o-xylene [ug/L]	24-Jun-22	12:28	27-Jun-22	13:27	< 20
m/p-xylene [ug/L]	24-Jun-22	12:28	27-Jun-22	13:27	< 20



Carrie Greenlaw
Project Specialist,
Environment, Health & Safety



SGS Canada Inc.

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

Works #: 110000819

Project : PO#017018

20-July-2022

OCWA-Grey Bruce (Warton WPCP)

Attn : Karla Young

Date Rec. : 13 July 2022

LR Report: CA12362-JUL22

P.O. Box 760
Southampton, ON
N0H 2L0, Canada

Copy: #1

Phone: 519-797-2561
Fax:pdf

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: Sept Sept-Septage-Hol ding Tank
Sample Date & Time					12-Jul-22 11:30
Temperature Upon Receipt [°C]	---	---	---	---	17.0
Aluminum (total) [mg/L]	19-Jul-22	16:36	20-Jul-22	14:49	0.546
Arsenic (total) [mg/L]	19-Jul-22	16:36	20-Jul-22	14:49	0.0016
Barium (total) [mg/L]	19-Jul-22	16:36	20-Jul-22	14:49	0.124
Cadmium (total) [mg/L]	19-Jul-22	16:36	20-Jul-22	14:49	0.000140
Calcium (total) [mg/L]	19-Jul-22	16:36	20-Jul-22	14:49	79.8
Chromium (total) [mg/L]	19-Jul-22	16:36	20-Jul-22	14:49	0.00208
Cobalt (total) [mg/L]	19-Jul-22	16:36	20-Jul-22	14:49	0.000445
Copper (total) [mg/L]	19-Jul-22	16:36	20-Jul-22	14:49	0.138
Iron (total) [mg/L]	19-Jul-22	16:36	20-Jul-22	14:49	9.69
Lead (total) [mg/L]	19-Jul-22	16:36	20-Jul-22	14:49	0.00263
Magnesium (total) [mg/L]	19-Jul-22	16:36	20-Jul-22	14:49	26.5
Manganese (total) [mg/L]	19-Jul-22	16:36	20-Jul-22	14:49	0.196
Mercury (total) [mg/L]	15-Jul-22	12:23	15-Jul-22	15:51	0.00004
Nickel (total) [mg/L]	19-Jul-22	16:36	20-Jul-22	14:50	0.0040
Potassium (total) [mg/L]	19-Jul-22	16:36	20-Jul-22	14:50	56.5
Selenium (total) [mg/L]	19-Jul-22	16:36	20-Jul-22	14:50	0.00109
Silver (total) [mg/L]	19-Jul-22	16:36	20-Jul-22	14:50	0.00016
Sodium (total) [mg/L]	19-Jul-22	16:36	20-Jul-22	14:50	185
Tin (total) [mg/L]	19-Jul-22	16:36	20-Jul-22	14:50	0.00244
Zinc (total) [mg/L]	19-Jul-22	16:36	20-Jul-22	14:50	0.156



SGS Canada Inc.

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

Works #: 110000819

Project : PO#017018
LR Report : CA12362-JUL22

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

Waterworks/Project # **110000819** C of C LIMS No: July - 12363

Facility Name **Warton WWTP** Laboratory Section

Org. # **5620** Date Rec'd: JUL 13 2022

Quote # Temperature Upon Receipt: 17°C

Attached Parameter List No Yes Sample condition upon receipt

Identification of Regulation under which the sample(s) fall: No Requirement to Report Sample Results Under Any Regulation for Wastewater Treatment Initials: PC

Requested Turnaround Time: 24-48 h 5-7d 7-10d Other Specify: _____

Report to: Process & Compliance Technician (PCT) Data Transfer Contact: PCT

Address: **18 Caroline Street Southamptom, ON N0H 2L0** Invoice To: Ontario Clean Water Agency

Telephone: **519-374-5782** 136 Main St. E Sheburne, ON L0V 3K5

Fax: **519-797-3080** (519) 925-1938

Email: **kyoung@ocwa.com** (519) 925-0322

kyoung@ocwa.com pawesth@landis@ocwa.com

kyoung@ocwa.com carrie.green@sgs.com

Laboratory: SGS Lakelield Research Ltd 185 Concession St. Lakelield, ON K0L 2H0

705-652-2000 705-652-6385

Station Acronym	Station Number (Short Name)	Sample Location Name	Date & Time Collected	# of Bottles	Parameters										Comments	Upload to MOE	Upload to OCWA			
					BOD ₅	Total Suspended Solids	Total Phosphorous	TKN	Total Ammonia Nitrogen	Chemical Oxygen Demand	Acetone	Benzene	Ethylbenzene	Isopropyl Alcohol				Methyl Alcohol	Methylene Chloride	Methyl Ethyl Ketone
Sept	Sept	Septage - Holding Tank	JUL 12 2022 11:30	8	X	X	X	X	X	X	X	X	X	X	X	X	X	2 - 500 mL PET bottles, 2 - 60 mL plastic w/ sulphuric acid preservative, 2 - 40 mL EPA vials unpreserved (no headspace), 2 - 40 mL EPA vials w/ sodium bisulfite preservative (no headspace)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Sampler Name: **Don CASAR** Sampler Signature: Don Casar

Station Acronym: Cell - Cell Contents, Dis - Disinfection, Down - Downstream, Eff - Final Effluent, P/BY - Primary Bypass, Raw - Raw Sewage, SdBy - Secondary Bypass, Up - Upstream, Well - Monitoring Well, Aer - Aeration, B/S - Biosolids raw sludge, Bth - Biosolids thickening, Bpd - Biosolids primary digestion, Bpd - Biosolids sec. digestion, Bps - Biosolids not super, Bss - Biosolids sec super, Bsq - Biosolids soil quality, DAF - Dissolved Air Flotation, Grl - Primary Treatment/Grl, P/EI - Primary Effluent, R/S - Return Activated Sludge, SBR - Secondary Treatment/SBR, S/CEI - Secondary Effluent, TVAS - Thickened Waste Activated Sludge, WAS - Waste Activated Sludge, InW - Industrial Wastewater, P/sin - Pump Sln, Sgpl - Septage, Loh - Leachate, P/T - Primary Treatment, ReAr - Re-aeration, Ter - Tertiary Treatment, Ato - Aeration, TeBy - Tertiary Bypass, Hold - Holding Tank, CSO - Combined Sewer Overflow, SSO - Sanitary Sewer Overflow

Revision #2 Revised: 2022-02-17



SGS Canada Inc.

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

Works #: 110000819

Project : PO#017018

22-July-2022

OCWA-Grey Bruce (Warton WPCP)

Attn : Karla Young

Date Rec. : 13 July 2022

LR Report: CA12363-JUL22

P.O. Box 760
Southampton, ON
N0H 2L0, Canada

Copy: #1

Phone: 519-797-2561
Fax:pdf

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: Sept Sept-Septage-Hold ing Tank
Sample Date & Time					12-Jul-22 11:30
Temperature Upon Receipt [°C]	---	---	---	---	17.0
Biochemical Oxygen Demand (BOD5) [mg/L]	14-Jul-22	17:19	19-Jul-22	12:59	2000
Total Suspended Solids [mg/L]	14-Jul-22	10:40	15-Jul-22	12:52	562
Chemical Oxygen Demand [mg/L]	14-Jul-22	07:44	19-Jul-22	12:59	2380
Ammonia+Ammonium (N) [as N mg/L]	14-Jul-22	17:46	18-Jul-22	11:58	121
Total Kjeldahl Nitrogen [as N mg/L]	15-Jul-22	15:14	18-Jul-22	13:13	163
Phosphorus (total) [mg/L]	15-Jul-22	15:14	20-Jul-22	12:52	13.0
Isopropyl Alcohol [mg/L]	21-Jul-22	13:23	22-Jul-22	15:26	< 5
Methyl alcohol [mg/L]	21-Jul-22	13:23	22-Jul-22	15:26	< 5
Acetone [ug/L]	15-Jul-22	07:44	18-Jul-22	10:52	< 1200
Benzene [ug/L]	15-Jul-22	07:44	18-Jul-22	10:52	< 20
Ethylbenzene [ug/L]	15-Jul-22	07:44	18-Jul-22	10:52	< 20
Dichloromethane [ug/L]	15-Jul-22	07:44	18-Jul-22	10:52	< 20
Methyl ethyl ketone [ug/L]	15-Jul-22	07:44	18-Jul-22	10:52	< 800
Toluene [ug/L]	15-Jul-22	07:44	18-Jul-22	10:52	< 20
Xylene (total) [ug/L]	15-Jul-22	07:44	18-Jul-22	10:52	< 20
o-xylene [ug/L]	15-Jul-22	07:44	18-Jul-22	10:52	< 20
m/p-xylene [ug/L]	15-Jul-22	07:44	18-Jul-22	10:52	< 20

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

Waterworks/Project # **110000819** C of C LIMS No: **AUG 2022**
 Facility Name **Warton WWTP** Laboratory Section **AUG 05 2022** Sample condition upon receipt _____
 Org. # **5620** Date Rec'd: _____ Time Rec'd: _____ Initials _____
 Quota # _____ Attached Parameter List No Yes
 Identification of Regulation under which the sample(s) fall: No Requirement to Report Sample Results Under Any Regulation for Wastewater Treatment
 Temperature Upon Receipt **23x3** °C

Requested Turnaround Time: 24-48 h 5-7d 7-10d Other _____ Specify: _____
 Report to: Process & Compliance Technician (PCT) Data Transfer Contact: PCT
 Address: 18 Caroline Street 136 Main St. E Laboratory: SGS Lakeland Research Ltd
 Southampton, ON Sheburne, ON 185 Concession St.
 N0H 2L0 NOH 2L0 K0L 2H0 Lakeland, ON
 Telephone: 519-374-5782 519-925-1938 705-652-2000
 Fax: 519-797-3080 519-925-0322 705-652-6365
 Email: kyounq@ocwa.com pwesthighlands@ocwa.com carrie.greenlaw@srs.com

Station Acronym	Station Number (Short Name)	Sample Location Name	Date & Time Collected	# of Bottles	Parameters										Comments	Upload to MOE	Upload to OCWA			
					Total Suspended Solids	Total Phosphorous	TKN	Total Ammonia Nitrogen	Chemical Oxygen Demand	Acetone	Benzene	Ethylbenzene	Isopropyl Alcohol	Methyl Alcohol				Methylene Chloride	Methyl Ethyl Ketone	Methylene Chloride
Sept	Sept	Septage - Holding Tank	AUG - 04 - 2022 10:55	8	X	X	X	X	X	X	X	X	X	X	X	X	X	2 - 500 mL PET bottles, preservative, 2 - 60 mL plastic w/ sulphuric acid (no headspace), 2 - 40 mL EPA vials unpreserved (no headspace), 2 - 40 mL EPA vials w/ sodium bisphosphate preservative (no headspace)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
																			Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
																			Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
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																			Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>

Sampler Name: **MEET PATEL** Sampler Signature: *M Patel*

* Station Acronym: Cell - Cell Contents, Dis - Disinfection, Down - Downstream, Eff - Final Effluent, PrBy - Primary Bypass, Raw - Raw Sewage, ScBy - Secondary Bypass, Up - Upstream, Well - Monitoring Well, Air - Aeration, Bps - Biosolids raw sludge, Bth - Biosolids thickening, Bpd - Biosolids primary digestion, Bsd - Biosolids sec. digestion, Bps - Biosolids pri super, Bss - Biosolids sec super, Bsq - Biosolids sludge quality, Bsoq - Biosolids soil quality, DAF - Dissolved Air Flotation, Grit - Primary Treatment/Grit, PREI - Primary Treatment/Chl, PREI - Primary Treatment/SBR, Secondary Treatment/SBRs, SCEI - Secondary Effluent, TWAS - Thickened Waste Activated Sludge, WAS - Waste Activated Sludge, IndW - Industrial Wastewater, PSin - Pump Sln, Sept - Septage, Lch - Leachate, PrTy - Primary Treatment, ReA - Re-aeration, Tert - Tertiary Treatment, Allo - Activ. TeBy - Tertiary Bypass, Hold - Holding Tank, CSO - Combined Sewer Overflow, SSO - Sanitary Sewer Overflow

Puro R 930 R



SGS Canada Inc.

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

Works #: 110000819

Project : PO#017018

11-August-2022

OCWA-Grey Bruce (Warton WPCP)

Attn : Karla Young

Date Rec. : 05 August 2022

LR Report: CA12217-AUG22

P.O. Box 760
Southampton, ON
N0H 2L0, Canada

Copy: #1

Phone: 519-797-2561
Fax:pdf

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: Sept Sept-Septage-Holdi ng Tank
Sample Date & Time					04-Aug-22 10:55
Temperature Upon Receipt [°C]	---	---	---	---	23.0
Biochemical Oxygen Demand (BOD5) [mg/L]	05-Aug-22	16:56	10-Aug-22	13:03	1940
Total Suspended Solids [mg/L]	10-Aug-22	10:59	11-Aug-22	08:34	6810
Chemical Oxygen Demand [mg/L]	09-Aug-22	13:12	10-Aug-22	13:04	3150
Ammonia+Ammonium (N) [as N mg/L]	09-Aug-22	22:15	11-Aug-22	10:32	192
Total Kjeldahl Nitrogen [as N mg/L]	09-Aug-22	15:33	11-Aug-22	11:44	474
Phosphorus (total) [mg/L]	09-Aug-22	15:33	11-Aug-22	14:02	69.4
Isopropyl Alcohol [mg/L]	09-Aug-22	12:18	11-Aug-22	14:34	< 5
Methyl alcohol [mg/L]	09-Aug-22	12:18	11-Aug-22	14:34	< 5
Acetone [ug/L]	10-Aug-22	16:35	11-Aug-22	12:34	< 1200
Benzene [ug/L]	10-Aug-22	16:35	11-Aug-22	12:34	< 20
Ethylbenzene [ug/L]	10-Aug-22	16:35	11-Aug-22	12:34	< 20
Dichloromethane [ug/L]	10-Aug-22	16:35	11-Aug-22	12:34	< 20
Methyl ethyl ketone [ug/L]	10-Aug-22	16:35	11-Aug-22	12:34	< 800
Toluene [ug/L]	10-Aug-22	16:35	11-Aug-22	12:34	103
Xylene (total) [ug/L]	10-Aug-22	16:35	11-Aug-22	12:34	< 20
o-xylene [ug/L]	10-Aug-22	16:35	11-Aug-22	12:34	< 20
m/p-xylene [ug/L]	10-Aug-22	16:35	11-Aug-22	12:34	< 20

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



SGS Canada Inc.

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

Works #: 110000819

Project : PO#017018

26-August-2022

OCWA-Grey Bruce (Warton WPCP)

Attn : Karla Young

Date Rec. : 10 August 2022

LR Report: CA12399-AUG22

P.O. Box 760
Southampton, ON
N0H 2L0, Canada

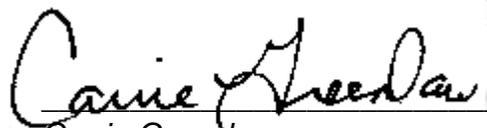
Copy: #1

Phone: 519-797-2561
Fax:pdf

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: Sept Sept-Septage-Holdi ng Tank
Sample Date & Time					09-Aug-22 10:15
Temperature Upon Receipt [°C]	---	---	---	---	16.0
Biochemical Oxygen Demand (BOD5) [mg/L]	11-Aug-22	16:34	16-Aug-22	11:55	468
Total Suspended Solids [mg/L]	13-Aug-22	11:54	15-Aug-22	14:09	167
Chemical Oxygen Demand [mg/L]	15-Aug-22	10:45	16-Aug-22	10:56	1380
Ammonia+Ammonium (N) [as N mg/L]	12-Aug-22	09:15	16-Aug-22	14:13	108
Total Kjeldahl Nitrogen [as N mg/L]	15-Aug-22	13:12	17-Aug-22	12:55	104
Phosphorus (total) [mg/L]	15-Aug-22	13:12	17-Aug-22	14:16	30.1
Isopropyl Alcohol [mg/L]	24-Aug-22	10:50	25-Aug-22	16:30	< 5
Methyl alcohol [mg/L]	24-Aug-22	10:50	25-Aug-22	16:30	< 5
Acetone [ug/L]	16-Aug-22	19:24	17-Aug-22	16:44	< 1200
Benzene [ug/L]	16-Aug-22	19:24	17-Aug-22	16:44	< 20
Ethylbenzene [ug/L]	16-Aug-22	19:24	17-Aug-22	16:44	< 20
Dichloromethane [ug/L]	16-Aug-22	19:24	17-Aug-22	16:44	< 20
Methyl ethyl ketone [ug/L]	16-Aug-22	19:24	17-Aug-22	16:44	< 800
Toluene [ug/L]	16-Aug-22	19:24	17-Aug-22	16:44	47.0
Xylene (total) [ug/L]	16-Aug-22	19:24	17-Aug-22	16:44	< 20
o-xylene [ug/L]	16-Aug-22	19:24	17-Aug-22	16:44	< 20
m/p-xylene [ug/L]	16-Aug-22	19:24	17-Aug-22	16:44	< 20



Carrie Greenlaw
Project Specialist,
Environment, Health & Safety



SGS Canada Inc.

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

Works #: 110000819

Project : PO#017018

27-September-2022

OCWA-Grey Bruce (Warton WPCP)

Attn : Karla Young

Date Rec. : 14 September 2022

LR Report: CA12534-SEP22

P.O. Box 760
Southampton, ON
N0H 2L0, Canada

Copy: #1

Phone: 519-797-2561
Fax: pdf

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: Sept Sept-Septage-Holdi ng Tank
Sample Date & Time					13-Sep-22 10:55
Temperature Upon Receipt [°C]	---	---	---	---	17.0
Biochemical Oxygen Demand (BOD5) [mg/L]	15-Sep-22	17:00	20-Sep-22	12:57	2100
Total Suspended Solids [mg/L]	16-Sep-22	11:51	20-Sep-22	10:24	3970
Chemical Oxygen Demand [mg/L]	16-Sep-22	16:25	20-Sep-22	12:57	15100
Ammonia+Ammonium (N) [as N mg/L]	17-Sep-22	14:10	20-Sep-22	15:55	93.7
Total Kjeldahl Nitrogen [as N mg/L]	15-Sep-22	10:50	19-Sep-22	10:45	178
Phosphorus (total) [mg/L]	16-Sep-22	16:17	19-Sep-22	13:47	18.4
Isopropyl Alcohol [mg/L]	23-Sep-22	13:00	27-Sep-22	13:08	< 5
Methyl alcohol [mg/L]	23-Sep-22	13:00	27-Sep-22	13:08	< 5
Acetone [ug/L]	20-Sep-22	16:38	22-Sep-22	11:05	< 1200
Benzene [ug/L]	20-Sep-22	16:38	22-Sep-22	11:05	< 20
Ethylbenzene [ug/L]	20-Sep-22	16:38	22-Sep-22	11:05	< 20
Dichloromethane [ug/L]	20-Sep-22	16:38	22-Sep-22	11:05	< 20
Methyl ethyl ketone [ug/L]	20-Sep-22	16:38	22-Sep-22	11:05	< 800
Toluene [ug/L]	20-Sep-22	16:38	22-Sep-22	11:05	56.5
Xylene (total) [ug/L]	20-Sep-22	16:38	22-Sep-22	11:05	< 20
o-xylene [ug/L]	20-Sep-22	16:38	22-Sep-22	11:05	< 20
m/p-xylene [ug/L]	20-Sep-22	16:38	22-Sep-22	11:05	< 20

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

Ontario Clean Water Agency - Request for Laboratory Services and CHAIN OF CUSTODY - SEWAGE (QUARTERLY SEPTAGE)

Waterworks/Project # **110000819** C of C LIMS No: **Oct-12542**

Facility Name **Warton WWTP** Laboratory Section _____ Sample condition upon receipt _____

Org. # **5620** Date Rec'd: **Oct 14 2022** Time Rec'd: **14:30** Initials _____

Quote # _____ Temperature Upon Receipt _____ °C

Attached Parameter List No Yes

Identification of Regulation under which the sample(s) fall: No Requirement to Report Sample Results Under Any Regulation for Wastewater Treatment

Requested Turnaround Time: 24-48 h 5-7d 7-10d Other Specify: _____

App. Req'd X

Report to: Process & Compliance Technician (PCT) **Datta Transfer Contact: PCT**

Address: 18 Carolina Street, Southhampton, ON N0H 2L0

Telephone: 519-374-5782

Fax: (519) 797-3080

Email: kyoung@ocwa.com

Invoice To: Ontario Clean Water Agency, 136 Main St. E, Shelburne, ON L9V 3K5

Lab: SGS Lakefield Research Ltd, 185 Concession St, Lakefield, ON K0L 2H0

705-652-2000

705-652-6365

carrie.greenlaw@sgs.com

Station Number (Short Name)	Sample Location Name	Date & Time Collected	# of Bottles	Parameters														Comments	Upload to MOE		Upload to OCWA						
				Aluminum	Arsenic	Barium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Mercury	Nickel		Potassium	Selenium	Silver	Sodium	Tin	Zinc			
Sept	Septage - Holding Tank	OCT 13 2022 11:15	2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	1-250 mL metals bottle preserved with nitric acid 1-glass bottle preserved with HCL for Mercury	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>

Station Name: **MEET PATEL** Sampler Signature: **M Patel**

* Station Acronym: Cell - Cell Contents, Dis - Disinfection, Down - Downstream, Eff - Final Effluent, P1By - Primary Bypass, Raw - Raw Sewage, ScBy - Secondary Bypass, Up - Upstream, Well - Monitoring Well, Aer - Aeration, Bis - Biosolids raw sludge, Bb - Biosolids thickening, Bpd - Biosolids primary digestion, Bsd - Biosolids sec. digestion, Bps - Biosolids pi super, Bss - Biosolids see super, Blq - Biosolids sludge quality, Bsq - Biosolids see quality, DAF - Dissolved Air Flotation, GA - Primary Treatment/Grit, PRE - Primary Effluent, PAS - Return Activated Sludge, SBR - Secondary Treatment/SBR, SRF - Secondary Effluent, TWAS - Thickened Waste Activated Sludge, WAS - Waste Activated Sludge, IndW - Industrial Wastewater, PSH - Pump Sh, Sopl - Septage, Lch - Leachate, P1T - Primary Treatment, ReA - Re-aeration, Tert - Tertiary Treatment, Allo - Acillo, TeBy - Teritary Bypass, Hold - Holding Tank, CSO - Combined Sewer Overflow, SSO - Sanitary Sewer Overflow

Revision #2

Revised: 2022.07.28

Ba-10:30



SGS Canada Inc.

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

Works #: 110000819

Project : PO#017018

31-October-2022

OCWA-Grey Bruce (Warton WPCP)

Attn : Karla Young

Date Rec. : 14 October 2022

LR Report: CA12542-OCT22

P.O. Box 760
Southampton, ON
N0H 2L0, Canada

Copy: #1

Phone: 519-797-2561
Fax:pdf

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: Sept Sept-Septage-Hol ding Tank
Sample Date & Time					13-Oct-22 11:15
Temperature Upon Receipt [°C]	---	---	---	---	14.0
Mercury (total) [ug/L]	17-Oct-22	10:14	18-Oct-22	10:22	0.01
Aluminum (total) [mg/L]	26-Oct-22	20:48	31-Oct-22	13:18	0.251
Arsenic (total) [mg/L]	26-Oct-22	20:48	31-Oct-22	13:18	0.0047
Barium (total) [mg/L]	26-Oct-22	20:48	31-Oct-22	13:18	0.0494
Calcium (total) [mg/L]	26-Oct-22	20:48	31-Oct-22	13:18	96.6
Cadmium (total) [mg/L]	26-Oct-22	20:48	31-Oct-22	13:18	0.000093
Cobalt (total) [mg/L]	26-Oct-22	20:48	31-Oct-22	13:18	0.000350
Chromium (total) [mg/L]	26-Oct-22	20:48	31-Oct-22	13:18	0.00096
Copper (total) [mg/L]	26-Oct-22	20:48	31-Oct-22	13:18	0.0872
Iron (total) [mg/L]	26-Oct-22	20:48	31-Oct-22	13:18	5.00
Potassium (total) [mg/L]	26-Oct-22	20:48	31-Oct-22	13:18	50.8
Magnesium (total) [mg/L]	26-Oct-22	20:48	31-Oct-22	13:18	29.3
Manganese (total) [mg/L]	26-Oct-22	20:48	31-Oct-22	13:18	0.184
Sodium (total) [mg/L]	26-Oct-22	20:48	31-Oct-22	13:18	315
Nickel (total) [mg/L]	26-Oct-22	20:48	31-Oct-22	13:18	0.0042
Lead (total) [mg/L]	26-Oct-22	20:48	31-Oct-22	13:18	0.00239
Selenium (total) [mg/L]	26-Oct-22	20:48	31-Oct-22	13:18	0.00080
Tin (total) [mg/L]	26-Oct-22	20:48	31-Oct-22	13:18	0.00236
Silver (total) [mg/L]	26-Oct-22	20:48	31-Oct-22	13:18	0.00021
Zinc (total) [mg/L]	26-Oct-22	20:48	31-Oct-22	13:18	0.174



SGS Canada Inc.

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

Works #: 110000819

Project : PO#017018
LR Report : CA12542-OCT22

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

Waterworks/Project # **110000819** C of C LIMS No: **Oct-12545**

Facility Name **Warton WWTP** Laboratory Section _____ Sample condition upon receipt _____

Org. # **5620** Date Rec'd: **OCT 14 2022** Time Rec'd: _____ Initials: _____

Quote # _____ Attached Parameter List No Yes Temperature Upon Receipt **14 X3** °C

Identification of Regulation under which the sample(s) fall: No Requirement to Report Sample Results Under Any Regulation for Wastewater Treatment

Requested Turnaround Time: 24-48 h 5-7d 7-10d Other _____ Specify: _____

Report to: Process & Compliance Technician (PCT) Invoice To: Ontario Clean Water Agency Laboratory: SGS Lakefield Research Ltd

Address: 18 Caroline Street 136 Main St. E 185 Concession St. Lakefield, ON Shelburne, ON KOL 2H0

Telephone: 519-374-5782 519-374-5782 (519) 925-1938 705-652-2000

Fax: 519 797-3080 (519) 797-3080 (519) 925-0322 705-652-6365

Email: kyoung@ocwa.com kyounq@ocwa.com apwesthighlands@ocwa.com garrie.greenlaw@sgs.com

Station Acronym	Station Number (Short Name)	Sample Location Name	Date & Time Collected	# of Bottles	Parameters										Comments	Upload to MOE	Upload to OCWA			
					Total Suspended Solids	Total Phosphorus	TKN	Total Ammonia Nitrogen	Chemical Oxygen Demand	Acetone	Benzene	Ethylbenzene	Isopropyl Alcohol	Methyl Alcohol				Methylene Chloride	Methyl Ethyl Ketone	Methylene Chloride
Sept	Sept	Septage - Holding Tank	OCT 13 2022 11:05	8	X	X	X	X	X	X	X	X	X	X	X	X	X	2 - 500 mL PET bottles, 2 - 60 mL plastic w/ sulphuric acid preservative, 2 - 40 mL EPA vials unpreserved (no headspace), 2 - 40 mL EPA vials w/ sodium bisulphate preservative (no headspace)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
																			Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
																			Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
																			Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
																			Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>

Sampler Name: **MEET PATEL** Sampler Signature: *M Patel*

* Station Acronym: Cell - Cell Contents, Dig - Disinfection, Down - Downstream, Eff - Final Effluent, PBY - Primary Bypass, Raw - Raw Sewage, SBy - Secondary Bypass, Up - Upstream, Well - Monitoring Well, Aer - Aeration, Bis - Biosolids raw sludge, Bth - Biosolids thickening, Bpd - Biosolids primary digestion, Bsd - Biosolids sec. digestion, Bps - Biosolids pri super, Bss - Biosolids sec super, Bsq - Biosolids sludge quality, Bsoq - Biosolids soil quality, DAF - Dissolved Air Flotation, Grl - Primary Treatment/Grl, PFI - Primary Treatment/Grl, PFI - Primary Treatment, RAS - Return Activated Sludge, SBR - Secondary Treatment/SBR, SdE - Secondary Effluent, TWAS - Thickened Waste Activated Sludge, WAS - Waste Activated Sludge, indW - Industrial Wastewater, PSl - Pump Sln, Sept - Septage, Lcht - Leachate, PTr - Primary Treatment, ReAr - Re-aeration, Tot - Tertiary Treatment, Allo - Acillo, Teby - Tertiary Bypass, Hold - Holding Tank, CSO - Combined Sewer Overflow, SSO - Sanitary Sewer Overflow

Revision #2
 Revised: 2022.02.17
 Pa-RTW 1030
 #608270486759



SGS Canada Inc.

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

Works #: 110000819

Project : PO#017018

27-October-2022

OCWA-Grey Bruce (Warton WPCP)

Attn : Karla Young

Date Rec. : 14 October 2022

LR Report: CA12545-OCT22

P.O. Box 760
Southampton, ON
N0H 2L0, Canada

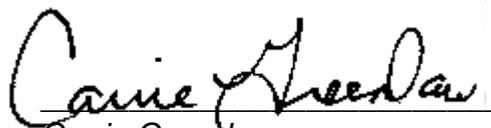
Copy: #1

Phone: 519-797-2561
Fax:pdf

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: Sept Sept-Septage-Hold ing Tank
Sample Date & Time					13-Oct-22 11:05
Temperature Upon Receipt [°C]	---	---	---	---	14.0
Biochemical Oxygen Demand (BOD5) [mg/L]	14-Oct-22	17:56	27-Oct-22	13:14	1970
Total Suspended Solids [mg/L]	18-Oct-22	14:53	20-Oct-22	11:15	367
Chemical Oxygen Demand [mg/L]	27-Oct-22	09:43	27-Oct-22	13:13	2820
Ammonia+Ammonium (N) [as N mg/L]	18-Oct-22	21:23	20-Oct-22	13:28	81.5
Total Kjeldahl Nitrogen [as N mg/L]	18-Oct-22	10:41	20-Oct-22	13:43	138
Phosphorus (total) [mg/L]	18-Oct-22	10:41	20-Oct-22	09:47	11.9
Isopropyl Alcohol [mg/L]	18-Oct-22	08:23	20-Oct-22	17:43	< 5
Methyl alcohol [mg/L]	18-Oct-22	08:23	20-Oct-22	17:43	< 5
Acetone [ug/L]	17-Oct-22	15:09	19-Oct-22	08:33	< 1200
Benzene [ug/L]	17-Oct-22	15:09	19-Oct-22	08:33	< 20
Ethylbenzene [ug/L]	17-Oct-22	15:09	19-Oct-22	08:33	< 20
Dichloromethane [ug/L]	17-Oct-22	15:09	19-Oct-22	08:33	< 20
Methyl ethyl ketone [ug/L]	17-Oct-22	15:09	19-Oct-22	08:33	< 800
Toluene [ug/L]	17-Oct-22	15:09	19-Oct-22	08:33	25.9
Xylene (total) [ug/L]	17-Oct-22	15:09	19-Oct-22	08:33	< 20
o-xylene [ug/L]	17-Oct-22	15:09	19-Oct-22	08:33	< 20
m/p-xylene [ug/L]	17-Oct-22	15:09	19-Oct-22	08:33	< 20



Carrie Greenlaw
Project Specialist,
Environment, Health & Safety

Waterworks/Project # **110000819** C of C LIMS No: **NOV 13303A**

Facility Name **Warton WWTP** Laboratory Section

Org. # **5620** Date Recd: **NOV 09 2022**

Quote # Temperature Upon Receipt **8°C** X 3 °C

Attached Parameter List No Yes Sample condition upon receipt

Identification of Regulation under which the sample(s) fall: No Requirement to Report Sample Results Under Any Regulation for Wastewater Treatment Time Recd: _____

Requested Turnaround Time: Initials _____

Report to: Process & Compliance Technician (PCT) Data Transfer Contact: PCT

Address: 18 Caroline Street Southhampton, ON N0H 2L0 Invoice To: Ontario Clean Water Agency
136 Main St. E
Sheburne, ON
L0V 3K5

Telephone: 519-374-5782 519-374-5782 (519) 925-1938

Fax: 519-797-3080 519-797-3080 (519) 925-0322

Email: kyouniq@ocwa.com kyouniq@ocwa.com amyesh@handis@ocwa.com

Requested Turnaround Time: b 24-48 h 5-7d 7-10d Other Specify: _____

Station Acronym	Station Number (Short Name)	Sample Location Name	Date & Time Collected	# of Bottles	BOD ₅	Total Suspended Solids	Total Phosphorous	TKN	Total Ammonia Nitrogen	Chemical Oxygen Demand	Acetone	Benzene	Ethylbenzene	Isopropyl Alcohol	Methyl Alcohol	Methylene Chloride	Methyl Ethyl Ketone	Methylene Chloride	Toluene	Xylene	Comments	Upload to MOE	Upload to OCWA
Sept	Sept	Septage - Holding Tank	NOV - 08 - 2022 10:40	8	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	2 - 500 mL PET bottles, preservative, 2 - 40 mL EPA vials unpreserved (no headspace), 2 - 40 mL EPA vials w/ sodium bisulfate preservative (no headspace)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

Sampler Name: **MEET PATEL** Sampler Signature: *M Patel*

* Station Acronym: Cell - Cell Contents, Dis - Disinfection, Down - Downstream, Eff - Final Effluent, P1B1 - Primary Bypass, Raw - Raw Sewage, S2B1 - Secondary Bypass, Up - Upstream, Well - Monitoring Well, Aer - Aeration, B1S - Biosolids thickening, B1P - Biosolids primary digestion, B1D - Biosolids sec. digestion, B1S - Biosolids pri super, B1S - Biosolids soil quality, B1S - Biosolids sludge quality, B1S - Biosolids soil quality, DAF - Dissolved Air Flotation, Grit - Primary Treatment/Grit, P1E1 - Primary Effluent, RAS - Return Activated Sludge, S2E1 - Secondary Effluent, T1WAS - Thickened Waste Activated Sludge, WAS - Waste Activated Sludge, IndW - Industrial Wastewater, P1S1 - Pump Sta, Sept - Septage, Lch - Leachate, P1T1 - Primary Treatment, Rev1 - Re-aeration, Tert - Tertiary Treatment, Alg - Acilia, T1B1 - Tertiary Bypass, Hold - Holding Tank, CSO - Combined Sewer Overflow, SSO - Sanitary Sewer Overflow

60829181631A, R1n
9.45.21



SGS Canada Inc.

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

Works #: 110000819

Project : PO#017018

17-November-2022

OCWA-Grey Bruce (Warton WPCP)

Attn : Karla Young

Date Rec. : 09 November 2022

LR Report: CA13303-NOV22

P.O. Box 760
Southampton, ON
N0H 2L0, Canada

Copy: #1

Phone: 519-797-2561
Fax:pdf

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: Sept Sept-Septage-Holdi ng Tank
Sample Date & Time					08-Nov-22 10:40
Temperature Upon Receipt [°C]	---	---	---	---	8.0
Biochemical Oxygen Demand (BOD5) [mg/L]	10-Nov-22	16:49	15-Nov-22	13:38	2140
Total Suspended Solids [mg/L]	11-Nov-22	13:38	14-Nov-22	16:13	460
Chemical Oxygen Demand [mg/L]	16-Nov-22	08:18	16-Nov-22	12:35	3800
Ammonia+Ammonium (N) [as N mg/L]	11-Nov-22	21:31	14-Nov-22	10:03	38.9
Total Kjeldahl Nitrogen [as N mg/L]	11-Nov-22	07:54	15-Nov-22	12:45	105
Phosphorus (total) [mg/L]	11-Nov-22	07:54	16-Nov-22	11:04	13.0
Isopropyl Alcohol [mg/L]	15-Nov-22	10:08	16-Nov-22	17:13	< 5
Methyl alcohol [mg/L]	15-Nov-22	10:08	16-Nov-22	17:13	< 5
Acetone [ug/L]	12-Nov-22	13:37	17-Nov-22	14:17	< 1200
Benzene [ug/L]	12-Nov-22	13:37	17-Nov-22	14:17	< 20
Ethylbenzene [ug/L]	12-Nov-22	13:37	17-Nov-22	14:17	< 20
Dichloromethane [ug/L]	12-Nov-22	13:37	17-Nov-22	14:17	< 20
Methyl ethyl ketone [ug/L]	12-Nov-22	13:37	17-Nov-22	14:17	< 800
Toluene [ug/L]	12-Nov-22	13:37	17-Nov-22	14:17	< 20
Xylene (total) [ug/L]	12-Nov-22	13:37	17-Nov-22	14:17	< 20
o-xylene [ug/L]	12-Nov-22	13:37	17-Nov-22	14:17	< 20
m/p-xylene [ug/L]	12-Nov-22	13:37	17-Nov-22	14:17	< 20
Methylene Chloride [ug/L]	12-Nov-22	13:37	17-Nov-22	14:17	< 20



Carrie Greenlaw
Project Specialist,
Environment, Health & Safety

Waterworks/Project # **110000819** C of C LIMS No: **Dec-13443**

Facility Name **Warton WWTP** Laboratory Section _____ Sample condition upon receipt _____
 Org. # **5620** Date Rec'd: **DEC 14 2022** Time Rec'd: _____ Initials **CA**

Quote # _____ No Yes

Attached Parameter List _____ Temperature Upon Receipt **10 x 3** °C

Identification of Regulation under which the sample(s) fall: No Requirement to Report Sample Results Under Any Regulation for Wastewater Treatment

Requested Turnaround Time: _____

App. 24-48 h 5-7d 7-10d Other _____ Specify: _____

Report to: Process & Compliance Technician (PCT) Data Transfer Contact: PCT

Address: 18 Caroline Street, Southampton, ON N0H 2L0
 136 Main St. E, Shelburne, ON L9V 3K5
 Laboratory: SGS Lakeland Research Ltd, 185 Concession St., Lakeland, ON K0L 2H0

Telephone: 519-374-5782 519-374-5782 (519) 925-1938
 519-797-3080 (519) 925-0322 705-652-2000
 Email: kyoung@ocwa.com kyounq@ocwa.com adwesthighlands@ocwa.com 705-652-6365
 garrie.greenlaw@sqs.com

Station Number (Short Name)	Station Acronym	Sample Location Name	Date & Time Collected	# of Bottles	BOD ₅	Total Suspended Solids	Total Phosphorous	TKN	Total Ammonia Nitrogen	Chemical Oxygen Demand	Acetone	Benzene	Ethylbenzene	Isopropyl Alcohol	Methyl Alcohol	Methylene Chloride	Methyl Ethyl Ketone	Methylene Chloride	Toluene	Xylene	Comments	Upload to MOE	Upload to OCWA
Sept	Sept	Septage - Holding Tank	DEC 12 2022 13:50	8	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	2 - 500 mL PET bottles, 2 - 60 mL plastic w/ sulphuric acid preservative, 2 - 40 mL EPA vials unpreserved (no headspace), 2 - 40 mL EPA vials w/ sodium bisulphate preservative (no headspace)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
																						Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
																						Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
																						Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
																						Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>

Sampler Name: **DAN CAESAR** Sampler Signature: *Dan Caesar*

* Station Acronym: Cell - Cell Contents, Dis - Disinfection, Down - Downstream, Eff - Final Effluent, PRy - Primary Bypass, Raw - Raw Sewage, Scdy - Secondary Bypass, Up - Upstream, Well - Monitoring Well, Aer - Aeration, Bris - Biosolids thickening, Bpd - Biosolids primary digestion, Bsd - Biosolids sec. digestion, Bps - Biosolids pri super, Bss - Biosolids sec super, Bsq - Biosolids sludge quality, Bsqg - Biosolids soil quality, DAF - Dissolved Air Flootation, Grit - Primary Treatment/Grit, PREI - Primary Treatment, RAS - Return Activated Sludge, SBR - Secondary Treatment/SBRs, ScEI - Secondary Effluent, TWAS - Thickened Waste Activated Sludge, WAS - Waste Activated Sludge, IndW - Industrial Wastewater, FSn - Pump, Sin, Sept - Septage, Lt - Leachate, PTr - Primary Treatment, ReAr - Re-aeration, Tert - Tertiary Treatment, Allo - Aciflo, TeBy - Tertiary Bypass, Hold - Holding Tank, CSO - Combined Sewer Overflow, SSO - Sanitary Sewer Overflow

2 none vials
 2 bisulfate vials

PH# 608291749120
 HCRTN SR 9:30



SGS Canada Inc.

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

Works #: 110000819

Project : PO#017018

23-December-2022

OCWA-Grey Bruce (Warton WPCP)

Attn : Karla Young

Date Rec. : 14 December 2022

LR Report: CA13443-DEC22

P.O. Box 760
Southampton, ON
N0H 2L0, Canada

Copy: #1

Phone: 519-797-2561
Fax:pdf

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: Sept Sept-Septage-Holdi ng Tank
Sample Date & Time					12-Dec-22 13:50
Temperature Upon Receipt [°C]	---	---	---	---	10.0
Biochemical Oxygen Demand (BOD5) [mg/L]	15-Dec-22	17:27	20-Dec-22	15:28	1290
Total Suspended Solids [mg/L]	16-Dec-22	12:54	19-Dec-22	13:42	241
Chemical Oxygen Demand [mg/L]	19-Dec-22	11:30	20-Dec-22	15:28	1850
Ammonia+Ammonium (N) [as N mg/L]	22-Dec-22	15:03	23-Dec-22	11:03	69.7
Total Kjeldahl Nitrogen [as N mg/L]	15-Dec-22	09:17	21-Dec-22	14:04	94.5
Phosphorus (total) [mg/L]	15-Dec-22	09:17	21-Dec-22	14:56	6.3
Isopropyl Alcohol [mg/L]	21-Dec-22	09:05	23-Dec-22	09:02	< 5
Methyl alcohol [mg/L]	21-Dec-22	09:05	23-Dec-22	09:02	< 5
Acetone [ug/L]	20-Dec-22	08:42	22-Dec-22	13:38	< 1200
Benzene [ug/L]	20-Dec-22	08:42	22-Dec-22	13:38	< 20
Ethylbenzene [ug/L]	20-Dec-22	08:42	22-Dec-22	13:38	< 20
Dichloromethane [ug/L]	20-Dec-22	08:42	22-Dec-22	13:38	< 20
Methyl ethyl ketone [ug/L]	20-Dec-22	08:42	22-Dec-22	13:38	< 800
Toluene [ug/L]	20-Dec-22	08:42	22-Dec-22	13:38	116
Xylene (total) [ug/L]	20-Dec-22	08:42	22-Dec-22	13:38	< 20
o-xylene [ug/L]	20-Dec-22	08:42	22-Dec-22	13:38	< 20
m/p-xylene [ug/L]	20-Dec-22	08:42	22-Dec-22	13:38	< 20

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