

March 31, 2021

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

RE: 2020 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 2020 Annual Performance Report for the Wiarton Sewage Lagoon System which covers the reporting period of January 1, 2020 to December 31, 2020. 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



WIARTON WASTEWATER TREATMENT PLANT

ANNUAL PERFORMANCE REPORT

For the period of JANUARY 1, 2020 TO DECEMBER 31, 2020

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.

The plant discharge utilizes the pipe located on Mary Street to Isaac Street (original) as well as the original abandoned force main 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.

Facility Name	Wiarton Wastewater Treatment Plant
Facility Type	MBBR 3-cell, Aerated Lagoon3-cell, Sand Filtration, UV disinfection with pumping stations
	(3)
Plant Classification	П
Works Number	20002681
Rated Capacity	4,400 m³/day
Number of Households	1,100
Receiving Water	Colpoy's Bay (Georgian Bay)
Environmental Compliance Approval	ECA 6045-ARDJS7
Certificate of Approval	3-0709-82-006 (Air)

Table 1. Wiarton Wastewater Treatment System Overview

Table 2. Monitoring Program for Wiarton WWTP

Source	Parameter	Frequency	Method
Influent	Flow (m ³)	Daily	Flow Meter
innuent	BOD ₅ , TSS, TP, TKN	Monthly	External Analysis
	Flow (m ³)	Daily	Flow Meter
	CBOD ₅ , TSS, Total Ammonia Nitrogen (TAN), Total Phosphorus	Bi-Weekly	External Analysis
Effluent	E. Coli	Bi-Weekly	External Analysis
	pH, Temperature	Bi-Weekly	In-House & External Analysis
	Temperature	Bi-Weekly	In-House & External Analysis
	Flow (m ³)	Daily	Flow Meter
Septage	BOD5, 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
MRRR	DO, pH, Temperature, Ammonia	Daily	Online analyzers
MDDK	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.

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

Table 3. Raw Sewage Monitoring - Sampling Frequencies as Required

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 Sewa	ge Monitoring – Sa	mpling Free	quencies as Rec	juired by	y Schedule D of	ECA 6045-ARDJS7
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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,	Grab	Monthly
Methyl ethyl, ketone, Toluene, Xylene		
Metals: Aluminum, Arsenic, Barium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead,	Grab	Quarterly
Magnesium, Manganese, Mercury, Nickel, Potassium, Selenium, Silver, Sodium, Tin, Zinc		

2.2 Effluent Limits

The effluent limits that are to be met as per ECA 6045-ARDJS7 for the Wiarton 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 housed in OCWAs data management system MAXIMO. 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. 2020 Efficient Annual Average Concentrations and Removal Efficiencies										
Parameter	Annual Average Concentration	Removal Efficiency								
CBOD ₅	2.5	n/a								
Total Suspended Solids	5.9	98.1%								
Total Phosphorous	0.04	95.1%								

Table 7. 2020 Effluent Annual Average Concentrations and Removal Efficiencies

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

		OD ₅	Total Suspended Solids				Total Phosphorous			Total Ammonia Nitrogen (TAN)				E. Coli				
2020	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	3.0	Y	5.1	Y	8.2	Y	13.9	Y	0.03	Y	0.06	Y	0.10	Y	0.17	Y	2.00	n/a
February	3.8	Y	5.3	Y	11.0	Y	15.4	Y	0.04	Y	0.07	Y	0.10	Y	0.17	Y	2.00	n/a
March	2.2	Y	5.4	Y	6.8	Y	16.8	Y	0.04	Y	0.07	Y	0.19	Y	0.32	Y	2.00	n/a
April	2.9	Y	3.7	Y	4.3	Y	5.5	Y	0.04	Y	0.05	Y	0.10	Y	0.13	Y	2.00	n/a
May	2.3	Y	2.4	Y	5.5	Y	5.9	Y	0.03	Y	0.03	Y	0.07	Y	0.08	Y	2.00	Y
June	2.9	Y	2.9	Y	5.2	Y	5.2	Y	0.04	Y	0.04	Y	1.09	Y	1.09	Y	2.00	Y
July	2.2	Y	1.1	Y	3.3	Y	1.7	Y	0.04	Y	0.02	Y	0.45	Y	0.23	Y	2.00	Y
August	2.0	Y	2.5	Y	4.0	Y	5.0	Y	0.04	Y	0.05	Y	0.15	Y	0.19	Y	2.00	Y
September	2.0	Y	4.0	Y	2.6	Y	5.3	Y	0.03	Y	0.06	Y	0.21	Y	0.42	Y	2.00	Y
October	2.0	Y	3.6	Y	2.2	Y	3.8	Y	0.04	Y	0.07	Y	0.10	Y	0.18	Y	2.00	n/a
November	2.0	Y	2.3	Y	3.2	Y	3.7	Y	0.04	Y	0.04	Y	0.23	Y	0.27	Y	1.59	n/a
December	2.0	Y	5.0	Y	7.3	Y	18.0	Y	0.04	Y	0.11	Y	0.63	Y	1.57	Y	2.00	n/a

Table 8. Comparison of Wiarton Wastewater Treatment System Monitoring Data to Effluent Limits, 2020

*"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 2020, the effluent was within the effluent limits and ranged from 6.57 to 8.55 with an annual average of 7.40. A monthly summary of pH can be found in Table 9

Table 7. Wolding Summary of prillor the Wilaton Wastewater Treatment System, 2020								
	Average	Minimum	Maximum					
January	7.22	6.97	7.57					
February	6.78	6.57	7.32					
March	7.90	7.52	8.55					
April	7.85	7.54	8.34					
May	7.87	7.39	8.13					
June	7.09	6.63	7.64					
July	6.79	6.67	6.91					
August	6.92	6.62	7.14					
September	7.14	7.01	7.25					
October	7.36	6.83	7.64					
November	7.71	7.45	7.99					
December	7.76	7.59	7.97					

Table 9. Monthly Summary of pH for the Wiarton Wastewater Treatment System, 2020

2.4 Effluent Objectives

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

Effluent Parameter	Monthly Average Concentration (mg/L) *	Monthly Average Waste Loading (kg/day)
CBOD5	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 2.44 mg/L and an annual average loading of 3.62 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 67% and the average loading of CBOD₅ by 73%.

During the reporting period, the Total Suspended Solids monthly averages remained within the effluent objective of 10 mg/L, 92% of the time, producing an annual average of 5.30 mg/L and an annual average loading of 8.36 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 55% of the annual average concentration and approximately 52% 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 0.04 mg/L and an annual average loading of 0.05 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 87% of the annual average concentration and approximately 86% 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 0.40 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 94% of the average loading of Total Ammonia Nitrogen.

All of the design objectives in the ECA were achieved more than 90% of the time during the reporting period.

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

	СВО	D5	Total Suspend	ded Solids	Total Phosph	orous	Total Ammonia Nitrogen (TAN)				
2020	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 (Nov 1 to Apr 1 - 6.0 mg/L & May 1 to Oct 31 – 3.0 mg/L)			
January	3.0	Y	8.2	Y	0.03	Y	0.10	Y			
February	3.8	Y	11.0	Ν	0.04	Y	0.10	Y			
March	2.2	Y	6.8	Y	0.04	Y	0.19	Y			
April	2.9	Y	4.3	Y	0.04	Y	0.10	Y			
May	2.3	Y	5.5	Y	0.03	Y	0.07	Y			
June	2.9	Y	5.2	Y	0.04	Y	1.09	Y			
July	2.2	Y	3.3	Y	0.04	Y	0.45	Y			
August	2.0	Y	4.0	Y	0.04	Y	0.15	Y			
September	2.0	Y	2.6	Y	0.03	Y	0.21	Y			
October	2.0	Y	2.2	Y	0.04	Y	0.10	Y			
November	2.0	Y	3.2	Y	0.04	Y	0.23	Y			
December	2.0	Y	7.3	Y	0.04	Y	0.63	Y			

Table 11. Comparison of Wiarton Wastewater Treatment System Monitoring Data to Effluent Objectives, 2020

** 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

2.6 Effluent Monitoring

The total effluent flow in 2020 was 556,314 m^3 with an annual average daily flow of 1,520 m^3 /day. Total effluent flows in 2020 have decreased in comparison to 2019.

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)	44	108.5	170
TSS (mg/L)	75	157.8	978
TKN (mg/L)	10.1	19.9	31.4
Total Phosphorous	0.85	2.07	3.4

 Table 12: Influent Characteristics

In 2020, approximately 1,642 m³ of septage was received by the Wiarton Wastewater Treatment System. This is lower than 2019 (2,339 m³) and 2018 (2,326 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 F for Septage Laboratory Results.

Table 13: Septage Receiving Characteristics

Parameter	Minimum	Maximum
Biochemical Oxygen Demand (BOD5) [mg/L]	693	10,800
Total Suspended Solids [mg/L]	151	11,200
Chemical Oxygen Demand [mg/L]	1600	34,000
Ammonia+Ammonium (N) [mg/L]	0.1	2460
Total Kjeldahl Nitrogen [as N mg/L]	24.4	3280
Phosphorus (total) [mg/L]	3.9	510
Isopropyl Alcohol [µg/L]	<5000	8600
Methyl alcohol [µg/L]	<5000	6400
Acetone [µg/L]	<1200	5040
Benzene [µg/L]	<0.5	<20
Ethylbenzene [µg/L]	<20	<20
Methylene Chloride [ug/L]	<20	<20
Methyl ethyl ketone [µg/L]	<800	<800
Toluene [µg/L]	<20	355
Xylene (total) [µg/L]	<20	<20
o-xylene [µg/L]	<20	<20
m/p-xylene [µg/L]	<20	<20
Aluminum (mg/L)	0.28	124
Arsenic (mg/L)	< 0.002	0.088
Barium (mg/L)	0.04	1.92
Cadmium (mg/L)	0.000	0.023
Calcium (mg/L)	87.1	663
Chromium (mg/L)	0.001	0.225
Cobalt (mg/L)	0.000	0.019

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Copper (mg/L)	0.107	5.84
Iron (mg/L)	4.03	101
Lead (mg/L)	0.005	0.239
Magnesium (mg/L)	23.3	95.7
Manganese (mg/L)	0.252	1.820
Mercury (mg/L)	0.000	0.001
Nickel (mg/L)	0.008	0.219
Potassium (mg/L)	24.5	77.1
Selenium (mg/L)	0.001	0.088
Silver (µg/L)	< 0.05	19.2
Zinc (mg/L)	0.25	26.00

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 2020 was 640,216 m³ with an annual average daily flow of 1,726 m³/day, which is 39.2% of the recommended rated capacity of 4,400 m³/day. Total influent flows in 2020 have decreased in comparison to 2019. The daily influent flow remained within the recommended rated capacity 97.2% (i.e. 355 out of 365 days) of the time during 2020.

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.

2020	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	3,753	1,968		
February	1,952	1,432		
March	6,949	2,630		
April	2,144	1,571		
May	1,834	1,374		
June	2,546	1,249	1 726	Var
July	1,590	1,184	1,720	Tes
August	5,819	1,744		
September	3,500	1,663		
October	2,838	1,904		
November	2,720	1,746		
December	5,512	2,293		

 Table 14.
 Average Daily Raw Sewage Flows by Month for 2020

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 decreased since 2015 (i.e. 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, 2019

8	·····, _···		
Parameters	Average	Minimum	Maximum
Total Kjeldahl Nitrogen (N mg/L)	0.99	0.50	4.00

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)

Intermittent power bumps which causes the treated sewage to bypass UV disinfection remain an operational challenge for 2020. 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 E 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;

- Replaced louver actuators
- Replaced lamp #9 module 1 and connector on Lamp #8 module 2 at Filter Building
- Replace UV bulb, sleeve, wiper rings and connector on Module 2 Lamp 5
- Replaced plug on alum transfer pump at filter building
- Lagoon Cell #3 Effluent Screen repaired
- Pump #3 pulled and inspected for blockage and condition
- Replaced lamp 3 module 1 on filter building UV system

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 MAXIMO.

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 MAXIMO, upon completion, Operators charge there time to the work order and close it off.

On July 30, 2020, 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 all with percent errors of less than 5%. All records for calibrations/ verifications can be found in Appendix B.

On June 8, 2020, 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 2020 and no sludge is expected to be removed in 2021.

8. Septage Receiving Works

In 2020, approximately 1,642 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
- D&S Portables

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

Month	Total Volume of Septage Received (m ³)
January	252.1
February	157.4
March	205.9
April	77.3
May	69.9
June	104.4
July	93.6
August	72.9
September	111.5
October	161.5
November	102.8
December	232.8

Table 16. Total Volume of Septage Received in 2020

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 2020, six (6) community complaints for the Wiarton Wastewater Treatment System were received regarding sewer lateral services blockages. A detailed summary of the community complaints and the steps taken to address the complaints 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 were zero (0) overflows and zero (0) spills in 2020 at the Wiarton Wastewater Treatment System. During the reporting period, four (4) bypasses of final effluent (total volume of 208.61 m³) being discharged without receiving all of the required treatment were 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 18 for a summary and Appendix D for detailed bypass reports.

ECA 6045-ARDJS7 requires that Quarterly bypass/overflow reports are to be submitted to the Water Supervisor. All 2020 quarterly reports were submitted to the Water Supervisor by the deadlines specified in the ECA and have been included in Appendix D.

	Ti	me	Duration	Volume	Treatment	Samples		Impact of Event	Mitigation
Date	Start	End	HH:MM	(m ³)	Process Bypassed	Collected	Reason for Bypass		
2020/01/15	12:57	13:07	00:10	10.00	UV	Yes	Power failure causing	Filter treated effluent	n/a
					disinfection		UV system failure	released to effluent outfall	
2020/03/19	17.30	18.10	00.40	92.67	UV	Ves	Power failure causing	Filter treated effluent	n/a
2020/03/17	17.50	10.10	00.40	12.07	disinfection	105	UV system failure	released to effluent outfall	11/ a
2020/05/03	11.00	11.45	00.45	65.60	UV	Vac	Power failure causing	Filter treated effluent	n/a
2020/03/03	11.00	11.45	00.45	05.00	disinfection	105	UV system failure	released to effluent outfall	11/a
2020/05/20	05.40	06.25	00:45	40.34	UV	Vac	Power failure causing	Filter treated effluent	n/a
2020/03/20	05.40	00.25	00.45	40.34	disinfection	105	UV system failure	released to effluent outfall	11/a

Table 17. Bypass Events

2020 Annual Performance Report Town of South Bruce Peninsula: Wiarton Wastewater Treatment Plant ECA 6045-ARDJS7

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.



Appendix A

Performance Assessment Report

Ontario Clean Water Agency Performance Assessment Report Wastewater/Lagoon

Report extracted 03/29/2021 07:42

Facility: [5620] WIARTON WASTEWATER TREATMENT LAGOON
Works: [110000819]

From:	01/01/2020 to 31/12/2020

	01/2020	02/2020		03/2020		04/2020		05/2020	06/2020		07/2020		08/2020		09/2020		10/2020		11/2020	12/2020	<total></total>	<avg></avg>	<`	:Max>	<criteria></criteria>
Flows:																									
Raw Flow: Total - Raw Sewage (m ³)	61006.89	41520.58		81514.85		48703.32		42602.04	38707.03		38835.06		53725.78		49662.03		58851.25		54008.11	71079.41	640216.35				
Raw Flow: Avg - Raw Sewage (m³/d)	1967.96	1431.74		2629.51		1571.07		1374.26	1248.61		1176.82		1733.09		1655.40		1898.43		1742.20	2292.88		1726.83			4400.0
Raw Flow: Max - Raw Sewage (m ³ /d)	3752.65	1951.61		6948.84		2143.50		1834.39	2545.77		1587.76		5816.86		3482.27		2821.61		2702.47	5512.37			F	6948.84	
Eff. Flow: Total - Effluent (m ³)	52463.00	42314.00		77197.00		38531.00		33078.00	30012.00		15838.00		38773.00		60520.00		55027.00		34808.00	77753.00	556314.00				
Eff. Flow: Avg - Effluent (m ³ /d)	1692.35	1459.10		2490.23		1284.37		1067.03	1000.40		510.90		1250.74		2017.33		1775.06		1160.27	2508.16		1518.00			
Eff. Flow: Max - Effluent (m3/d)	3766.00	3217.00		3683.00		2067.00		1600.00	1882.00		1422.00		1780.00		3833.00		2876.00		1759.00	4684.00			4	4684.00	
Carbonaceous Biochemical Oxygen Demand: CBOD:																									
Eff: Avg cBOD5 - Effluent (mg/L)	< 3.667	3.000	<	2.333	<	2.750	<	2.250	3.500	<	2.000	<	2.000	<	2.000	<	2.000	<	2.000	< 2.000		< 2.458		3.667	20.0
Eff: # of samples of cBOD5 - Effluent (mg/L)	3	2		3		4		4	2		2		2		3		2		3	2	32				
Loading: cBOD5 - Effluent (kg/d)	< 6.205	4.377	<	5.811	<	3.532	<	2.401	3.501	<	1.022	<	2.501	<	4.035	<	3.550	<	2.321	< 5.016		< 3.689		6.205	
Biochemical Oxygen Demand: BOD5:																									
Raw: Avg BOD5 - Raw Sewage (mg/L)	84.000	86.000		108.000		108.000		114.000	109.000		158.500		74.500		102.000		88.500		148.000	101.000		106.792	1	158.500	
Raw: # of samples of BOD5 - Raw Sewage (mg/L)	1	1		2		3		2	2		2		2		3		2		2	2	24				
Total Suspended Solids: TSS:																									
Raw: Avg TSS - Raw Sewage (mg/L)	115.000	106.000		117.000		121.000		116.000	148.000		160.500		133.500		387.000		95.000		144.500	106.500		145.833	:	387.000	
Raw: # of samples of TSS - Raw Sewage (mg/L)	1	1		2		3		2	2		2		2		3		2		2	2	24				
Eff: Avg TSS - Effluent (mg/L)	11.000	11.000		6.667		5.000	<	5.250	6.500		3.000		4.000		2.333		3.000		3.000	< 10.000		< 5.896		11.000	24.0
Eff: # of samples of TSS - Effluent (mg/L)	3	3		3		4		4	2		2		2		3		2		3	2	33				
Loading: TSS - Effluent (kg/d)	18.616	16.050		16.602		6.422	<	5.602	6.503		1.533		5.003		4.707		5.325		3.481	< 25.082		< 9.577		25.082	
Percent Removal: TSS - Raw Sewage (mg/L)	90.435	89.623		94.302		95.868		95.474	95.608		98.131		97.004		99.397		96.842		97.924	90.610				99.397	
Total Phosphorus: TP:																									
Raw: Avg TP - Raw Sewage (mg/L)	2.060	2.190		1.565		1.853		2.265	1.985		3.245		1.955		2.080		2.035		2.320	1.415		2.081		3.245	
Raw: # of samples of TP - Raw Sewage (mg/L)	1	1		2		3		2	2		2		2		3		2		2	2	24				
Eff: Avg TP - Effluent (mg/L)	< 0.030	0.045		0.037	<	0.035	<	0.033	0.050	<	0.035		0.035	<	0.033		0.035	<	0.040	< 0.040		< 0.037		0.050	0.5
Eff: # of samples of TP - Effluent (mg/L)	3	2		3		4		4	2		2		2		3		2		3	2	32				
Loading: TP - Effluent (kg/d)	< 0.051	0.066		0.091	<	0.045	<	0.035	0.050	<	0.018		0.044	<	0.067		0.062	<	0.046	< 0.100		< 0.056		0.100	
Percent Removal: TP - Raw Sewage (mg/L)	98.544	97.945		97.657		98.112		98.565	97.481		98.921		98.210		98.397		98.280		98.276	97.173				98.921	
Nitrogen Series:																									
Raw: Avg TKN - Raw Sewage (mg/L)	27.600	22.400		16.050		18.467		21.950	19.600		30.250		18.250		14.967		21.750		23.750	12.000		20.586		30.250	
Raw: # of samples of TKN - Raw Sewage (mg/L)	1	1		2		3		2	2		2		2		3		2		2	2	24				
Eff: Avg TAN - Effluent (mg/L)	< 0.100	< 0.100	<	0.167	<	0.100	<	0.100	1.900		0.250		0.100	<	0.167	<	0.100	<	0.300	0.600		< 0.332		1.900	3.0 - 8.0
Eff: # of samples of TAN - Effluent (mg/L)	3	2		3		4		4	2		2		2		3		2		3	2	32				
Loading: TAN - Effluent (kg/d)	< 0.169	< 0.146	<	0.415	<	0.128	<	0.107	1.901		0.128		0.125	<	0.336	<	0.178	<	0.348	1.505		< 0.457	11	1.901	
Eff: Avg NO3-N - Effluent (mg/L)	4.797	4.480		4.417		2.428		0.693	0.105		0.570		0.695		0.523		0.840		1.700	4.215		2.122		4.797	
Eff: # of samples of NO3-N - Effluent (mg/L)	3	2		3	LE	4	ΙĪ	4	2	1	2		2		3		2		3	2	32				
Eff: Avg NO2-N - Effluent (mg/L)	< 0.030	0.040		0.060	<	0.030	<	0.030	0.195		0.385	<	0.030	<	0.030	<	0.030	<	0.040	0.130		< 0.086		0.385	
Eff: # of samples of NO2-N - Effluent (mg/L)	3	2		3		4		4	2		2		2		3		2	T	3	2	32				
Disinfection:																									
Eff: GMD E. Coli - Effluent (cfu/100mL)	2 000	2 000		2 000		2 000		2 000	2 000		2 000		2 000		2 000		2 000	T	1 587	2 000		1 966	I T	2 000	



Appendix B

Calibration Reports



Hach ServicePlus™ FIELD SERVICE REPORT / RAPPORT DE SERVICE DE TERRAIN

Customer / Client: C			EO-PAUL FRIGAULT
Phone / Telephone: 5	NTARIO CLEAN WATER AGENCY 19-372-4807	، Fax Email Address / Adresse:	rigault@ocwa.com
Location: O	NTÀRIO CLEAN WATER AGENCY, 897 BAYVIEW ST, WI Intario. N0H 2T0. CA	ARTON, Technician / Technicien: S	Stephen Bilton
Work Order Number / Numéro de Co	mmande: WO-00736723- Visit - 1 of 1	Purchase Order / Bon de Commande Date of Service / Date de service: 6	: Y5844 \$/8/2020
Product / Produit	Product / Produit Description	Serial Number / No. de Série	Asset Tag
LPV417.99.00002	1720E LR TURBIDITY SENSOR, HACH	04020000688	Filter 1 Turbidity
As found, the condition of the anal cleaned and inspected. The lamp of calibration gain value was 0.62 and The instrument read 0.917 NTU du completed, the as left reading of th specifications.	Votes yzer was good, the sample reading was 0.018 NTU, and the was replaced, the electronics were zeroed, and a calibration d was within instrument specifications. The calibration perfo uring the post-calibration verification with 1 NTU StablCal sta e analyzer was 0.034 NTU. The analyzer has been restored	initial calibration gain was 0.70. Thusing 20 NTU StablCal (lot a9057 e rmance was verified using a 1 NTU and was within verification sp dard and was within verification sp to normal operation, and its perforr	e turbidimeter head and sensor were xp feb21) was performed. The resulting StablCal (lot a0093 exp apr22) standard. ecifications. After PM service was nance and condition were within
Product / Produit	Product / Produit Description	Serial Number / No. de Série	Asset Tag
LPV417.99.00002	1720E LR TURBIDITY SENSOR, HACH	040200000706	154151 Raw Water Turbidity
The instrument read 1.002 NTU du completed, the as left reading of th specifications.	ring the post-calibration verification with 1 NTU StablCal sta e analyzer was 0.839 NTU. The analyzer has been restored	ndard and was within verification spe to normal operation, and its perform	ecifications. After PM service was nance and condition were within
Product / Produit	Product / Produit Description	Serial Number / No. de Série	Asset Tag
LPV417.99.00002	1720E LR TURBIDITY SENSOR, HACH	041000004817	Finished Water Turbidity
Product / Produit	Product / Produit Description	Serial Number / No. de Série	Asset Tag
Product / Produit LPV417.99.00002	Product / Produit Description 1720E LR TURBIDITY SENSOR, HACH Notes	Serial Number / No. de Série 040100000409	Asset Tag Filter 2 Turbidity
Product / Produit LPV417.99.00002 As found, the condition of the analy cleaned and inspected. The lamp v calibration gain value was 0.65 and The instrument read 0.878 NTU du completed, the as left reading of th specifications.	Product / Produit Description 1720E LR TURBIDITY SENSOR, HACH Notes /zer was good, the sample reading was 0.020 NTU, and the vas replaced, the electronics were zeroed, and a calibration a was within instrument specifications. The calibration perfor ring the post-calibration verifications with 1 NTU StablCal state e analyzer was 0.033 NTU. The analyzer has been restored	Serial Number / No. de Série 04010000409 initial calibration gain was 0.63. The using 20 NTU StablCal (lot a9057 e) mance was verified using a 1 NTU S dard and was within verification spe to normal operation, and its perform	Asset Tag Filter 2 Turbidity e turbidimeter head and sensor were cp feb21) was performed. The resulting StablCal (lot a0093 exp apr22) standard. scifications. After PM service was hance and condition were within
Product / Produit LPV417.99.00002 As found, the condition of the analy cleaned and inspected. The lamp v calibration gain value was 0.65 and The instrument read 0.878 NTU du completed, the as left reading of th specifications. Product / Produit	Product / Produit Description 1720E LR TURBIDITY SENSOR, HACH Var was good, the sample reading was 0.020 NTU, and the var seplaced, the electronics were zeroed, and a calibration was within instrument specifications. The calibration perfor ring the post-calibration verification with 1 NTU StablCal stat e analyzer was 0.033 NTU. The analyzer has been restored Product / Produit Description	Serial Number / No. de Série 04010000409 initial calibration gain was 0.63. The using 20 NTU StablCal (lot a9057 ex mance was verified using a 1 NTU S indard and was within verification spe to normal operation, and its perform	Asset Tag Filter 2 Turbidity a turbidimeter head and sensor were (p feb21) was performed. The resulting StablCal (lot a0093 exp apr22) standard. StablCal (lot a0093 exp apr20) standard. StablC
Product / Produit LPV417.99.00002 As found, the condition of the analy cleaned and inspected. The lamp v calibration gain value was 0.65 and The instrument read 0.878 NTU du completed, the as left reading of th specifications. Product / Produit 4700000	Product / Produit Description 1720E LR TURBIDITY SENSOR, HACH Notes rzer was good, the sample reading was 0.020 NTU, and the vas veplaced, the electronics were zeroed, and a calibration perfor ing the post-calibration verifications. The calibration perfor ring the post-calibration verification with 1 NTU StablCal stat e analyzer was 0.033 NTU. The analyzer has been restored Product / Produit Description oo 2100N LAB TURB, EPA 1821 Notes	Serial Number / No. de Série 04010000409 initial calibration gain was 0.63. The using 20 NTU StablCal (lot a9057 ex mance was verified using a 1 NTU S ndard and was within verification spe to normal operation, and its perform Serial Number / No. de Série 05070C020466	Asset Tag Filter 2 Turbidity a turbidimeter head and sensor were op feb21) was performed. The resulting StablCal (lot a0093 exp apr22) standard. ecifications. After PM service was nance and condition were within Asset Tag 211066
Product / Produit LPV417.99.00002 As found, the condition of the analy cleaned and inspected. The lamp v calibration gain value was 0.65 and The instrument read 0.878 NTU du completed, the as left reading of th specifications. Product / Produit 4700000 As found, the condition of the analy optics chamber were cleaned, the 1 was verified with DI water (0.054), was 0.011. The instrument has be	Product / Produit Description 1720E LR TURBIDITY SENSOR, HACH Notes vzer was good, the sample reading was 0.020 NTU, and the vas replaced, the electronics were zeroed, and a calibration perforing the post-calibration verifications. The calibration perforing the post-calibration verification with 1 NTU StablCal state e analyzer was 0.033 NTU. The analyzer has been restored Product / Produit Description oo 2100N LAB TURB, EPA 1821 Notes rzer was good, the firmware version was 2.1, and the empty amp and small lens were replaced, and the instrument was (20 NTU (20.1) and 1000 NTU (1001) Stablcal standards. Af en restored to normal operation, and performance and conditional perfo	Serial Number / No. de Série 04010000409 initial calibration gain was 0.63. The using 20 NTU StablCal (lot a9057 ex mance was verified using a 1 NTU 5 odard and was within verification spe to normal operation, and its perform Serial Number / No. de Série 05070C020466 cell reading was 0.013. The instrur aditorated using StablCal standards ter PM service was completed, the a tion were within specifications.	Asset Tag Filter 2 Turbidity e turbidimeter head and sensor were top feb21) was performed. The resulting StablCal (lot a0093 exp apr22) standard. ecifications. After PM service was hance and condition were within Asset Tag 211066 nent was inspected, the exterior and the (lot a9219 exp oct20). The instrument as left empty cell reading of the analyzer
Product / Produit LPV417.99.00002 As found, the condition of the analy cleaned and inspected. The lamp v calibration gain value was 0.65 and The instrument read 0.878 NTU du completed, the as left reading of th specifications. Product / Produit 4700000 As found, the condition of the analy optics chamber were cleaned, the l was verified with DI water (0.054), was 0.011. The instrument has be	Product / Produit Description 1720E LR TURBIDITY SENSOR, HACH Notes rzer was good, the sample reading was 0.020 NTU, and the vas replaced, the electronics were zeroed, and a calibration perforing the post-calibration verifications. The calibration perforing the post-calibration verification with 1 NTU StablCal state e analyzer was 0.033 NTU. The analyzer has been restored Product / Produit Description oo 2100N LAB TURB, EPA 1821 Notes rzer was good, the firmware version was 2.1, and the empty amp and small lens were replaced, and the instrument was a 20 NTU (20.1) and 1000 NTU (1001) Stablcal standards. Af en restored to normal operation, and performance and conditional operation, and performance and conditional operation.	Serial Number / No. de Série 04010000409 initial calibration gain was 0.63. The using 20 NTU StablCal (lot a9057 ex mance was verified using a 1 NTU StablCal (lot a9057 ex dard and was within verification spectron dard and was within verification spectron bdard and was within verification spectron Serial Number / No. de Série 05070C020466 cell reading was 0.013. The instruct calibrated using StablCal standards tor were within specifications.	Asset Tag Filter 2 Turbidity e turbidimeter head and sensor were sp feb21) was performed. The resulting StablCal (lot a0093 exp apr22) standard. colfications. After PM service was hance and condition were within Asset Tag 211066 nent was inspected, the exterior and the (lot a9219 exp oct20). The instrument as left empty cell reading of the analyzer Asset Tag
Product / Produit LPV417.99.00002 As found, the condition of the analy cleaned and inspected. The lamp v calibration gain value was 0.65 and The instrument read 0.878 NTU du completed, the as left reading of th specifications. Product / Produit 4700000 As found, the condition of the analy optics chamber were cleaned, the I was verified with DI water (0.054), was 0.011. The instrument has be Product / Produit 4650000	Product / Produit Description 1720E LR TURBIDITY SENSOR, HACH Notes vzer was good, the sample reading was 0.020 NTU, and the vas replaced, the electronics were zeroed, and a calibration perfor ring the post-calibration verifications. The calibration perfor ring the post-calibration verifications. The calibration perfor e analyzer was 0.033 NTU. The analyzer has been restored Product / Produit Description oo 2100N LAB TURB, EPA 1821 vzer was good, the firmware version was 2.1, and the empty amp and small lens were replaced, and the instrument was 120 NTU (20.1) and 1000 NTU (1001) Stablcal standards. Af en restored to normal operation, and performance and condition Product / Produit Description 00 2100P PORTABLE TURBIDIMETER	Serial Number / No. de Série 04010000409 initial calibration gain was 0.63. The using 20 NTU StablCal (lot a9057 eximance was verified using a 1 NTU StablCal (lot a9057 eximance was verified using a 1 NTU StablCal and was within verification spector normal operation, and its perform Serial Number / No. de Série 05070C020466 cell reading was 0.013. The instrurcalibrated using StablCal standards ter PM service was completed, the attion were within specifications. Serial Number / No. de Série 021100028695	Asset Tag Filter 2 Turbidity a turbidimeter head and sensor were sp feb21) was performed. The resulting StablCal (lot a0093 exp apr22) standard. StablCal (lot a0093 exp apr22) standard. StablCal (lot a0091 exp are service was hance and condition were within Asset Tag 211066 nent was inspected, the exterior and the (lot a9219 exp oct20). The instrument is left empty cell reading of the analyzer Asset Tag 211065
Product / Produit LPV417.99.00002 As found, the condition of the analy cleaned and inspected. The lamp v calibration gain value was 0.65 and the instrument read 0.878 NTU du completed, the as left reading of th specifications. Product / Produit 4700000 As found, the condition of the analy optics chamber were cleaned, the l was verified with DI water (0.054), was 0.011. The instrument has be Product / Produit 4650000 As found, the condition of the turbid the optics chamber were cleaned, the l was verified with DI water (0.054), was 0.011. The instrument has be 0.01. The turbidimeter has been re	Product / Produit Description 1720E LR TURBIDITY SENSOR, HACH Notes zzer was good, the sample reading was 0.020 NTU, and the was replaced, the electronics were zeroed, and a calibration perforing the post-calibration verifications. The calibration performing the post-calibration verification with 1 NTU StablCal state e analyzer was 0.033 NTU. The analyzer has been restored Product / Produit Description oo 2100N LAB TURB, EPA 1821 Notes rzer was good, the firmware version was 2.1, and the empty amp and small lens were replaced, and the instrument was 420 NTU (20.1) and 1000 NTU (1001) Stablcal standards. Af en restored to normal operation, and performance and condition of 2100P PORTABLE TURBIDIMETER Product / Produit Description oo 2100P PORTABLE TURBIDIMETER Notes dimeter was good, the firmware version was 1.3, and the empty atter (0.13), and 10 NTU (9.67) Stablcal standard. After PM s stored to regular operation, and performance and condition values	Serial Number / No. de Série 04010000409 initial calibration gain was 0.63. The using 20 NTU StablCal (lot a9057 expanse was verified using a 1 NTU 5 ndard and was within verification spender 10 normal operation, and its perform Serial Number / No. de Série 05070C020466 cell reading was 0.013. The instrum additional stablCal standards ter PM service was completed, the attion were within specifications. Serial Number / No. de Série 021100028695 pty cell reading was 0.02. The turbic ras calibrated using StablCal standards rew was completed, the as left errivice within specifications.	Asset Tag Filter 2 Turbidity e turbidimeter head and sensor were top feb21) was performed. The resulting StablCal (tot a0093 exp apr22) standard. ecifications. After PM service was hance and condition were within Asset Tag 211066 nent was inspected, the exterior and the (tot a9219 exp oct20). The instrument is left empty cell reading of the analyzer Asset Tag 211065 Immeter was inspected, the exterior and rds (tot A9287 exp dec20). The hpty cell reading of the turbidimeter was

	Product / Produit Description	Serial Number / No. de Série	Asset Tag
LXV440.53.10002	AISE SC W RFID (USA)	1653164	Ait-207/tit-206
found: not reading, multiple er Y694), returned to process, a:	rors, sensor had failed. cleaned, inspected probe, tested with s left readings: 0.1 mg/l nh4-n, 6.5 mg/l K, unit performing as	test cartridge to confirm probe oper expected.	ation, passed, replaced sensor cartrid
Product / Produit	Product / Produit Description	Serial Number / No. de Série	Asset Tag
5440000	CL17 FINAL ASSEMBLY W/KITS	03100008358	Raw Water Total chlorine
s found, the condition of the CL lorimeter was cleaned and insp a verification grab sample were he instrument was restored to n	17 was good, the firmware version was 1.4, and the instrume bected. Tubing, fittings, and the stir magnet were replaced. e within 5% of the instrument reading. Following preventative ormal operation, and its performance and condition were with	nt reading was 0.74 mg/L. A new m nstrument accuracy was verified utili maintenance service completion, the in specifications.	aintenance kit was installed, and the izing a certified Hach DR900. The resul e as-left analyzer reading was 0.77 mg/
Product / Produit	Product / Produit Description	Serial Number / No. de Série	Asset Tag
5440000	CL17 FINAL ASSEMBLY W/KITS	030800007905	Finished Water Clearwell Free
Product / Produit DPD1R1 s found, the condition of the pro placed, and the probe was refil easurement performance of the M service, calibration, and verifi erformance and condition were	Product / Produit Description Digital pH Sensor,Ryton, Convertible Notes be was operational, showing calibration due, and the sample led with standard cell solution. Following PM service, the pro- probe following service and calibration was verified using co- cation were completed, the as left reading of the probe was within specifications.	Serial Number / No. de Série 1603440861 reading was 7.42 ph. The probe was be was calibrated. The calibration s rtified pH standards. Their values w 7.69 ph. The probe has been restore	Asset Tag Ait-205 as cleaned, inspected, the salt bridge w lope after PM was -54.7 mV/pH. The rere: 4.01 - 4.01, 7 - 7.06, 10 - 10.01 Al d to normal operation, and its
Product / Produit DPD1R1 ; found, the condition of the pro placed, and the probe was refill assurement performance of the A service, calibration, and verifi rformance and condition were Product / Produit DPD1P1	Product / Produit Description Digital pH Sensor,Ryton, Convertible Notes be was operational, showing calibration due, and the sample led with standard cell solution. Following PM service, the pro- probe following service and calibration was verified using cc cation were completed, the as left reading of the probe was within specifications. Product / Produit Description Digital pH Sensor, PEEK, Convertible	Serial Number / No. de Série 1603440861 e reading was 7.42 ph. The probe wa be was calibrated. The calibration s ertified pH standards. Their values w 7.69 ph. The probe has been restore Serial Number / No. de Série 000907430223	Asset Tag Ait-205 as cleaned, inspected, the salt bridge w lope after PM was -54.7 mV/pH. The rere: 4.01 - 4.01, 7 - 7.06, 10 - 10.01 Ai d to normal operation, and its Asset Tag Raw Water ph
Product / Produit DPD1R1 s found, the condition of the pro paced, and the probe was refil easurement performance of the M service, calibration, and verifi erformance and condition were Product / Produit DPD1P1	Product / Produit Description Digital pH Sensor,Ryton, Convertible Notes be was operational, showing calibration due, and the sample led with standard cell solution. Following PM service, the proc probe following service and calibration was verified using ce cation were completed, the as left reading of the probe was within specifications. Product / Produit Description Digital pH Sensor, PEEK, Convertible Notes Notes	Serial Number / No. de Série 1603440861 reading was 7.42 ph. The probe was be was calibrated. The calibration striffied pH standards. Their values w 7.69 ph. The probe has been restore Serial Number / No. de Série 000907430223	Asset Tag Ait-205 As cleaned, inspected, the salt bridge w lope after PM was -54.7 mV/pH. The rere: 4.01 - 4.01, 7 - 7.06, 10 - 10.01 Ai d to normal operation, and its Asset Tag Raw Water ph
Product / Produit DPD1R1 s found, the condition of the pro placed, and the probe was refil easurement performance of the W service, calibration, and verifi erformance and condition were Product / Produit DPD1P1 s found, the condition of the pro placed, and the probe was refil easurement performance of the easurement performance of the easurement performance of the formance and condition were	Product / Produit Description Digital pH Sensor,Ryton, Convertible Notes be was operational, showing calibration due, and the sample led with standard cell solution. Following PM service, the pro- e probe following service and calibration was verified using calibration were completed, the as left reading of the probe was within specifications. Product / Produit Description Digital pH Sensor, PEEK, Convertible Notes be was operational, showing calibration due, and the sample cation were completed, the as left reading of the probe was of the probe was of the probe following service and calibration was verified using calibration due, and the sample be was operational, showing calibration due, and the sample cation were completed, the as left reading of the probe was of the probe wa	Serial Number / No. de Série 1603440861 e reading was 7.42 ph. The probe was be was calibrated. The calibration striffed pH standards. Their values w 7.69 ph. The probe has been restore Serial Number / No. de Série 000907430223 e reading was 7.83 ph. The probe was calibrated. The calibration s striffed pH standards. Their values w 7.74 ph. The probe has been restore	Asset Tag Ait-205 as cleaned, inspected, the salt bridge w. lope after PM was -54.7 mV/pH. The rere: 4.01 - 4.01, 7 - 7.06, 10 - 10.01 Af d to normal operation, and its Asset Tag Raw Water ph as cleaned, inspected, the salt bridge w. lope after PM was -54.1 mV/pH. The rere: 4.01 - 4.01, 7 - 7.04, 10 - 10.01 Af d to normal operation, and its
Product / Produit DPD1R1 found, the condition of the pro placed, and the probe was refil easurement performance of the M service, calibration, and verifi rformance and condition were Product / Produit DPD1P1 found, the condition of the pro placed, and the probe was refil easurement performance of the M service, calibration, and verifi rformance and condition were Product / Produit Product / Produit	Product / Produit Description Digital pH Sensor,Ryton, Convertible Notes be was operational, showing calibration due, and the sample led with standard cell solution. Following PM service, the pro- probe following service and calibration was verified using or cation were completed, the as left reading of the probe was as within specifications. Product / Produit Description Digital pH Sensor, PEEK, Convertible Notes be was operational, showing calibration was verified using or exprobe following service and calibration was verified using or cation were completed, the as left reading of the probe was as within specifications. Product / Produit Description Digital pH Sensor, PEEK, Convertible Notes be was operational, showing calibration was verified using colibration was	Serial Number / No. de Série 1603440861 reading was 7.42 ph. The probe was be was calibrated. The calibration striffied pH standards. Their values w 7.69 ph. The probe has been restore Serial Number / No. de Série 000907430223 ereading was 7.83 ph. The probe was be was calibrated. The calibration s striffied pH standards. Their values w 7.74 ph. The probe has been restore	Asset Tag Ait-205 As cleaned, inspected, the salt bridge w dope after PM was -54.7 mV/pH. The rere: 4.01 - 4.01, 7 - 7.06, 10 - 10.01 Af d to normal operation, and its Asset Tag Raw Water ph Asset Tag Raw Water ph as cleaned, inspected, the salt bridge w rere: 4.01 - 4.01, 7 - 7.04, 10 - 10.01 Af d to normal operation, and its Asset Tag
Product / Produit DPD1R1 s found, the condition of the pro placed, and the probe was refil assurement performance of the A service, calibration, and verifi erformance and condition were Product / Produit DPD1P1 : found, the condition of the pro placed, and the probe was refil assurement performance of the A service, calibration, and verifi rformance and condition were Product / Produit Set 2940060	Product / Produit Description Digital pH Sensor,Ryton, Convertible Notes be was operational, showing calibration due, and the sample led with standard cell solution. Following PM service, the pro- probe following service and calibration was verified using or cation were completed, the as left reading of the probe was 's within specifications. Product / Produit Description Digital pH Sensor, PEEK, Convertible Notes be was operational, showing calibration was verified using co cation were completed, the as left reading of the sample eq with standard cell solution. Following PM service, the pro- e probe following service and calibration was verified using co cation were completed, the as left reading of the probe was 's within specifications. Product / Produit Description O DR/2400 PORTABLE, NO POWER	Serial Number / No. de Série 1603440861 reading was 7.42 ph. The probe was be was calibrated. The calibration s prtified pH standards. Their values w 7.69 ph. The probe has been restore Serial Number / No. de Série 000907430223 reading was 7.83 ph. The probe was be was calibrated. The calibration s pertified pH standards. Their values w 7.74 ph. The probe has been restore Serial Number / No. de Série 000907430223	Asset Tag Ait-205 As cleaned, inspected, the salt bridge w lope after PM was -54.7 mV/pH. The rere: 4.01 - 4.01, 7 - 7.06, 10 - 10.01 Ar d to normal operation, and its Asset Tag Raw Water ph As cleaned, inspected, the salt bridge w lope after PM was -54.1 mV/pH. The rere: 4.01 - 4.01, 7 - 7.04, 10 - 10.01 Ar d to normal operation, and its Asset Tag
Product / Produit DPD1R1 a found, the condition of the proplaced, and the probe was refile easurement performance of the w service, calibration, and verifier Product / Produit DPD1P1 a found, the condition of the proplaced, and the probe was refile easurement performance of the y Service, calibration, and verifier placed, and the probe was refile easurement performance of the M service, calibration, and verifier product / Produit 5940060 a found the condition of the metto 21. Verification results were a d2 1.292 (1.245 ±0.100), Std3 .607 ±0.050), Std2 1.210 (1.18)	Product / Produit Description Notes be was operational, showing calibration due, and the sample led with standard cell solution. Following PM service, the pro- e probe following service and calibration was verified using co- cation were completed, the as left reading of the probe was within specifications. Product / Produit Description Digital pH Sensor, PEEK, Convertible Notes be was operational, showing calibration due, and the sample led with standard cell solution. Following PM service, the pro- p probe following service and calibration was verified using co- cation were completed, the as left reading of the probe was service and calibration was verified using co- p probe following service and calibration was verified using co- cation were completed, the as left reading of the probe was service in were completed, the as left reading of the probe was service ation were completed, the as left reading of the probe was service in the probe was service in the sample led with standard cell solution. Following PM service at the sample led with standard cell solution. Following PM service at the sample led with standard cell solution. Following PM service at the sample led with standard cell solution. Following PM service at the sample led with standard cell solution.<	Serial Number / No. de Série 1603440861 reading was 7.42 ph. The probe was be was calibrated. The calibration striffied pH standards. Their values w 7.69 ph. The probe has been restore Serial Number / No. de Série 000907430223 reading was 7.83 ph. The probe was be was calibrated. The calibration s striffied pH standards. Their values w 7.74 ph. The probe has been restore Serial Number / No. de Série 000907430223 reading was 7.83 ph. The probe was be was calibrated. The calibration s striffed pH standards. Their values w 7.74 ph. The probe has been restore Serial Number / No. de Série 020800000418 rerified wavelength accuracy using D 2.66 ±0.100), Std3 1.852 (1.826 ±0.31.854 in specifications	Asset Tag Ait-205 As cleaned, inspected, the salt bridge w slope after PM was -54.7 mV/pH. The rere: 4.01 - 4.01, 7 - 7.06, 10 - 10.01 A d to normal operation, and its Asset Tag Raw Water ph as cleaned, inspected, the salt bridge w slope after PM was -54.1 mV/pH. The rere: 4.01 - 4.01, 7 - 7.04, 10 - 10.01 A d to normal operation, and its Asset Tag PR Check secondary standards Lot A90 (50); 520nm: Std1 0.645 (0.638 ±0.050 (1.796 ±0.150); 610nm: Std1 0.604
Product / Produit DPD1R1 a found, the condition of the proplaced, and the probe was refile pasurement performance of the waservice, calibration, and verifi informance and condition were Product / Produit DPD1P1 a found, the condition of the proplaced, and the probe was refile asurement performance of the pasurement performance of the assurement performance of the service, calibration, and verifi assurement performance of the service, calibration, and verifi off sp40060 found the condition of the met of1.1292 (1.245 ±0.100), Std3 .607 ±0.050), Std2 1.210 (1.18)	Product / Produit Description Notes be was operational, showing calibration due, and the sample be was operational, showing calibration due, and the sample be was operational, showing calibration was verified using ca probe following service and calibration was verified using ca cation were completed, the as left reading of the probe was within specifications. Product / Produit Description Digital pH Sensor, PEEK, Convertible Notes be was operational, showing calibration due, and the sample led with standard cell solution. Following PM service, the pro- e probe following service and calibration was verified using ca cation were completed, the as left reading of the probe was 'within specifications. Product / Produit Description oo DR/2400 PORTABLE, NO POWER Product / Produit Description oo DR/2400 PORTABLE, NO POWER st follows: 420nm: Std1 0.650 (0.635 ±0.050), Std2 1.308 (1 1.866 (1.803 ±0.150); 560nm: Std1 0.641 (0.639 ±0.050), St s ±0.100), Std3 1.753 (1.724 ±0.150). Unit is performing with	Serial Number / No. de Série 1603440861 reading was 7.42 ph. The probe was be was calibrated. The calibration striffied pH standards. Their values w 7.69 ph. The probe has been restore Serial Number / No. de Série 000907430223 reading was 7.83 ph. The probe was be was calibrated. The calibration s striffied pH standards. Their values w 7.74 ph. The probe has been restore Serial Number / No. de Série 000907430223 reading was 7.83 ph. The probe was be was calibrated. The calibration s striffied pH standards. Their values w 7.74 ph. The probe has been restore Serial Number / No. de Série 020800000418 verified wavelength accuracy using D 2266 ±0.100), Std3 1.852 (1.826 ±0.122 1.282 (1.248 ±0.100), Std3 1.854 in specifications	Asset Tag Ait-205 as cleaned, inspected, the salt bridge w lope after PM was -54.7 mV/pH. The rere: 4.01 - 4.01, 7 - 7.06, 10 - 10.01 Ait d to normal operation, and its Asset Tag Raw Water ph as cleaned, inspected, the salt bridge w lope after PM was -54.1 mV/pH. The rere: 4.01 - 4.01, 7 - 7.04, 10 - 10.01 Ait d to normal operation, and its Asset Tag Raw Cleaned, inspected, the salt bridge w lope after PM was -54.1 mV/pH. The rere: 4.01 - 4.01, 7 - 7.04, 10 - 10.01 Ait d to normal operation, and its Asset Tag PR Check secondary standards Lot A90 (1.796 ±0.150); 610nm: Std1 0.604
Product / Produit DPD1R1 if ound, the condition of the problexed, and the probe was refile asurement performance of the asurement performance of the A service, calibration, and verifi rformance and condition were Product / Produit DPD1P1 found, the condition of the problexed, and the probe was refile asurement performance of the assurement performance of the A service, calibration, and verifi formance and condition were DPD1P1 formance and condition were Product / Produit 5940060 found the condition of the met v21. Verification results were at v21. v22 (1.245 ± 0.100), Std3 607 ± 0.050), Std2 1.210 (1.18) Product / Produit DP2700.01	Product / Produit Description Notes be was operational, showing calibration due, and the sample e with standard cell solution. Following PM service, the pro- e probe following service and calibration was verified using calibration were completed, the as left reading of the probe was within specifications. Product / Produit Description Digital pH Sensor, PEEK, Convertible Notes be was operational, showing calibration due, and the sample e probe following service and calibration due, and the sample e probe following service and calibration was verified using calibration were completed, the as left reading of the probe was 'within specifications. Product / Produit Description op DR/2400 PORTABLE, NO POWER Product / Produit Description oo DR/2400 PORTABLE, NO POWER 1.866 (1.803 ±0.150); 560nm: Std1 0.641 (0.639 ±0.050), Std3 1.753 (1.724 ±0.150). Unit is performing with service with service is pollowis; 420nm; Std1 0.650 (0.635 ±0.050), Std3 1.753 (1.724 ±0.150). Unit is performing with service is performed with service is perf	Serial Number / No. de Série 1603440861 Preading was 7.42 ph. The probe was be was calibrated. The calibration s prified pH standards. Their values w 7.69 ph. The probe has been restore Serial Number / No. de Série 000907430223 Preading was 7.83 ph. The probe was be was calibrated. The calibration s prified pH standards. Their values w 7.74 ph. The probe has been restore Serial Number / No. de Série 020800000418 Verified wavelength accuracy using D 21.282 (1.248 ±0.100), Std3 1.854 in specifications Serial Number / No. de Série 020800000418	Asset Tag Ait-205 As cleaned, inspected, the salt bridge w lope after PM was -54.7 mV/pH. The rere: 4.01 - 4.01, 7 - 7.06, 10 - 10.01 A d to normal operation, and its Asset Tag Raw Water ph as cleaned, inspected, the salt bridge w lope after PM was -54.1 mV/pH. The rere: 4.01 - 4.01, 7 - 7.04, 10 - 10.01 A d to normal operation, and its Asset Tag DR Check secondary standards Lot A90 (50); 520nm: Std1 0.645 (0.638 ±0.050 (1.796 ±0.150); 610nm: Std1 0.604

Product / Produit	Product / Produit Description	Serial Number / No. de Série	Asset Tag
HQ40D	HQ40D vv HQ40d MULTI PORTABLE METER 070700010812		211068
Notes As found, the condition of the meter was good. The meter was cleaned, inspected, and the batteries were replaced. Communication with probes and data storage in the meter was verified. The LDO cap was replaced and calibrated in air (slope 96.4%), as left reading 8.31 mg/l in air. The pH probe was calibrated and verified using pH buffer standards. The calibration results were: pH 4 - 4.01, pH 7 - 7.00, pH 10 - 10.01, and the slope was - 56.51. The measurement performance of the probe following service and calibration was verified using certified pH standards. The verification values were: 4.01 - 3.92, 7 - 6.83, 10 - 10.03 After PM service was completed, both the meter and the probe were restored to normal operation, and their performance and condition were within specifications.			
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
W&T Depolox chlorine analyzer:	inspected, verified calibration with Hach DR900 standard withir	n 5%	
Drodust / Droduit	Droduct / Broduit Deceription	Carial Number / No. do Cária	Accet Tag
9020000		160630000021	Asset Tag
3020000	Notes	1000000021	AII-203
performed. After PM service was operation and its performance an	completed, the as left reading of the probe was 8.32 ppm O2 d condition were within specifications.	in air and the gain factor was 0.83.	The probe has been restored to normal
Product / Produit	Product / Produit Description	Serial Number / No. de Série	Asset Tag
9020000	ASSY, PROBE, LDO MODEL 2, HACH	160630000026	Ait-204
	Notes		
Product / Produit	Product / Produit Description	Serial Number / No. de Série	Asset Tag
9020000	ASSY, PROBE, LDO MODEL 2, HACH	160630000028	Ait-202
As found, the condition of the probe was operational with replace cap message and the sample reading was 4.59 ppm O2. The probe was cleaned, inspected, and the sensor cap and gasket were replaced. A new sensor code was entered into the sc controller and was verified to be correct. An air calibration of the sensor was performed. After PM service was completed, the as left reading of the probe was 8.59 ppm O2 in air and the gain factor was 0.87. 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
5953000	rr POCKET COLORIMETER II, CHLORINE	09080E131923	154142
As found, the condition of the me sample cup, and sample cell reta calibration was restored, and way secondary standards results as for restored to normal operation, and	Notes ter was good. The exterior, sample compartment, and optics w ining springs. The batteries were replaced, and the battery te relength accuracy was verified using PCII SpecCheck Seconda ollows: Std1: 0.22 (0.24 +/- 0.09) Std2: 0.91 (0.93 +/-0.10), St I performance and condition were within specifications.	ere cleaned. The meter was inspec minals were inspected. The operati ary Standard. (Parameter of PCII) L d3: 1.64 (1.71 +/- 0.14). After servic	cted, including the interference filter, on was tested, the factory default ot A9288 oct21. Verification of se was completed, the meter was
Product / Produit	Product / Produit Description	Serial Number / No. de Sário	Ascet Tag
4677000	00 POCKET COLOR. CHLORINE REPL.INST	OCWA-XXX839	
	Notes	1	
As found, the condition of the me sample cup, and sample cell reta calibration was restored, and way secondary standards results as fr restored to normal operation, and	ter was good. The exterior, sample compartment, and optics w ining springs. The batteries were replaced, and the battery te velength accuracy was verified using PCII SpecCheck Seconda ollows: Std1: 0.21 (0.22 +/- 0.09) Std2: 0.87 (0.86 +/-0.10), St performance and condition were within specifications	ere cleaned. The meter was inspect rminals were inspected. The operati ary Standard. (Parameter of PCII) L d3: 1.58 (1.58 +/- 0.14). After servic	cted, including the interference filter, on was tested, the factory default ot A9288 oct21. Verification of se was completed, the meter was

Product / Produit 4677000	Product / Produit Description 00 POCKET COLOR. CHLORINE REPL.INST	Serial Number / No. de Série OCWA-XXX35484	Asset Tag 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, 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 A9288 oct21. Verification of secondary standards results as follows: Std1: 0.21 (0.22 +/- 0.09) Std2: 0.84 (0.86 +/-0.10), Std3: 1.53 (1.58 +/- 0.14). After service was completed, the meter was restored to normal operation, and performance and condition were within specifications.					
Product / Produit	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 A9288 oct21. Verification of secondary standards results as follows: Std1: 0.24 (0.24 +/- 0.09) Std2: 0.91 (0.93 +/-0.10) , Std3: 1.64 (1.71 +/- 0.14). After service was completed, the meter was restored to normal operation, and performance and condition were within specifications.					
Product / Produit		Serial Number / No. de Série	Asset Tag		
5870000	IT 00 POCKET CLRMTR II CHLORINE SYSTEM	16070E305678			
restored to normal operation, and	a performance and condition were 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	<u> </u>			
Product / Produit	Product / Produit Description	Serial Number / No. de Série	Asset Tag		
	Notes				





Verification report flowmeter

Plant operator	WWTP
Device information	
Location 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 1541d10h24m14s	Date/time 30.07.20 12:50
Verification ID 5	
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

30.07.2020

Date

Inspectors signature

Operator's signature

Verification report



Verification report flowmeter

Serial number: KC1E9919000

Verification detailed results Verification ID 5

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





Verification report flowmeter

Plant operator	Wiarton WWTP	
Device information		
Location Wiarton 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	Date/time	

1541d02h41m30s	30.07.20 12:43
Verification ID 5	
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

20.07.2020

Q.

Date

Inspectors signature

Operator's signature

Verification report



Verification report flowmeter

Serial number: KC1E9819000

Verification detailed results Verification ID 5

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





Verification report flowmeter

Plant operator	Wiarton WWTP	
Device information		
Location Wiarton WWTP	Device tag FIT-301	
Module name Promag L	Nominal diameter DN100 / 4"	
Device name Promag 400	Order code 5L4C1H-40D6/0	
Serial number KC1EF119000	Firmware version 01.05.05	
Calibration		
Calibration factor 1.3799	Zero point -4	
Verification information		

Operating time 1541d19h19m32s	Date/time 30.07.20 12:33
Verification ID 5	
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

30.07.2020

Date

Inspectors signature

Operator's signature

Verification report



Verification report flowmeter

Serial number: KC1EF119000

Verification detailed results Verification ID 5

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

	151 Superior Blvd, Unit #13 Mississauga, ON, L5T 2L1. www.Indus-Control.com	VERIFICATION REPORT- PARSHALL FLUME OPEN CHANNEL FLOW MEASUREMENT			
Customer Name:	OCWA-Grey Bruce Hub			Site/Plant Address:	59 Park St, Ripley
Plant Name:	STP			onen lant Address.	Ontrario N0G 2R0
	Device Information			<u>Se</u>	ervice Information
Make:	Milltronics			Date:	July 30, 2020
Model:	Multiranger Plus			Report No:	001115-2007-25
Order Code:	N/A			JOD NO:	CO1115-2007
	0500023466				Flow Dataila
Tag:	NA Final Effluent Discharge			1.1	
Job Location:	Final Effluent Discharge			Unit:	m3/n
last Deeding		AQUEET		Flow Range:	4.20 mA
TOTALIZED (m2)	7803786 8	7803843		4 mA Sot Point	0 m3/b
FLOW (m2/b)	2100	2000		4 IIIA Set Foint	501.0 m3/b
	2100	2000		20 MA Sel Point	591.9113/11
	Maintenance Checklist			Ren	narks
Visual Inspection:	✓ OK	□ NOT OK			
Electrical Inspection:	✓ OK	□ NOT OK			
		Programming Para	meter of Instru	iment	
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
		otrumont Toot Info	rmation and E	Populto	
Input			Flow on Papel Motor	LILIT Mossured	Deviation
(%)	Calculated Flow(m3/h)	(mA)	Display	Output (mA)	(m3/h)
()		· · · ·	(m3/h)		, , , , , , , , , , , , , , , , , , ,
0	0.00	4.00	0.00	3.99	0.00
25	147.98	8.00	147.59	7.99	0.00
50	295.95	12.00	295.47	11.98	0.00
75	443.93	16.00	443.91	15.96	0.00
100	591.90	20.00	591.25	20.00	0.01
	Information	of Tools used for	Verification of	the Instruments	
Device Description:	Manufacture	ar		Model	Serial No:
Electrical Multimeter	Fluke		179		As per Provided
					-
Verification Test Result:	Passed			Fail	Not Verified
Overall Remarks:	Program parameters verified				
Service Technician :	Sagar patel			Stamp/Signature	R/
Printed Date:	July 30, 2020				9
			End of Repo	rt	Version: 19-12



Appendix D Community Complaints

Facility ID:	5620		
Facility Name:	Wiarton Wastewater Collection System		
Address:			
City:	Wiarton		
Name of Complainant:			
Address:	685 Frank Street, Wiarton		
Phone Number:			
NOTE: If there were mu the number and details i	ltiple complaints, provide the name of the person who filed the initial complaint and note n the "Description" field below		
Date of Complaint:	January 17, 2020		
Time of Complaint:	14:00		
<u>Nature of Complaint</u>			
Noise	Water Supply Taste/ Colour Water Pressure/ No Water		
Visual	Service Problem Basement Flooding		
Odour Sludge Related			
Other: . Sewer lateral backup /2 nd sewer lateral			
Description: sewer late	eral block- up at 685 Frank Street,, Wiarton. Inspect 2 nd sewer lateral to property		
Action taken in response: Cleared sewer lateral blockage with mechanical auger and inspected with sewer camera. Sewer lateral was blocked with wipes.			
Was the source of the problem identified?: X Yes No			
Was the source an OCWA facility/activity?: Yes X No			
If "Yes", please describe:			
If any remedial action is required, complete an action plan form.			
Investigating Operator: Dave Noble			

Facility ID:	5620			
Facility Name:	Wiarton Wastewater Collection System			
Address:				
City:	Wiarton			
Name of Complainant:				
Address:	430 Brown Street, Wiarton			
Phone Number:				
NOTE: If there were mu the number and details i	ltiple complaints, provide the name of the person who filed the initial complaint and note n the "Description" field below			
Date of Complaint:	February 17, 2020			
Time of Complaint:	10:15 AM			
<u>Nature of Complaint</u>				
Noise	Water Supply Taste/ Colour Water Pressure/ No Water			
Visual	Service Problem Basement Flooding			
Odour	Sludge Related			
Other: Sewer lat	eral backup			
Responded to 430 Brow	n Street sewer lateral blockage call			
Action taken in response: Video inspected lateral from inside house to collection main. Cleared soft blockage. Exposed clean-out on front lawn under shrubs and video recorded from clean out to collection main. At least 2 sections show standing water due to elevation loss (dip) 430 Brown. Lateral flowing again				
Was the source of the problem identified?: X Yes No				
Was the source an OCWA facility/activity?: Yes X No				
If "Yes", please describe:				
If any remedial action is	required, complete an action plan form.			

Investigating Operator: Dave Noble

	5620				
Facility ID:	Wiarton Waste Water Collection				
Facility Name:	897 Bawiew Street				
Address:	Wiaton				
City:	Vialton				
Name of Complainant:	Joidall				
Address:	430 Brown Street				
Phone Number:	519-378-6102				
NOTE: If there were multiple complaints, provide the name of the person who filed the initial complaint and note the number and details in the "Description" field below.					
Date of Complaint:	February 26th 2020				
Time of Complaint:	0700				
Nature of Complaint					
Noise	Water Supply Taste/ Colour Water Pressure/ No Water				
Visual	Service Problem X Basement Flooding				
Odour	Sludge Related				
Other:	·				
Description:					
Sanitary Lateral B	lockage, backing up in floor drain in basement.				
Action taken in respon	ise:				
Camera lateral, pu	sh flat snake, auger with power auger, camera after completed.				
Service has a dip	in the lateral where PVC connects to what appears to be No				
Corrode. Lateral h	as flow through now, will camera at the end of the week to verify				
110 .					
Was the source of the	problem identified?: Yes No				
Was the source on OCWA facility/activity?					
If "Ves" please descri	he:				
Municipal Sewer Collection System					
If any remedial action i					
Investigating Operator. Benjamin Madill					
Investigating Operato	s required, complete an action plan form. r: Benjamin Madill				
Investigating Operato	s required, complete an action plan form. r: Benjamin Madill				
Investigating Operato	r: Benjamin Madill				
Investigating Operato	s required, complete an action plan form. r: Benjamin Madill				
Investigating Operato	r required, complete an action plan form. r: Benjamin Madill				
Investigating Operato	s required, complete an action plan form. r: Benjamin Madill				
S:\Forms (Generic)\FORM_C	s required, complete an action plan form. r: Benjamin Madill ommunityComplaint.docx				

Facility ID:	5620		
Facility Name:	Wiarton Wastewater Collection System		
Address:			
City:	Wiarton		
Name of Complainant:	Trudy McCarthy		
Address:	355 Mary Street, Wiarton		
Phone Number:			
NOTE: If there were mu the number and details it	ltiple complaints, provide the name of the person who filed the initial complaint and note n the "Description" field below		
Date of Complaint:	October 16, 2020		
Time of Complaint:	14:13		
Nature of Complaint			
Noise	Water Supply Taste/ Colour Water Pressure/ No Water		
Visual	Service Problem Basement Flooding		
Odour	Sludge Related		
Other: . Sewer late	eral backup		
Description: sewer backing up at 355 Mary Street, Wiarton			
Action taken in response: Please see notes below			
Was the source of the problem identified?: X Yes No			
Was the source an OCWA facility/activity?: Yes X No			
If "Yes", please describe: Please see notes below			

If any remedial action is required, complete an action plan form.

Investigating Operator: Dan Caesar

14:13-Call from TSBP 519.534.1610 who informs of sewer possibly backing up at 355 Mary Street, Wiarton

14:17-Confirm location on Wiarton Sanitary Sewer Collection System Map and find locate drawings on 355 Mary Street Property.

14:18-Dispatch Dan Caesar to investigate. Asked that he check sewer manhole on intersection of Claude and Mary to confirm flow and then check 355 Mary Street Property sewer clean out

14:23-Call Paul Bridge from Bridge Construction to ask if sewer lateral location was changed during construction project.

14:28-Call Evan Hellyer from Bridge Construction and he confirmed that sewer clean out location should remain the same at 355 Mary Street.

S:\15 SOUTH BRUCE PENINSULA (Town of)\01 OPERATIONAL\1-12 Community Complaints\Wiarton WPCP\2020\October 16 2020_355 Mary Street sewer back up.docx

14:33-Call Trudy McCarthy 226 568 2024 to confirm the complaint relayed from the Town regarding sewer backing up to the property situated at 355 Mary Street. I informed that OCWA staff were dispatched to 355 Mary Street to investigate. Trudy said that she was not present at the house at this time. I told her that I would call to confirm our findings.

14:40-Call Dan Caesar to confirm that location of sewer cleanout should be the same as shown on the locate sheet. He said that clean out was already located and opened and that he could see water at the top of the cleanout. He confirmed that he would attempt to push in the manual sewer auger.

15:13-Call Dan Caesar for update. He confirms that they were able to re-establish flow as water has now gone down in the clean-out.

16:30-Dan confirms that a soft blockage was completely pushed through the lateral following a few application of the manual sewer auger. Lateral was flushed with water and video inspected. No evidence of pipe offset or dip in the lateral found.

16:35 call Trudy McCarthy to inform that the sewer lateral is now free of blockage. Confirmed that no offset or dip in the pipe was found. She said that her husband told her that there was a lot of toilet paper rolls causing the blockage. I told her that we refer to those as soft blockages. I asked if they use flushable wipes and she said yes since recently. I asked that they not flush "any flushable wipes" down the toilet . I told her that in my opinion, no flushable wipes should be flushed down toilets.
Ontario Clean Water Agency Community Complaints

Facility ID:	5620			
Facility Name:	Wiarton Wastewater Collection System			
Address:				
City:	Wiarton			
Name of Complainant:	Trudy McCarthy			
Address:	355 Mary Street, Wiarton			
Phone Number:				
NOTE: If there were mu the number and details i	ltiple complaints, provide the name of the person who filed the initial complaint and note n the "Description" field below			
Date of Complaint:	November 24, 2020			
Time of Complaint:	22:30			
Nature of Complaint				
Noise	Water Supply Taste/ Colour Water Pressure/ No Water			
Visual	Service Problem Basement Flooding			
Odour	Sludge Related			
Other: . Sewer lat	eral backup			
Description: sewer bac	king up at 355 Mary Street, Wiarton			
Action taken in response: Cleared sewer lateral blockage with mechanical auger and inspected with sewer camera. Sewer lateral was blocked with wipes.				
Was the source of the problem identified?: x Yes No				
Was the source an OCWA facility/activity?: Yes X No				
If "Yes", please describe:				
If any remedial action is required, complete an action plan form.				

Investigating Operator: Ben Madill and Billy Shearer

Ontario Clean Water Agency Community Complaints

Facility ID:	5620			
Facility Name:	Wiarton Wastewater Collection System			
Address:				
City:	Wiarton			
Name of Complainant:	George			
Address:	561 Gould, Wiarton			
Phone Number:	519 379 9226			
NOTE: If there were mu the number and details i	ltiple complaints, provide the name of the person who filed the initial complaint and note n the "Description" field below			
Date of Complaint:	December 7, 2020			
Time of Complaint:	11:33			
Nature of Complaint				
Noise Visual Odour Other: Sewer lat	Water Supply Taste/ Colour Water Pressure/ No Water Service Problem Basement Flooding Sludge Related Heral backup			
 11:33 AM - I called George 519 379 9226 from 561 Gould and he explained that the plumbing from the right side of the building was blocked and that the plumbing from the left side of the building was flowing with gargling noise. He mentioned that he pushed a cable approx. 25 feet from a clean out inside the house. I asked if he called a plumber and he said that he would need permission from the building owner. 13:14 PM - I called George 519 379 9226 from 561 Gould and he explained that he was unable to reach the building owner. 				
Action taken in response: 13:30 PM – We pushed the Town's sewer camera through a sewer clean out situated in a crawl space at 561 Gould Street. Blockage was located approximately 12 feet from the front wall of the house. I mentioned that they had to call a plumber as the blockage was located on the private side of the property.				
Was the source of the problem identified?: X Yes No				
Was the source an OCWA facility/activity?: Yes X No				
If "Yes", please describ	e:			
If any remedial action is required, complete an action plan form.				

Investigating Operator: Dan Caesar / Leo-Paul Frigault



Appendix E Effluent By-Pass Reports

Ontario Clean Water Agency Environmental Incident Report

Facility ID:	5620	EIncidentRep ort
Facility Name:	Wiarton Wastewater Treatment Lagoon	
Address:	c/o Southampton WPCP	
City:	Southampton	
Province:	Ontario	
Postal Code:	NOH 2LO	
Date of Occurrence:	01/15/2020	
Time of Occurrence:	12:57:00 PM	
Nature of the Incident		
• Level 1 Contingency	y O Level 2 Contingency O Level 3 Contingency Click here To Show	the Definitions
Incident affected:	ir 🛛 Water 🗌 Land 🗌 Nothing	
What was discharged o Chlorine Sodium Hypochlori Calcium Chloride Aluminum Compou Arsenic Fluoride	r emitted? Oil/Diesel/Gas te Odours nds (Specify in Other) Untreated or partly treated sewage Odours Water Iron Coagulants	
	Other:	
If this was a discharge, sp	ill or emission	
If a liquid, approximate	ely what quantity was released?: <u>10000</u> Litres	
If a gas, approximately	what quantity was released?:	
If a solid, approximate	ly what quantity was released?: Kg	

What was the source of release?:

Power outage caused UV failure. Filtered lagoon effluent was released without UV treatment.

Where did the release go?:

Through the regular outfall to Colpoy's Bay.

If it entered a watercourse: \bigcirc Yes \bigcirc No

If it went off site: \bigcirc Yes \bigcirc No

Duration of the release?: 10 minutes

Is the release now stopped?: \bigcirc Yes \bigcirc No

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

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

Action(s) Taken

What actions were taken to control the incident?

Effluent discharge was shut down, UV system was restarted and alarms were acknowledged. Samples were collected according to the ECA.

What actions have been taken to remediate the incident?

Was this a reportable spill or discharge?: \bigcirc Yes \bigcirc No

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

14:24 - Reported to Blake at Spills Action Centre on January 15, 2020 was issued reference number #5263-BKUQNU

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

If "Yes", which office/location and who was the contact?: 14:35 - Shayne Finlay at MOE Owen Sound was notified on January 15, 2020.

Was it reported to MOE SAC?: \bullet Yes \bigcirc No

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

14:24 - Reported to Blake at Spills Action Centre on January 15, 2020 was issued reference number #5263-BKUQNU

Was it reported to Municipality?: \bigcirc Yes \bigcirc No

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

14:45 - Lara Widdifield at Town of South Bruce Peninsula on January 15, 2020

External Assistance/Involvement

Was corporate or area office assistance requested?: \bigcirc Yes $lacksquare$ No					
If "Yes", was it received?: \bigcirc Yes \bigcirc No					
Was external emergency assistance requested?: \bigcirc Yes $ullet$ No					
If "Yes", from who?: Fire Department Ambulance or Hospital Police Hote Canutec Coast Guard Coast Coa					
Other:					
Was there any media involvment?: \bigcirc Yes $ullet$ No					
If "Yes", who?:					
Was the public affected?: \bigcirc Yes $igodot$ No					
If "Yes", how?:					
Updated By: Karla Young 05/11/2020 03:35:47 PM					

Comments:

Bypass Incident 5263-BKUQNU

January 15, 2020

-UV system failure at 12:57PM, 10 minutes bypass of ~10000 Litres

-shut down effluent, reset UV system, alarms acknowledged, once UV system was stabilized the effluent discharge was re-opened

-14:15 Leo-Paul Frigault OCWA Senior Operations Manager Grey Bruce Hub was notified

-14:24 SAC contacted talked to Blake issued reference number #5263-BKUQNU

-14:35 Shayne Finlay at Owen Sound MECP was notified

14:37-left voicemail at MOH Owen Sound Office

-14:41 Lara Widdifield Public Works Manager at Town of South Bruce Peninsula was notified

-15:32-Jos Moerman Grey Bruce Health Unit returned call-no further actions required

-Adverse Report faxed out January 15, 2020:

16:53-Town of South Bruce Peninsula

16:54-SAC Office

16:56-Owen Sound MECP Office

16:57-Owen Sound MOH Office

16:58-Enviroment Canada

-16:48 email informing of the Environmental Incident was sent out to MECP, MOH, Town of South Bruce Peninsula, Environment Canada, OCWA

-January 17, 2020 Grab Sample Analysis received from SGS Lab

-January 23, 2020 Composite Sample Analysis received from SGS Lab

Ontario Clean Water Agency Environmental Incident Report

Facility ID:	5620	EIncidentRep ort
Facility Name:	Wiarton Wastewater Treatment Lagoon	
Address:	c/o Southampton WPCP	_
City:	Southampton	
Province:	Ontario	
Postal Code:	NOH 2LO	
Date of Occurrence:	03/20/2020	
Time of Occurrence:	12:11:19 PM	
Nature of the Incident		
• Level 1 Contingence	y \bigcirc Level 2 Contingency \bigcirc Level 3 Contingency <i>Click here To Show</i>	the Definitions
Incident affected:	ir 🛛 Water 🗌 Land 🗌 Nothing	
What was discharged of Chlorine Sodium Hypochlori Calcium Chloride Aluminum Compou Arsenic Fluoride	or emitted? Oil/Diesel/Gas te Untreated or partly treated sewage Odours nds (Specify in Other) Water Iron Coagulants Other: UV Treatment Bypass	
If this was a discharge, sp	ill or emission	
If a liquid, approximate	ely what quantity was released?: <u>92670</u> Litres	
If a gas, approximately	what quantity was released?:	
If a solid, approximate	ly what quantity was released?: Kg	
What was the source of	f release?:	
Bypass of second	lary effluent due to power loss.	

Where did the release go?:

Colpoy's Bay

If it entered a watercourse: \bullet Yes \bigcirc No

If it went off site: \bigcirc Yes \bigcirc No

Duration of the release?: 40 minutes

Is the release now stopped?: \bigcirc Yes \bigcirc No

Was there any damage? (i.e. property and/or environmental): \bigcirc Yes \bigcirc N/A

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

Action(s) Taken

What actions were taken to control the incident?

Incident # 8336-BMUVTP - Due to a power bump at the facility, the UV disinfection unit was offline for approximately 40 minutes. This caused a bypass of the UV treatment. Power was reset immediately.

What actions have been taken to remediate the incident?



Was this a reportable spill or discharge?: \bullet Yes \bigcirc No

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

1920hrs to MECP voicemail, 1922hrs to Barbara Z, (Owen Sound MOH)

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

If "Yes", which office/location and who was the contact?:

Was it reported to MOE SAC?: \bigcirc Yes \bigcirc No

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

1910hrs to Renee Belanger

Was it reported to Municipality?: \bigcirc Yes \bigcirc No

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

1927hrs to Municipal Office voicemail

External Assistance/Involvement

Was corporate or area office assistance requested?: \bigcirc Yes $ullet$ No					
If "Yes", was it received?: \bigcirc Yes \bigcirc No					
Was external emergency assistance requested?: \bigcirc Yes $ullet$ No					
If "Yes", from who?: Fire Department Equipment Suppliers Canutec Coast Guard Police Municipality					
Other:					
Was there any media involvment?: \bigcirc Yes $ullet$ No					
If "Yes", who?:					
Was the public affected?: \bigcirc Yes $lacksquare$ No					
If "Yes", how?:					
Updated By: David Jorge 03/22/2020 05:41:59 PM					

Comments:

Ontario Clean Water Agency Environmental Incident Report

Faci	lity ID:	5620	EIncidentRep ort
Faci	lity Name:	Wiarton Wastewater Treatment Lagoon	_
Add	ress:	c/o Southampton WPCP	-
City	:	Southampton	
Prov	vince:	Ontario	
Post	al Code:	NOH 2LO	
Date	e of Occurrence:	05/03/2020	
Time	e of Occurrence:	11:00:00 PM	
<u>Nature o</u>	of the Incident		
• L	evel 1 Contingency	○ Level 2 Contingency ○ Level 3 Contingency Click here To Show t	he Definitions
Incid	lent affected: 🗌 Air	Water \Box Land \Box Nothing	
Wha C S C A A F	t was discharged or 'hlorine odium Hypochlorite Calcium Chloride Iluminum Compound Iluminum Lompound	emitted? Oil/Diesel/Gas Untreated or partly treated sewage Odours ds (Specify in Other) Iron Coagulants	
		Other: <u>bypass of UV disinfection</u>	
<u>If this wa</u>	as a discharge, spil	<u>l or emission</u>	
If a l	iquid, approximatel	y what quantity was released?: <u>65600</u> Litres	
If a g	gas, approximately v	what quantity was released?:	
If a s	solid, approximately	what quantity was released?: Kg	
Wha	t was the source of 1	release?:	
	Power outage caus	ed UV failure. Filtered lagoon effluent was released without UV treatmen	ıt.

Where did the release go?:

Through the regular outfall to Colpoy's Bay

If it entered a watercourse: \bigcirc Yes \bigcirc No

If it went off site: \bigcirc Yes \bigcirc No

Duration of the release?: 45 minutes

Is the release now stopped?: \bigcirc Yes \bigcirc No

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

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

Action(s) Taken

What actions were taken to control the incident?

Reset the UV system. Took samples according to ECA.

What actions have been taken to remediate the incident?

Was this a reportable spill or discharge?: \bigcirc Yes \bigcirc No

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

 $00{:}35$ - Reported to Aaron Richards at Spills Action Centre on May 4, 2020 issued reference number $\#3484{-}BPA7FE$

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

If "Yes", which office/location and who was the contact?: Owen Sound Regional Office-left voicemail at 00:45 on May 4, 2020

Was it reported to MOE SAC?: \bigcirc Yes \bigcirc No

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

00:35 - Reported to Aaron Richards at Spills Action Centre on May 4, 2020 issued reference number #3484-BPA7FE

Was it reported to Municipality?: \bigcirc Yes \bigcirc No

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

8:05 Lara Widdifield at Town of South Bruce Peninsula on May 4, 2020

External Assistance/Involvement

Was corporate or area office assistance requested?: \bigcirc Yes $ullet$ No					
If "Yes", was it received?: \bigcirc Yes \bigcirc No					
Was external emergency assistance requested?: \bigcirc Yes $ullet$ No					
If "Yes", from who?: Fire Department Ambulance or Hospital MOE Coast Guard Police Municipality					
Other:					
Was there any media involvment?: \bigcirc Yes $igodoldsymbol{ imes}$ No					
If "Yes", who?:					
Was the public affected?: \bigcirc Yes $igodot$ No					
If "Yes", how?:					
Updated By: Karla Young 05/05/2020 12:17:36 PM					

Comments:

Bypass Incident #3484-BPA7FE

May 3, 2020

-UV system failure 45 minute bypass of 65600 Litres

-reset UV system, working normally after that

-took samples-May 3, 2020 11:45 Grab sample taken, May 4, 2020 17:00 Composite Sample taken May 4, 2020: 00:35 SAC centre notified-talked to Aaron Richards issued incident #3484-BPA7FE 00:45-left voicemail at MECP Owen Sound Regional Office 00:48-left voicemail at MOH Owen Sound Office

Adverse Report sent out May 4, 2020:

7:48-Town of South Bruce Peninsula

7:52-Spills Action Centre

8:02 MOH Owen Sound Office

8:03 MECP Owen Sound Office

8:05-notified Lara Widdifield at Town of South Bruce Peninsula

8:06-notified Leo-Paul Frigault, OCWA Senior Operations Manager, Grey-Bruce Hub

8:08-notified Karla Young, OCWA Process Compliance Technician, Grey-Bruce Hub May 5, 2020

11:29-Karla Young PCT talked to Bob Graham MECP and informed him of the bypass

-advised to follow the ECA requirements for a bypass and he will review the report from SAC and ensure we followed procedure and will call if any other questions

May 12, 2020-Received final lab analysis on samples collected - results below the objectives and limits set out in the ECA #6045-ARDJS7

Ontario Clean Water Agency Environmental Incident Report

Faci	lity ID:	5620	EIncidentRep ort
Faci	lity Name:	Wiarton Wastewater Treatment Lagoon	_
Add	ress:	c/o Southampton WPCP	-
City	:	Southampton	
Prov	vince:	Ontario	
Post	al Code:	NOH 2LO	
Date	e of Occurrence:	05/20/2020	
Time	e of Occurrence:	05:40:00 AM	
<u>Nature o</u>	of the Incident		
• L	evel 1 Contingency	○ Level 2 Contingency ○ Level 3 Contingency Click here To Show t	the Definitions
Incid	lent affected: 🗌 Air	: \square Water \square Land \square Nothing	
Wha C S C A A F	t was discharged or hlorine odium Hypochlorite calcium Chloride Aluminum Compound Arsenic luoride	emitted? Oil/Diesel/Gas Untreated or partly treated sewage Odours ds (Specify in Other) Water Iron Coagulants Other: <u>bypass of UV disinfection</u>	
If this wa	as a discharge, spil	l or emission	
If a l	liquid, approximatel	y what quantity was released?: <u>40340</u> Litres	
If a g	gas, approximately v	what quantity was released?:	
If a s	solid, approximately	what quantity was released?: Kg	
Wha	it was the source of 1	release?:	
	Power outage caus	ed UV failure. Filtered lagoon effluent was released without UV treatmen	ıt.

Where did the release go?:

Through the regular outfall to Colpoy's Bay

If it entered a watercourse: \bigcirc Yes \bigcirc No

If it went off site: \bigcirc Yes \bigcirc No

Duration of the release?: 45 minutes

Is the release now stopped?: \bullet Yes \bigcirc No

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

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

Action(s) Taken

What actions were taken to control the incident?

Reset the UV system. Took samples according to ECA.

What actions have been taken to remediate the incident?

Was this a reportable spill or discharge?: \bigcirc Yes \bigcirc No

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

06:53 - was reported to Aaron Richards at Spills Action Centre on May 20, 2020 and was issued reference number #4876-BPSESM

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

If "Yes", which office/location and who was the contact?: 07:00 - Owen Sound Office; 09:05 PCT left voicemail with local water inspector Bob Graham

Was it reported to MOE SAC?: \bigcirc Yes \bigcirc No

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

06:53 - was reported to Aaron Richards at Spills Action Centre on May 20, 2020 and was issued reference number #4876-BPSESM

Was it reported to Municipality?: \bigcirc Yes \bigcirc No

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

07:17 - left voicemail with Town of South Bruce Peninsula

External Assistance/Involvement

Was corporate or area office assistance requested?: \bigcirc Yes $ullet$ No						
If "Yes", was it received?: \bigcirc Yes \bigcirc No	If "Yes", was it received?: \bigcirc Yes \bigcirc No					
Was external emergency assistance requested?: \bigcirc Yes $igodoldsymbol{ imes}$ No						
If "Yes", from who?: Fire Department Ambulance or Hospital Police MOE Municipality	Canutec Coast Guard					
Other:						
Was there any media involvment?: \bigcirc Yes $igodoldsymbol{No}$						
If "Yes", who?:						
Was the public affected?: \bigcirc Yes \bigcirc No						
If "Yes", how?:						
Updated By: Karla Young 06/01/2020 12:06:14 PM						

Comments:

out in the ECA #6045-ARDJS7

Bypass Incident #4876-BPSESM May 20, 2020 -UV system failure due to power bump-45 minute bypass of 40340 Litres of filtered lagoon effluent -reset UV sytem, working normally after that -took samples-May 20, 2020-grab sample taken and Composite sampler started May 20, 2020 notifications: 06:53 SAC notified-talked to Aaron Richards and issued reference number #4876-BPSESM 07:00 Owen Sound MECP 07:00 OCWA Manager of Operations Leo-Paul Frigault informed 07:06 Lynda at Grey Bruce Health Unit 07:17 voicemail left with Town of South Bruce Peninsula 07:50 OCWA PCT Karla Young informed May 20, 2020 Adverse Report faxed out: 07:37 Town of South Bruce Peninsula 07:38 Grey Bruce Health Unit 07:39 Owen Sound MOE 07:40 Spills Action Centre May 20, 2020 9:05 OCWA PCT left voicemail with Bob Graham MECP Water Inspector to inform him of bypass and ask about any recommendations 10:18 OCWA PCT received email from Bob Graham MECP advising of the ECA sampling requirements and advised that we update our reporting form to reflect the ECA requirements 10:19 OCWA PCT forwarded Bob Graham's email to operations staff advising of the ECA sampling requirements May 21, 2020 Adverse Report form revised, as per MECP recommendation, to include all parameters required to be sampled in the ECA June 1, 2020-Received final lab analysis on samples collected - results below the objectives and limits set

From:	Karla Young
To:	<u>"Mark.Smith@ontario.ca";</u> "Graham, Robert G. (MECP)"
Cc:	Leo-Paul Frigault; Karen Lorente; Camille Leung; Michelle Neal
Subject:	2020 Q1 - Bypass/Overflow Event Summary - Wiarton WWTP (#110000819) - Town of South Bruce Peninsula
Date:	May-06-20 2:55:00 PM

Good Afternoon,

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

Dete	Time		Duration	Volume	e Treatment	Samples	Reason for	Impact of	Mitigation
Date	Start	End	HH:MM	(M ³)	Bypassed	Collected	Bypass	Event	
2020/01/15	12:57	13:07	00:10	10	UV disinfection	Yes	Power Failure causing UV Failure	Filter treated effluent released to effluent outfall	n/a
2020/03/19	17:30	18:10	00:40	92.67	UV disinfection	Yes	Power Failure causing UV 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.

Data	Tir	ne	Duration	Volume	Decoiver	Disinfection	Samples	Reason	Impact	Mitigation:
Date	Start	End	HH:MM	HH:MM (M ³)		Overflow	Conected	Overflow	of Event	Planned
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** <u>kyoung@ocwa.com</u> (519) 374 - 5782

From:	Karla Young
To:	"Mark.Smith@ontario.ca"; "Graham, Robert G. (MECP)"
Cc:	Leo-Paul Frigault; Michelle Neal; Karen Lorente
Subject:	2020 Q2 - Bypass/Overflow Event Summary - Wiarton WWTP (110000819) - Town of South Bruce Peninsula
Date:	August-06-20 2:54:00 PM
Attachments:	Report CA13126-MAY20(2).pdf
	Report CA13747-MAY20.pdf
	Report CA14798-MAY20.pdf
	Report CA13747-MAY20.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. Attached are the laboratory results from the two bypass events.

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.

Data	Ti	me	Duration Volume		Treatment	Samples	Reason for	Impact of	Mitigation
Date	Start End		HH:MM	HH:MM (M ³)		Conected	Bypass	Event	
2020/05/04	11:00	11:45	00:45	65.6	UV disinfection	Yes	Power Failure causing UV Failure	Filter treated effluent released to effluent outfall	n/a
2020/05/20	05:40	06:25	00:45	40.34	UV disinfection	Yes	Power Failure causing UV 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.

Data	Tir	ne	Duration	Volume	Decoiver	Disinfection	Samples	Reason	Impact	Mitigation:
Date	Start End		HH:MM	(M ³)	Keceiver	Overflow	Conecteu	Overflow	of Event	Planned
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** <u>kyoung@ocwa.com</u> (519) 374 - 5782

From:	Karla Young
To:	<u>"Graham, Robert G. (MECP)";</u> "Mark.Smith@ontario.ca"
Cc:	Leo-Paul Frigault; Michelle Neal; Karen Lorente; Melissa Cortes
Subject:	2020 Q3 - Bypass/Overflow Event Summary - Wiarton WWTP (110000819) - Town of South Bruce Peninsula
Date:	November-13-20 2:21:00 PM

Good Afternoon,

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

Dete	Ti	me	Duration	Volume	Treatment	Samples	Reason for	Impact of Event	Mitigation
Date	Start	End	HH:MM	(M ³)	Bypassed	Conected	Bypass		
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.

Data	Tiı	ne	Duration	Volume	Decoiver	Disinfection	Samples	Reason	Impact	Mitigation:
Date	Start End		HH:MM	(M ³)	Keceiver	Overflow	Conected	Overflow	of Event	Planned
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

From:	Karla Young
To:	"Graham, Robert G. (MECP)"; "Mark.Smith@ontario.ca"
Cc:	Leo-Paul Frigault; Michelle Neal; Karen Lorente; Melissa Cortes
Subject:	2020 Q4 - Bypass/Overflow Event Summary - Wiarton WWTP (110000819) - Town of South Bruce Peninsula
Date:	February-12-21 1:23:00 PM

Good Afternoon,

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

Data	Ti	me	Duration	Volume	Treatment	Samples	Reason for	Impact of Event	Mitigation
Date	Start End		HH:MM	(M ³)	Bypassed	Collected	Bypass		
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.

Data	Tiı	ne	Duration	Volume	Decoiver	Disinfection	Samples	Reason	Impact	Mitigation:
Date	Start End		HH:MM	(M ³)	Keceiver	Overflow	Conected	Overflow	of Event	Planned
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



Appendix F Septage Laboratory Results

(Addinan	Mooress	Telephor Fax:	Email:		Station Acronym	Sept							empler i	Station Action Station Action Station Action Station Action Station St			
							le:			Station Numbar (Short Name)	Sept							Name:	ckensd Wasi SO - Sanitan			
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erworks/Project # 1100C lity Name Wiarton W	ан 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		fication of Regulation under which th	equested Turnaround Time:	rd to: Megan Edney	ampton, ON 2L0	74-5782	ev2@iocwa.com	. Sample	Sample Location Name	Septage - Holding Tank							Deur	ntents, Dis - Disintection, Down - Downstre iosolids pri super, Bss - Biosolids sec super ited Sludge, WAS - Waste Activated Sludge Overflow			•
0819 WTP		ONI	e sample(s) fall: No Requirement		Data Transfer Co	18 Caroline Stres Southampton, Oh N0H 2L0	519-374-5782	mednev2@ocwa		Date & Time Collected	JAH. 17 2020 11:00							THE HERE	am, Ett - Finzt Etiluzni, Pr8y - Pńmary By , Eslq - Bicsolids słudge quality, Bsoq - 8 , IndW - Industrial Wastewater, PStn - P			1
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OCWA-Grey Bruce (Wiarton WPCP)

Attn : Megan Edney

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

Phone: 519-797-2561 Fax:pdf Works #: 110000819 Project : PO#017018

24-January-2020

Date Rec.: 21 January 2020 LR Report: CA12464-JAN20

Copy: #1

CERTIFICATE OF ANALYSIS Final Report

Analysis	1:	2:	3:	4:	5:
-	Analysis	Analysis Sta	rt Analysis	Analysis	Sept
	Start Date	Time	Completed Date	Completed Time	Sept-Septage-Hold ing Tank
Sample Date & Time					17-Jan-20 11:00
Temperature Upon Receipt [°C]					4.0
Mercury (total) [mg/L]	22-Jan-20	15:54	23-Jan-20	09:52	0.00001
Aluminum (total) [mg/L]	22-Jan-20	12:00	23-Jan-20	14:33	5.63
Arsenic (total) [mg/L]	22-Jan-20	12:00	23-Jan-20	14:33	0.0074
Barium (total) [mg/L]	22-Jan-20	12:00	23-Jan-20	14:33	0.261
Cadmium (total) [mg/L]	22-Jan-20	12:00	23-Jan-20	14:33	0.00602
Calcium (total) [mg/L]	22-Jan-20	12:00	23-Jan-20	14:33	250
Chromium (total) [mg/L]	22-Jan-20	12:00	23-Jan-20	14:33	0.0224
Cobalt (total) [mg/L]	22-Jan-20	12:00	23-Jan-20	14:33	0.00573
Copper (total) [mg/L]	22-Jan-20	12:00	23-Jan-20	14:33	4.80
Iron (total) [mg/L]	22-Jan-20	12:00	23-Jan-20	14:33	44.3
Lead (total) [mg/L]	22-Jan-20	12:00	23-Jan-20	14:33	0.107
Magnesium (total) [mg/L]	22-Jan-20	12:00	23-Jan-20	14:33	39.4
Manganese (total) [mg/L]	22-Jan-20	12:00	23-Jan-20	14:33	0.869
Nickel (total) [mg/L]	22-Jan-20	12:00	23-Jan-20	14:33	0.0728
Potassium (total) [mg/L]	22-Jan-20	12:00	23-Jan-20	14:33	24.5
Selenium (total) [mg/L]	22-Jan-20	12:00	23-Jan-20	14:33	0.00856
Silver (total) [mg/L]	22-Jan-20	12:00	23-Jan-20	14:33	0.00276
Sodium (total) [mg/L]	22-Jan-20	12:00	23-Jan-20	14:33	61.1
Tin (total) [mg/L]	22-Jan-20	12:00	23-Jan-20	14:33	0.0108
Zinc (total) [mg/L]	22-Jan-20	12:00	23-Jan-20	14:33	17.2

Data reported represents the sample submitted to SGS. Reproduction of this analytical report in full or in part is prohibited without prior written approval. Please refer to SGS General Conditions of Services located at http://www.sgs.com/terms_and_conditions_service.htm. (Printed copies are available upon request.) Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

Page 1 of 2



Works #: 110000819 Project : PO#017018 LR Report : CA12464-JAN20

een a e.

Carrie Greenlaw Project Specialist, Environment, Health & Safety

0002020909

Page 2 of 2

Data reported represents the sample submitted to SGS. Reproduction of this analytical report in full or in part is prohibited without prior written approval. Please refer to SGS General Conditions of Services located at http://www.sgs.com/terms_and_conditions_service.htm. (Printed copies are available upon request.) Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.



OCWA-Grey Bruce (Wiarton WPCP)

Attn : Megan Edney

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

Phone: 519-797-2561 Fax:pdf Works #: 110000819 Project : PO#017018

27-January-2020

Date Rec.: 21 January 2020 LR Report: CA12498-JAN20

Copy: #1

CERTIFICATE OF ANALYSIS Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time C	3: Analysis Completed Date	4: Analysis Completed Time	5: Sept Sept-Septage-Holdi ng Tank
Sample Date & Time					17-Jan-20 11:00
Temperature Upon Receipt [°C]					4.0
Biochemical Oxygen Demand (BOD5) [mg/L]	21-Jan-20	14:59	27-Jan-20	12:58	5820
Total Suspended Solids [mg/L]	21-Jan-20	09:58	23-Jan-20	15:11	8110
Chemical Oxygen Demand [mg/L]	22-Jan-20	10:43	27-Jan-20	12:58	14800
Ammonia+Ammonium (N) [as N mg/L]	21-Jan-20	20:18	22-Jan-20	13:43	61.4
Total Kjeldahl Nitrogen [as N mg/L]	21-Jan-20	12:55	22-Jan-20	13:48	300
Phosphorus (total) [mg/L]	21-Jan-20	12:55	23-Jan-20	13:26	39.2
Isopropyl Alcohol [mg/L]	27-Jan-20	10:35	27-Jan-20	15:18	< 5
Methyl alcohol [mg/L]	27-Jan-20	10:35	27-Jan-20	15:18	< 5
Acetone [ug/L]	24-Jan-20	15:51	27-Jan-20	11:59	< 1200
Benzene [ug/L]	24-Jan-20	15:51	27-Jan-20	11:59	< 20
Ethylbenzene [ug/L]	24-Jan-20	15:51	27-Jan-20	11:59	< 20
Dichloromethane [ug/L]	24-Jan-20	15:51	27-Jan-20	11:59	< 20
Methylene Chloride [ug/L]	24-Jan-20	15:51	27-Jan-20	11:59	< 20
Methyl ethyl ketone [ug/L]	24-Jan-20	15:51	27-Jan-20	11:59	< 800
Toluene [ug/L]	24-Jan-20	15:51	27-Jan-20	11:59	355
Xylene (total) [ug/L]	24-Jan-20	15:51	27-Jan-20	11:59	< 20
o-xylene [ug/L]	24-Jan-20	15:51	27-Jan-20	11:59	< 20
m/p-xylene [ug/L]	24-Jan-20	15:51	27-Jan-20	11:59	< 20

Carrie Greenlaw Project Specialist, Environment, Health & Safety

0002023427

Page 1 of 1

Data reported represents the sample submitted to SGS. Reproduction of this analytical report in full or in part is prohibited without prior written approval. Please refer to SGS General Conditions of Services located at http://www.sgs.com/terms_and_conditions_service.htm. (Printed copies are available upon request.) Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

² Station Actonym: Cell - Call Gontinis, Dia - Olikinetian, Dewn-Downstream, Erf - Final Effuent, Pély - Planety Sypess, Rev - Rev Sevage, Scoy - Secondary Dypass, Up - Upstream, Well - Montlouing Vell, Ast - Aetalion, Bis - Elasolids Inicidentia, Did - Elasolids Inicidentia, Did - Biotolids Inicidentia, Did - Biotolids Inicidentia, Big - Biotolids - Biotolids - Biotolids - Biotolids - Biotolids - Biotolids - Biot Ontario Clean Water Agency - Request for Laboratory Services and CHAIN OF CUSTODY - SEWAGE (MONTHLY - SEPTAGE - PAGE 1 of 1) Sampler Name Address: P BX Sept relephone Station Acronym Sept Station Number (Short Name) Quole # 15 Caroline Street Report to: Wegan Edney Org. # Facility Name Waterworks/Project # (519) 797-3080 NOH 2LO Southampion, ON Idaniificalion of Regulation under which the sample(s) fall: No Requirement to Report Sample Results Under Any Regulation for Wastewater Treatment 519-374-5782 Altached Parameter List Requested Turnaround Time Sample Location Name Seplage - Holding Tank 5620 UAUE Wiarton WWTP Sample 110000819 No NOOLE FEB.12,2020 10,00 Date & Time Collected 519-374-5782 (519) 797-3050 mednev2@cowa.com NOH 2LO Southampton, ON 18 Caroline Street Data Transfer Contact: Megan Edney 1 Il of Boulles Sampler Signature: Req 800. × Total Suspended × Solids Total × 0 Phosphorous à 24-48 h × TKN Total Ammonia Laboratory Section advesthighlands (519) 925-0322 (519) 925-1938 L9V 3K5 Shelburne, ON 136 Main St. E Invoice To: Onlario Clean Water Agency C of C LIMS No: × 1 Nitrogen Chemical Oxyger Dale Rec'd: × Demand SUCCE × Acelone Temperature Upon Receipt Parameler × Benzene FEB 1 3 2020 Z × × Ethylbenzene Kei × Isopropyl Alcohol 5-7d Methyl Alcohol sher \times Ceg Melhylene × BXD Chloride Melhyl Elhyl REVISION #1 × Kelone Time Rec'd: 1 Methylene × Chloride P. 6067571677802 7-100 V Sample condition upon receipt × Toluene 705-652-2000 Laboratory: SGS Lakelield Research Ltd 185 Concession St. Lakefield, ON ő \times Xylene 2 - 40 mL EPA vials unpreserved (no headspeed).
 2 - 40 mL EPA vials w/ sodium bisulphale preservative (no Other 2 - 500 mL PET boliles, 1 - 60 mL plastic w/ sulphune -(acetabeau cid preservative, Comments Specify Initials Z No Yes X. Sevised: 2017.12.01 205 YES No No No No Yes Yes No Page 1 of 1 Upload to MOE Yes Yes Yes D Y≥s No Yes . No No No Upload to OCWA



OCWA-Grey Bruce (Wiarton WPCP)

Attn : Megan Edney

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

Phone: 519-797-2561 Fax:pdf Works #: 110000819 Project : PO#017018

21-February-2020

Date Rec.: 13 February 2020 LR Report: CA12437-FEB20

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: Sept Sept-Septage-Hold ing Tank
Sample Date & Time					12-Feb-20 10:00
Temperature Upon Receipt [°C]					8.0
Biochemical Oxygen Demand (BOD5) [mg/L]	13-Feb-20	17:03	18-Feb-20	13:38	996
Total Suspended Solids [mg/L]	14-Feb-20	09:03	19-Feb-20	15:59	1180
Chemical Oxygen Demand [mg/L]	14-Feb-20	09:50	18-Feb-20	15:35	1600
Ammonia+Ammonium (N) [as N mg/L]	13-Feb-20	16:34	18-Feb-20	16:18	50.8
Total Kjeldahl Nitrogen [as N mg/L]	14-Feb-20	06:30	19-Feb-20	13:20	96.3
Phosphorus (total) [mg/L]	14-Feb-20	06:30	18-Feb-20	14:42	12.8
Isopropyl Alcohol [mg/L]	18-Feb-20	09:41	19-Feb-20	15:59	< 5
Methyl alcohol [mg/L]	18-Feb-20	09:41	19-Feb-20	15:59	< 5
Acetone [ug/L]	14-Feb-20	14:48	18-Feb-20	14:22	< 1200
Benzene [ug/L]	14-Feb-20	14:48	18-Feb-20	14:22	< 20
Ethylbenzene [ug/L]	14-Feb-20	14:48	18-Feb-20	14:22	< 20
Dichloromethane [ug/L]	14-Feb-20	14:48	18-Feb-20	14:22	< 20
Methyl ethyl ketone [ug/L]	14-Feb-20	14:48	18-Feb-20	14:22	< 800
Toluene [ug/L]	14-Feb-20	14:48	18-Feb-20	14:22	< 20
Xylene (total) [ug/L]	14-Feb-20	14:48	18-Feb-20	14:22	< 20
o-xylene [ug/L]	14-Feb-20	14:48	18-Feb-20	14:22	< 20
m/p-xylene [ug/L]	14-Feb-20	14:48	18-Feb-20	14:22	< 20

Da

Carrie Greenlaw Project Specialist, Environment, Health & Safety

Page 1 of 1

Data reported represents the sample submitted to SGS. Reproduction of this analytical report in full or in part is prohibited without prior written approval. Please refer to SGS General Conditions of Services located at http://www.sgs.com/terms_and_conditions_service.htm. (Printed copies are available upon request.) Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

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erworks/Project # 1100(lity Name Wiarton W # 5620	e # hed Parameter List	ification of Regulation under which	tequested Turnaround Time:	rrl lo: Megan Edney	aroline Street hamplon, ON 210	374-5782	197-3080 hev2@ocwa.com	Sample	Sample Location Name	Seplage - Holding Tank						Ben M
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	vn upon receipt Initials			her Specify:	y: SGS Lakelield Resear	, ON	2000	enlaw@sos.com	Comments		500 mL PET bottles, 60 mL PET bottles, 4 preservative, 4 dnn EPA vials unpreserved Aneddpace), 40 mL EPA vials w/ sodium ulphate preservative (no ulspace)						
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	B								A	Upload to OCW			U Yes[U Yes[Yes[



OCWA-Grey Bruce (Wiarton WPCP)

Attn : Megan Edney

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

Phone: 519-797-2561 Fax:pdf Works #: 110000819 Project : PO#017018

07-April-2020

 Date Rec. :
 25 March 2020

 LR Report:
 CA13801-MAR20

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: Sept Sept-Septage-Hold ing Tank
Sample Date & Time					24-Mar-20 10:30
Temperature Upon Receipt [°C]					10.0
Biochemical Oxygen Demand (BOD5) [mg/L]	25-Mar-20	20:13	30-Mar-20	18:57	1730
Total Suspended Solids [mg/L]	26-Mar-20	16:07	27-Mar-20	14:08	280
Chemical Oxygen Demand [mg/L]	26-Mar-20	08:05	30-Mar-20	18:57	2350
Ammonia+Ammonium (N) [as N mg/L]	26-Mar-20	18:06	30-Mar-20	18:39	9.5
Total Kjeldahl Nitrogen [as N mg/L]	27-Mar-20	15:30	31-Mar-20	16:54	24.4
Phosphorus (total) [mg/L]	27-Mar-20	15:30	01-Apr-20	15:20	7.5
Isopropyl Alcohol [mg/L]	03-Apr-20	14:51	07-Apr-20	14:34	< 5
Methyl alcohol [mg/L]	03-Apr-20	14:51	07-Apr-20	14:34	< 5
Acetone [ug/L]	30-Mar-20	10:55	31-Mar-20	13:45	< 1200
Benzene [ug/L]	30-Mar-20	10:55	31-Mar-20	13:45	< 20
Ethylbenzene [ug/L]	30-Mar-20	10:55	31-Mar-20	13:45	< 20
Dichloromethane [ug/L]	30-Mar-20	10:55	31-Mar-20	13:45	< 20
Methyl ethyl ketone [ug/L]	30-Mar-20	10:55	31-Mar-20	13:45	< 800
Toluene [ug/L]	30-Mar-20	10:55	31-Mar-20	13:45	37.6
Xylene (total) [ug/L]	30-Mar-20	10:55	31-Mar-20	13:45	< 20
o-xylene [ug/L]	30-Mar-20	10:55	31-Mar-20	13:45	< 20
m/p-xylene [ug/L]	30-Mar-20	10:55	31-Mar-20	13:45	< 20

Carrie Greenlaw Project Specialist, Environment, Health & Safety

Page 1 of 1

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ng, Bpd - Biosolids pri ImenVSBAs, ScEl - S olding Tank, CSO - Co							glass bottle - red with HCL for	mL metals bottle	х н.	Comments	N@Sos.com		n St.	S Lakefield Resea	Specify:			Initials	
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Telephon	lephone: 519-374-5782 519-374-5782							-			(519)	925-19	38		_	-		_	_	-		705-6	652-2000		_	
Fax: Email:	ax: (519) 797-3080 (519) 797-3080 mail: mednev2@ocwa.com mednev2@ocwa.com						-		_	-	(519) apwet	925-03 thighla	ands@	ocwa.	com				_	_	-	705-6 carrie	352-6365 a.greenlaw@sgs.com			
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Sept	Sept	-	Septage - Holding Tank	11:15		7	×	×	×	×	x	×	x	×	x	x	x	×	x	x	x	x	2 - 500 mL PET bottles. 1 - 60 mL plastic w/ sulphunic acid preservative. 2 - 40 mL EPA vials unpreserved (no headspace). 2 - 40 mL EPA vials w/ sodium bisulphate preservative (no headspace)	Yes X	Yes X	
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* Station Acronym: Cell - Cell Conterts, Dis - Disnifection, Down - Downstream, Eff - Final Effluent, Prify - Primary Bypass, Raw - Raw Sewage, ScBy - Secondary Bypass, Up - Upstream, Well - Monitoring Well, Aer - Aeration, Brs - Biosolids-raw abudge, Bin - Biosolids thickening, Bpd - Biosolids primary digestion, Brs - Biosolids sec, digestion, Brs - Biosolids raw abudge, Bin - Biosolids thickening, Bpd - Biosolids subge quality, Baoq - Biosolids sec, digestion, Brs - Biosolids raw abudge, SBR - Secondary Treatment/Grt. Pref - Primary Treatment/Grt. Pref - Primary Effluent, RAS - Return Activated Studge, SBR - Secondary Treatment/SBRs, SER - Secondary Treatment/Grt. Pref - Primary Treatm

Revision #1

Revised: 2017.12.01



OCWA-Grey Bruce (Wiarton WPCP)

Attn : Megan Edney

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

Phone: 519-797-2561 Fax:pdf Works #: 110000819 Project : PO#017018

20-April-2020

 Date Rec.:
 07 April 2020

 LR Report:
 CA14147-APR20

0002096385

Copy: #1

CERTIFICATE OF ANALYSIS Final Report

Analysis	1:	2:	3:	4:	5:
, maly old	Analysis	Analysis Sta	rt Analysis	Analysis	Sept
	Start Date	Time	Completed Date	Completed	Sept-Septage-Hold
				Time	
Sample Date & Time					06-Apr-20 11:15
Temperature Upon Receipt [°C]					7.0
Biochemical Oxygen Demand (BOD5) [mg/L]	13-Apr-20	20:46	20-Apr-20	13:29	1500
Total Suspended Solids [mg/L]	09-Apr-20	08:25	13-Apr-20	13:04	161
Chemical Oxygen Demand [mg/L]	14-Apr-20	15:48	15-Apr-20	08:14	2950
Ammonia+Ammonium (N) [as N mg/L]	07-Apr-20	18:20	16-Apr-20	16:48	< 0.1
Total Kjeldahl Nitrogen [as N mg/L]	08-Apr-20	15:07	13-Apr-20	10:26	28.2
Isopropyl Alcohol [mg/L]	15-Apr-20	12:40	17-Apr-20	12:11	< 5
Methyl alcohol [mg/L]	15-Apr-20	12:40	17-Apr-20	12:11	< 5
Acetone [ug/L]	16-Apr-20	17:11	20-Apr-20	14:04	< 1200
Benzene [ug/L]	16-Apr-20	17:11	20-Apr-20	14:04	< 20
Ethylbenzene [ug/L]	16-Apr-20	17:11	20-Apr-20	14:04	< 20
Dichloromethane [ug/L]	16-Apr-20	17:11	20-Apr-20	14:04	< 20
Methyl ethyl ketone [ug/L]	16-Apr-20	17:11	20-Apr-20	14:04	< 800
Toluene [ug/L]	16-Apr-20	17:11	20-Apr-20	14:04	< 20
Xylene (total) [ug/L]	16-Apr-20	17:11	20-Apr-20	14:04	< 20
o-xylene [ug/L]	16-Apr-20	17:11	20-Apr-20	14:04	< 20
m/p-xylene [ug/L]	16-Apr-20	17:11	20-Apr-20	14:04	< 20
Aluminum (total) [mg/L]	08-Apr-20	15:20	09-Apr-20	12:40	0.281
Arsenic (total) [mg/L]	08-Apr-20	15:20	09-Apr-20	12:40	0.0009
Barium (total) [mg/L]	08-Apr-20	15:20	09-Apr-20	12:40	0.0431
Cadmium (total) [mg/L]	08-Apr-20	15:20	09-Apr-20	12:40	0.000064
Calcium (total) [mg/L]	08-Apr-20	15:20	09-Apr-20	12:40	87.1
Chromium (total) [mg/L]	08-Apr-20	15:20	09-Apr-20	12:40	0.00136
Cobalt (total) [mg/L]	08-Apr-20	15:20	09-Apr-20	12:40	0.000268
Copper (total) [mg/L]	08-Apr-20	15:20	09-Apr-20	12:40	0.107
Iron (total) [mg/L]	08-Apr-20	15:20	09-Apr-20	12:40	4.03
Lead (total) [mg/L]	08-Apr-20	15:20	09-Apr-20	12:40	0.00470
Magnesium (total) [mg/L]	08-Apr-20	15:20	09-Apr-20	12:40	23.3
Manganese (total) [mg/L]	08-Apr-20	15:20	09-Apr-20	12:40	0.252
Mercury (total) [ug/L]	07-Apr-20	19:40	09-Apr-20	07:04	< 0.01
Nickel (total) [mg/L]	08-Apr-20	15:20	09-Apr-20	12:39	0.0128

Page 1 of 2

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Works #: 110000819

Project : PO#017018 LR Report : CA14147-APR20

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: Sept Sept-Septage-Hold ing Tank
Potassium (total) [mg/L]	08-Apr-20	15:20	09-Apr-20	12:39	27.7
Phosphorus (total) [mg/L]	08-Apr-20	15:20	09-Apr-20	12:39	5.56
Selenium (total) [mg/L]	08-Apr-20	15:20	09-Apr-20	12:39	0.00049
Silver (total) [mg/L]	08-Apr-20	15:20	09-Apr-20	12:39	< 0.00005
Sodium (total) [mg/L]	08-Apr-20	15:20	09-Apr-20	12:39	241
Tin (total) [mg/L]	08-Apr-20	15:20	09-Apr-20	12:39	0.00082
Zinc (total) [mg/L]	08-Apr-20	15:20	09-Apr-20	12:39	1.02

reeda

Carrie Greenlaw Project Specialist, Environment, Health & Safety

0002096385

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Sistion Number (Short Neme)	Samp	e Location Name	2	Date & Colle MAY 0	Time ecled 8 2020	# of Bottles	BODs	Total Suspended Solids	Total Phosphorous	TKN	Total Ammonia Nitrogen	Chemical Oxygen Demand	Acetone	Benzene	Eihylbenzene	Isopropyl Alcohol	Melhyl Alcohol	Methylene Chlorido	Methyl Ethyl Kelone	Methylene Chloride	Toluene	Xylene	in s	Upload to MOE	Upload to OCWA
Sepi	Sepla	ge - Holding Tank	10 A	11:00	5 ⁻¹ -	7	×	×	x	×	×	x	×	×	x	×	×	x	×	×	x	×	2 - 500 mL PET bottles, 1 - 60 mL plastic w/ sulphoric acid preservative, 2 - 60 mL EPA viels unpreserved (no headspace), 2 - 40 mL EPA viels w/ sodium bisulphate preservative (no headspace)	Yes X. No	Yes[] No[
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digestion, Sea - Disonactions, Das - Disonaction, Down - Downskiezm, Eff - Final Ethuent, PrBy - Primary Bypass, Raw - Raw Sawage, ScBy - Secondary Eypass <u>- Disonactions - Management</u> Well, Act - Actation, Brs - Elosolids-raw sludge, Bth - Elosolids primary ScE1 - Secondary Ethuent, TWAS - Thickened Weste Activated Sludge, Vas - Activated Sludge, Low - Jossinids val quelity, DAF - Dissolved Air Floatation, Grit - Primary Treatment/Grit, PrE1 - Primary Ethuent, RAS - Relurn Activated Sludge, SBR - Secondary Treatment/SBRs, Holding Tank, CSO - Combined Sawer Overflow, SSO - Santary Sever Overflow

Revision #1

Purolator 606863681239



OCWA-Grey Bruce (Wiarton WPCP)

Attn : Karla Young

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

Phone: 519-797-2561 Fax:pdf Works #: 110000819 Project : PO#017018

21-May-2020

Date Rec.: 11 May 2020 LR Report: CA13351-MAY20

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: Sept Sept-Septage-Holdi ng Tank
Sample Date & Time					08-May-20 11:00
Temperature Upon Receipt [°C]					7.0
Biochemical Oxygen Demand (BOD5) [mg/L]	11-May-20	21:46	19-May-20	07:31	2420
Total Suspended Solids [mg/L]	11-May-20	15:06	12-May-20	10:17	290
Chemical Oxygen Demand [mg/L]	13-May-20	09:48	19-May-20	07:31	2980
Ammonia+Ammonium (N) [as N mg/L]	12-May-20	17:00	15-May-20	13:20	0.3
Total Kjeldahl Nitrogen [as N mg/L]	12-May-20	15:18	15-May-20	13:32	46.7
Phosphorus (total) [mg/L]	12-May-20	15:18	13-May-20	17:12	6.0
Isopropyl Alcohol [mg/L]	12-May-20	10:31	21-May-20	14:02	< 5
Methyl alcohol [mg/L]	12-May-20	10:31	21-May-20	14:02	< 5
Acetone [ug/L]	15-May-20	06:55	20-May-20	17:03	< 1200
Benzene [ug/L]	15-May-20	06:55	20-May-20	17:03	< 20
Ethylbenzene [ug/L]	15-May-20	06:55	20-May-20	17:03	< 20
Dichloromethane [ug/L]	15-May-20	06:55	20-May-20	17:03	< 20
Methyl ethyl ketone [ug/L]	15-May-20	06:55	20-May-20	17:03	< 800
Toluene [ug/L]	15-May-20	06:55	20-May-20	17:03	36.0
Xylene (total) [ug/L]	15-May-20	06:55	20-May-20	17:03	< 20
o-xylene [ug/L]	15-May-20	06:55	20-May-20	17:03	< 20
m/p-xylene [ug/L]	15-May-20	06:55	20-May-20	17:03	< 20

Carrie Greenlaw Project Specialist, Environment, Health & Safety

0002123540

Page 1 of 1 Data reported represents the sample submitted to SGS. Reproduction of this analytical report in full or in part is prohibited without prior written approval. Please refer to SGS General Conditions of Services located at http://www.sgs.com/terms_and_conditions_service.htm. (Printed copies are available upon request.) Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples. Page 1 of 1

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	(515) 737-5000 mednev2@ocwa.com	mednev2@ccviz.con			6			and a	o tore							Comments	
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OM RTN 10:00 P: 606 910 324 031

Revised: 2017.12.01

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OCWA-Grey Bruce (Wiarton WPCP)

Attn : Karla Young

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

Phone: 519-797-2561 Fax:pdf Works #: 110000819 Project : PO#017018

03-July-2020

Date Rec. : 23 June 2020 LR Report: CA13558-JUN20

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: Sept Sept-Septage-Hold ing Tank
Sample Date & Time					19-Jun-20 11:50
Temperature Upon Receipt [°C]					20.0
Biochemical Oxygen Demand (BOD5) [mg/L]	24-Jun-20	16:55	29-Jun-20	15:58	1030
Total Suspended Solids [mg/L]	24-Jun-20	07:47	25-Jun-20	12:08	313
Chemical Oxygen Demand [mg/L]	24-Jun-20	11:45	29-Jun-20	15:58	3250
Ammonia+Ammonium (N) [as N mg/L]	23-Jun-20	17:39	24-Jun-20	15:08	50.8
Total Kjeldahl Nitrogen [as N mg/L]	24-Jun-20	14:23	26-Jun-20	11:01	52.0
Phosphorus (total) [mg/L]	24-Jun-20	14:23	26-Jun-20	11:00	10.3
Isopropyl Alcohol [mg/L]	02-Jul-20	10:27	03-Jul-20	14:21	< 5
Methyl alcohol [mg/L]	02-Jul-20	10:27	03-Jul-20	14:21	< 5
Acetone [ug/L]	26-Jun-20	14:45	30-Jun-20	13:38	< 1200
Benzene [ug/L]	26-Jun-20	14:45	30-Jun-20	13:38	< 20
Ethylbenzene [ug/L]	26-Jun-20	14:45	30-Jun-20	13:38	< 20
Dichloromethane [ug/L]	26-Jun-20	14:45	30-Jun-20	13:38	< 20
Methyl ethyl ketone [ug/L]	26-Jun-20	14:45	30-Jun-20	13:38	< 800
Toluene [ug/L]	26-Jun-20	14:45	30-Jun-20	13:38	22.2
Xylene (total) [ug/L]	26-Jun-20	14:45	30-Jun-20	13:38	< 20
o-xylene [ug/L]	26-Jun-20	14:45	30-Jun-20	13:38	< 20
m/p-xylene [ug/L]	26-Jun-20	14:45	30-Jun-20	13:38	< 20

Carrie Greenlaw Project Specialist, Environment, Health & Safety

Page 1 of 1 Data reported represents the sample submitted to SGS. Reproduction of this analytical report in full or in part is prohibited without prior written approval. Please refer to SGS

General Conditions of Services located at https://www.sgs.ca/en/terms-and-conditions (Printed copies are available upon request.) Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples. SGS Canada Inc. Environment-Health & Safety statement of conformity decision rule does not consider uncertainty when analytical results are compared to a specified standard or

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PAN PH 606 800 6537517 10 Maggerson

Ro Madili			C C	sattle sat	Holding Tank (1146 2 X X X	JUL 2 0 2020 # of Bottles Aluminum Arsenic Barlum	Sample	(519) 787-3080 mednev@@voxva.com	519-374-5762	18 Caroline Street Southampton, ON	Data Transfer Contact: Megan Edney	round Time:	lation under which the sample(s) falt: No Requirement to Report Sample Res	ist No Yes	5620	act # 110000819	for Laboratory Services and CHAIN OF CUSTODY - SEWAGE (QUART)
Sampler Signature:			1 3k	10-10	× × × × × × × × × × × × × × × × × × ×	Cadmium Calcium Chromium Cobalt Copper Iron Lead Magnesium Mangaoese Mercury Nickel Potassium	Parameters	(519) 925-0322 apwesthiohlands@pocwa.com	(519) 925-1938	Shedward St. E Shedward, ON	Invoice To: Ontario Clean Water Agency	b 24-48 h X 5-7d	sults Under Any Regulation for Wastewater Treatment	Temperature Upon Receipt	Date Rec'd:	C of C LIMS No:	ERLY SEPTAGE
					X X X X X acid preserved with nitric acid perserved with HCL for	Selenium Silver Sodium Tin Zinc	Commens	carrie creanawies.com	705-652-2000	185 Concession St. Lakefield, ON K0L 2H0	Laboratory: SGS Lakefield Resea	7-10d Other Specify.		MX2 · °	Time Rec'd: Initials	Sample condition upon receipt	

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1-1 CONK



OCWA-Grey Bruce (Wiarton WPCP)

Attn : Karla Young

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

Phone: 519-797-2561 Fax:pdf

Works #: 110000819 **Project :** PO#017018

05-August-2020

Date Rec.: 21 July 2020 LR Report: CA13395-JUL20

0002207838

Copy: #1

CERTIFICATE OF ANALYSIS **Final Report**

Analysis	1.	2.	3.	4٠	5.
, maly old	Analysis	Analysis Star	t Analysis	Analysis	Sept
	Start Date	Time	Completed Date	Completed	Sept-Septage-Hold
				Ilme	Ing Tank
Sample Date & Time					20-Jul-20 11:40
Temperature Upon Receipt [°C]					14.0
Biochemical Oxygen Demand (BOD5) [mg/L]	27-Jul-20	15:54	04-Aug-20	10:42	2530
Total Suspended Solids [mg/L]	21-Jul-20	20:22	22-Jul-20	15:51	1010
Chemical Oxygen Demand [mg/L]	22-Jul-20	08:30	31-Jul-20	13:39	3100
Ammonia+Ammonium (N) [as N mg/L]	21-Jul-20	18:39	22-Jul-20	15:47	93.2
Total Kjeldahl Nitrogen [as N mg/L]	22-Jul-20	07:29	24-Jul-20	11:56	154
Isopropyl Alcohol [mg/L]	30-Jul-20	16:13	05-Aug-20	09:55	< 5
Methyl alcohol [mg/L]	30-Jul-20	16:13	05-Aug-20	09:55	< 5
Acetone [ug/L]	21-Jul-20	16:42	23-Jul-20	12:11	< 1200
Benzene [ug/L]	21-Jul-20	16:42	23-Jul-20	12:11	< 20
Ethylbenzene [ug/L]	21-Jul-20	16:42	23-Jul-20	12:11	< 20
Dichloromethane [ug/L]	21-Jul-20	16:42	23-Jul-20	12:11	< 20
Methyl ethyl ketone [ug/L]	21-Jul-20	16:42	23-Jul-20	12:11	< 800
Toluene [ug/L]	21-Jul-20	16:42	23-Jul-20	12:11	< 20
Xylene (total) [ug/L]	21-Jul-20	16:42	23-Jul-20	12:11	< 20
o-xylene [ug/L]	21-Jul-20	16:42	23-Jul-20	12:11	< 20
m/p-xylene [ug/L]	21-Jul-20	16:42	23-Jul-20	12:11	< 20
Phosphorus (total) [mg/L]	23-Jul-20	13:10	29-Jul-20	10:53	15.9
Aluminum (total) [mg/L]	23-Jul-20	13:10	29-Jul-20	10:53	0.41
Arsenic (total) [mg/L]	23-Jul-20	13:10	29-Jul-20	10:53	< 0.002
Barium (total) [mg/L]	23-Jul-20	13:10	29-Jul-20	10:53	0.0742
Cadmium (total) [mg/L]	23-Jul-20	13:10	29-Jul-20	10:53	0.000160
Calcium (total) [mg/L]	23-Jul-20	13:10	29-Jul-20	10:53	132
Chromium (total) [mg/L]	23-Jul-20	13:10	29-Jul-20	10:53	0.0019
Cobalt (total) [mg/L]	23-Jul-20	13:10	29-Jul-20	10:53	0.000690
Copper (total) [mg/L]	23-Jul-20	13:10	29-Jul-20	10:53	0.284
Iron (total) [mg/L]	23-Jul-20	13:10	29-Jul-20	10:53	9.41
Lead (total) [mg/L]	23-Jul-20	13:10	29-Jul-20	10:53	0.0053
Magnesium (total) [mg/L]	23-Jul-20	13:10	29-Jul-20	10:53	43.6
Manganese (total) [mg/L]	23-Jul-20	13:10	29-Jul-20	10:53	0.255
Mercury (total) [ug/L]	22-Jul-20	16:56	23-Jul-20	13:42	0.01

Page 1 of 2

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Works #: 110000819

Project: LR Report: PO#017018 CA13395-JUL20

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: Sept Sept-Septage-Hold ing Tank
Nickel (total) [mg/L]	23-Jul-20	13:10	29-Jul-20	10:53	0.008
Potassium (total) [mg/L]	23-Jul-20	13:10	29-Jul-20	10:53	77.1
Selenium (total) [mg/L]	23-Jul-20	13:10	29-Jul-20	10:53	0.0013
Silver (total) [mg/L]	23-Jul-20	13:10	29-Jul-20	10:53	0.0006
Sodium (total) [mg/L]	23-Jul-20	13:10	29-Jul-20	10:53	391
Tin (total) [mg/L]	23-Jul-20	13:10	29-Jul-20	10:53	0.0020
Zinc (total) [mg/L]	23-Jul-20	13:10	29-Jul-20	10:53	0.25

Leena

Carrie Greenlaw Project Specialist, Environment, Health & Safety

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Page 2 of 2 Data reported represents the sample submitted to SGS. Reproduction of this analytical report in full or in part is prohibited without prior written approval. Please refer to SGS General Conditions of Services located at https://www.sgs.ca/en/terms-and-conditions (Printed copies are available upon request.) Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples. SGS Canada Inc. Environment-Health & Safety statement of conformity decision rule does not consider uncertainty when analytical results are compared to a specified standard or

Ontario Clean Water Agency - Request for Laboratory Services and CHAIN OF CUSTODY - SEWAGE (MONTHLY - SEPTAGE - PAGE 1 of 1)

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Revision #1



OCWA-Grey Bruce (Wiarton WPCP)

Attn : Karla Young

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

Phone: 519-797-2561 Fax:pdf Works #: 110000819 Project : PO#017018

31-August-2020

Date Rec.: 15 August 2020 LR Report: CA12405-AUG20

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: Sept Sept-Septage-Holdi ng Tank
Sample Date & Time					13-Aug-20 13:00
Temperature Upon Receipt [°C]					18.0
Total Solids [mg/L]	19-Aug-20	21:26	21-Aug-20	08:59	41200
SpecificGravity	19-Aug-20	21:26	21-Aug-20	08:59	1.0
Biochemical Oxygen Demand (BOD5) [mg/L]	18-Aug-20	16:42	24-Aug-20	14:03	10800
Total Suspended Solids [mg/L]	19-Aug-20	11:23	20-Aug-20	13:52	11200
Chemical Oxygen Demand [mg/L]	24-Aug-20	08:37	26-Aug-20	13:09	34000
Ammonia+Ammonium (N) [as N mg/L]	19-Aug-20	20:50	25-Aug-20	15:42	2460
Total Kjeldahl Nitrogen [as N mg/L]	18-Aug-20	16:03	24-Aug-20	13:50	3280
Phosphorus (Total) [mg/L]	20-Aug-20	11:00	20-Aug-20	15:12	510
Isopropyl Alcohol [mg/L]	25-Aug-20	12:32	28-Aug-20	09:12	8.6
Methyl alcohol [mg/L]	25-Aug-20	12:32	28-Aug-20	09:12	< 5
Acetone [ug/L]	25-Aug-20	16:31	28-Aug-20	13:33	5040
Benzene [ug/L]	25-Aug-20	16:31	28-Aug-20	13:33	< 20
Ethylbenzene [ug/L]	25-Aug-20	16:31	28-Aug-20	13:33	< 20
Dichloromethane [ug/L]	25-Aug-20	16:31	28-Aug-20	13:33	< 20
Methyl ethyl ketone [ug/L]	25-Aug-20	16:31	28-Aug-20	13:33	< 800
Toluene [ug/L]	25-Aug-20	16:31	28-Aug-20	13:33	< 20
Xylene (total) [ug/L]	25-Aug-20	16:31	28-Aug-20	13:33	< 20
o-xylene [ug/L]	25-Aug-20	16:31	28-Aug-20	13:33	< 20
m/p-xylene [ug/L]	25-Aug-20	16:31	28-Aug-20	13:33	< 20

Note: Total Phosphorous was analyzed on the as-received sample. Sample Matrix - Sludge/Soil

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Page 1 of 2



Works #: 110000819 PO#017018 CA12405-AUG20 Project: LR Report:

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Carrie Greenlaw Project Specialist, Environment, Health & Safety

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 - 60 mL plastic w/ sulphutic K0L 2H0 705-652-2000 705-652-6365 Carrie oreeniew@scs.com Specify: Comments Sample condition upon receipt 185 Concession SI. (apadspeat Lakefield, ON Clher 2 Sylene × 7-100 Time Rec'd: × anaulaT Chloride ÷ × Melhylene Kelone > × Meinyl Einyl Just Lenn Chloride × OCT 0 1 2020 analytene Temperature Upon Receipt luéntification of Regutation under which the sample(s) falf. No Requirement to Report Sample Results Under Any Regutation for Westewater Treatment 5-7d Meinyl Alcohol × Invoice To: Onlario Clean Water Agency lonopyl Alcohol × Parameters × Elhylbenzene × com Derver DOCVER อบอรบอย × 1 Ontario Clean Water Agency - Request for Laboratory Services and CHAIN OF CUSTODY - SEWAGE (MONTHLY - SEPTAGE - PAGE 1 of 1) C of C LIMS No: Leboratory Section Date Rec'd: × L9V 3:K5 (519) 925-1938 (519) 925-0322 20vesthichlands Acetone 136 Main St. E Shelburne, ON bnarnad × nagyxO IssimarlO บอดีอ่าเท × SinorninA Islo' 24-48 h > × NX.L Sampler Signalure: Phosphorous Q × 10101 Wegan Edney spijos × papuadsns leioj Req' ' × BODs Data Transier Contact: M 18 Caroline Street Southampton, ON NOH 2L0 COM 2 sainog jo // 24 [519-374-5782 [(519) 797-3060 [mednev2@ccvia.c Supt. 29, 203 Date & Time 10:00 Collected DAVE NOBLE 110000819 Wiarton WWTP No Sample Location Name Septege - Holding Tank Sample Requested Turneround Time 5620 Wateworks/Project # Allached Parameter List Report lo: Megan Edney CON 18 Caroline Street Southampton, ON 519-374-5782 (519) 797-3080 mednev2@ocwa.o Facility Name NOH 2LO 4. 6JO Quole # ÷ Station Number (Short -Name) Sept Sampler Name: Telephone: Fax: ()Address: Sept Sistion Acronym Email

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OCWA-Grey Bruce (Wiarton 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-October-2020

 Date Rec. :
 01 October 2020

 LR Report:
 CA12037-OCT20

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: Sept Sept-Septage-Hol ding Tank
Sample Date & Time					29-Sep-20 10:00
Temperature Upon Receipt [°C]					11.0
Biochemical Oxygen Demand (BOD5) [mg/L]	01-Oct-20	17:50	06-Oct-20	15:18	1520
Total Suspended Solids [mg/L]	02-Oct-20	07:07	06-Oct-20	10:12	480
Chemical Oxygen Demand [mg/L]	03-Oct-20	11:09	06-Oct-20	15:18	2150
Ammonia+Ammonium (N) [as N mg/L]	02-Oct-20	19:30	05-Oct-20	11:07	86.4
Total Kjeldahl Nitrogen [as N mg/L]	02-Oct-20	15:04	05-Oct-20	10:35	133
Phosphorus (total) [mg/L]	02-Oct-20	15:04	06-Oct-20	13:57	16.3
Isopropyl Alcohol [mg/L]	02-Oct-20	07:30	05-Oct-20	12:29	< 5
Methyl alcohol [mg/L]	02-Oct-20	07:30	05-Oct-20	12:29	6.4
Acetone [ug/L]	02-Oct-20	08:21	06-Oct-20	14:05	< 1200
Benzene [ug/L]	02-Oct-20	08:21	06-Oct-20	14:05	< 20
Ethylbenzene [ug/L]	02-Oct-20	08:21	06-Oct-20	14:05	< 20
Dichloromethane [ug/L]	02-Oct-20	08:21	06-Oct-20	14:05	< 20
Methyl ethyl ketone [ug/L]	02-Oct-20	08:21	06-Oct-20	14:05	< 800
Toluene [ug/L]	02-Oct-20	08:21	06-Oct-20	14:05	142
Xylene (total) [ug/L]	02-Oct-20	08:21	06-Oct-20	14:05	< 20
o-xylene [ug/L]	02-Oct-20	08:21	06-Oct-20	14:05	< 20
m/p-xylene [ug/L]	02-Oct-20	08:21	06-Oct-20	14:05	< 20

Carrie Greenlaw Project Specialist, Environment, Health & Safety

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General Conditions of Services located at https://www.sgs.ca/en/terms-and-conditions (Printed copies are available upon request.) Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples. SGS Canada Inc. Environment-Health & Safety statement of conformity decision rule does not consider uncertainty when analytical results are compared to a specified standard or

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Revision #1

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OCWA-Grey Bruce (Wiarton WPCP)

Attn : Karla Young

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

Phone: 519-797-2561 Fax:pdf Works #: 110000819 Project : PO#017018

28-October-2020

 Date Rec. :
 21 October 2020

 LR Report:
 CA13606-OCT20

0002301953

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: Sept Sept-Septage-Hol ding Tank
Sample Date & Time					20-Oct-20 11:15
Temperature Upon Receipt [°C]					11.0
Biochemical Oxygen Demand (BOD5) [mg/L]	22-Oct-20	17:29	27-Oct-20	11:04	1920
Total Suspended Solids [mg/L]	23-Oct-20	10:03	27-Oct-20	11:57	407
Chemical Oxygen Demand [mg/L]	26-Oct-20	10:34	27-Oct-20	11:17	2680
Ammonia+Ammonium (N) [as N mg/L]	21-Oct-20	21:20	25-Oct-20	11:51	52.7
Total Kjeldahl Nitrogen [as N mg/L]	22-Oct-20	06:59	27-Oct-20	15:36	98.2
Phosphorus (total) [mg/L]	22-Oct-20	06:59	26-Oct-20	13:36	9.7
Isopropyl Alcohol [mg/L]	21-Oct-20	18:32	22-Oct-20	13:13	< 5
Methyl alcohol [mg/L]	21-Oct-20	18:32	22-Oct-20	13:13	< 5
Acetone [ug/L]	26-Oct-20	15:32	27-Oct-20	14:51	< 1200
Benzene [ug/L]	26-Oct-20	15:32	27-Oct-20	14:51	< 20
Ethylbenzene [ug/L]	26-Oct-20	15:32	27-Oct-20	14:51	< 20
Dichloromethane [ug/L]	26-Oct-20	15:32	27-Oct-20	14:51	< 20
Methyl ethyl ketone [ug/L]	26-Oct-20	15:32	27-Oct-20	14:51	< 800
Toluene [ug/L]	26-Oct-20	15:32	27-Oct-20	14:51	80.0
Xylene (total) [ug/L]	26-Oct-20	15:32	27-Oct-20	14:51	< 20
o-xylene [ug/L]	26-Oct-20	15:32	27-Oct-20	14:51	< 20
m/p-xylene [ug/L]	26-Oct-20	15:32	27-Oct-20	14:51	< 20

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Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples. SGS Canada Inc. Environment-Health & Safety statement of conformity decision rule does not consider uncertainty when analytical results are compared to a specified standard or



Works #: 110000819 PO#017018 CA13606-OCT20 Project: LR Report:

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Carrie Greenlaw Project Specialist, Environment, Health & Safety

Page 2 of 2 Data reported represents the sample submitted to SGS. Reproduction of this analytical report in full or in part is prohibited without prior written approval. Please refer to SGS General Conditions of Services located at https://www.sgs.ca/en/terms-and-conditions (Printed copies are available upon request.) Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples. SGS Canada Inc. Environment-Health & Safety statement of conformity decision rule does not consider uncertainty when analytical results are compared to a specified standard or

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Revised: 2017.12.01

Revision #1

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							 - 250 mL metals bottle preserved with nitric acid 1- glass bottle erserved with HCL for 		Comments	reenlaw@sgs.com	-6365	d, ON	ory: SGS Lakefield Reseau icession St.	ther Specify:			tion upon receipt Initials	
	No Yes	No V	No No	No Y	No Yes	No Yes	No Yes	Upload to MO	E				rch Ltd				6	



OCWA-Grey Bruce (Wiarton 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-November-2020

 Date Rec.:
 30 October 2020

 LR Report:
 CA15699-OCT20

0002313893

Copy: #1

CERTIFICATE OF ANALYSIS Final Report

Analysis	1: Analysis	2: Analysis	3: Analysis	4: Analysis	5: Sept
	Start Date	Start Time	Date	Time	ding Tank
Sample Date & Time					29-Oct-20 07:00
Temperature Upon Receipt [°C]					14.0
Aluminum (total) [mg/L]	05-Nov-20	12:43	06-Nov-20	14:31	124
Arsenic (total) [mg/L]	05-Nov-20	12:43	06-Nov-20	14:31	0.088
Barium (total) [mg/L]	05-Nov-20	12:43	06-Nov-20	14:31	1.92
Cadmium (total) [mg/L]	05-Nov-20	12:43	06-Nov-20	14:31	0.0234
Calcium (total) [mg/L]	05-Nov-20	12:43	06-Nov-20	14:31	663
Chromium (total) [mg/L]	05-Nov-20	12:43	06-Nov-20	14:31	0.225
Cobalt (total) [mg/L]	05-Nov-20	12:43	06-Nov-20	14:31	0.0192
Copper (total) [mg/L]	05-Nov-20	12:43	06-Nov-20	14:31	5.84
Iron (total) [mg/L]	05-Nov-20	12:43	06-Nov-20	14:31	101
Lead (total) [mg/L]	05-Nov-20	12:43	06-Nov-20	14:31	0.239
Magnesium (total) [mg/L]	05-Nov-20	12:43	06-Nov-20	14:31	95.7
Manganese (total) [mg/L]	05-Nov-20	12:43	06-Nov-20	14:31	1.82
Mercury (total) [mg/L]	03-Nov-20	08:06	03-Nov-20	15:56	0.00087
Nickel (total) [mg/L]	05-Nov-20	12:43	06-Nov-20	14:32	0.219
Potassium (total) [mg/L]	05-Nov-20	12:43	06-Nov-20	14:32	59.8
Selenium (total) [mg/L]	05-Nov-20	12:43	06-Nov-20	14:32	0.0880
Silver (total) [mg/L]	05-Nov-20	12:43	06-Nov-20	14:32	0.0192
Sodium (total) [mg/L]	05-Nov-20	12:43	06-Nov-20	14:32	372
Tin (total) [mg/L]	05-Nov-20	12:43	06-Nov-20	14:32	0.0438
Zinc (total) [mg/L]	05-Nov-20	12:43	06-Nov-20	14:32	26.0

Page 1 of 2 Data reported represents the sample submitted to SGS. Reproduction of this analytical report in full or in part is prohibited without prior written approval. Please refer to SGS General Conditions of Services located at https://www.sgs.ca/en/terms-and-conditions (Printed copies are available upon request.) Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples. SGS Canada Inc. Environment-Health & Safety statement of conformity decision rule does not consider uncertainty when analytical results are compared to a specified standard or



Works #: 110000819 PO#017018 CA15699-OCT20 Project: LR Report:

0002313893

eena ne

Carrie Greenlaw Project Specialist, Environment, Health & Safety

Page 2 of 2 Data reported represents the sample submitted to SGS. Reproduction of this analytical report in full or in part is prohibited without prior written approval. Please refer to SGS General Conditions of Services located at https://www.sgs.ca/en/terms-and-conditions (Printed copies are available upon request.) Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples. SGS Canada Inc. Environment-Health & Safety statement of conformity decision rule does not consider uncertainty when analytical results are compared to a specified standard or

Sampler N * Station Acru digestion, Bs ScEt - Secon Holding Tank						Sept	Station Acronym		Email:	Fax:	Address:						(())
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Cell Contents, Dis-Distriction, Downs	2	and land o	Clientwik	2 am	rucid 2:	- Septage - Holding Tank	Sample Location Name	Sample	medney2@ocwa.com	519-374-5782 (519) 797-3080	18 Caroline Street Southampton, ON NOH 2L0	Report to: Megan Edney	Requested Turnaround Time:	Identification of Regulation under which	Quote # Attached Parameter List	Org. # 5620	Waterworks/Project # 1100
Ling Ling	M	appropriate creat	1 Ne-sample	m CI não	Sed thier	1105	Date & Time Collected NOV 1 2 2020		mednev2@ocw	519-374-5782	18 Caroline Str Southampton, (NOH 2L0	Data Transfer (h the sample(s) fall: No Requireme	No	7 W I T	000819
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				6	0	×	Xylene		carrie	705-6	185 C Lakefi KOL 2	Labor			റ്	ple con	
						 2 - 500 mL PET bottles, 1 - 60 mL plastic w/ sulphunc acid preservative, 2 - 40 mL EPA vials unpreserved (no headspace), 2 - 40 mL EPA vials w/ sodium bisulphate preservative (no headspace) 		Comments	.greenlaw@sgs.com	52-2000	ield, ON H0	atory: SGS Lakefield Resea	Other Specify:			dition upon receipt Initial	13503
	Yes No	No	No	Yes	Yes	No No	Upload to MOE					Irch Ltd			1		
	Ves Ves	Yes	Yes	No[Yes	□ Yes[Upload to OCWA	4									



OCWA-Grey Bruce (Wiarton WPCP)

Attn : Karla Young

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

Phone: 519-797-2561 Fax:pdf Works #: 110000819 Project : PO#017018

20-November-2020

Date Rec.: 13 November 2020 LR Report: CA13503-NOV20

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: Sept Sept-Septage-Hol ding Tank
Sample Date & Time					12-Nov-20 11:05
Temperature Upon Receipt [°C]					5.0
Biochemical Oxygen Demand (BOD5) [mg/L]	13-Nov-20	16:58	18-Nov-20	14:59	1350
Total Suspended Solids [mg/L]	14-Nov-20	11:39	19-Nov-20	09:08	468
Chemical Oxygen Demand [mg/L]	16-Nov-20	11:25	18-Nov-20	14:59	2480
Ammonia+Ammonium (N) [as N mg/L]	16-Nov-20	17:09	18-Nov-20	13:24	80.3
Total Kjeldahl Nitrogen [as N mg/L]	16-Nov-20	08:29	18-Nov-20	13:46	143
Phosphorus (total) [mg/L]	16-Nov-20	08:29	20-Nov-20	10:41	25.2

Carrie Greenlaw Project Specialist, Environment, Health & Safety

0002327640

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Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples. SGS Canada Inc. Environment-Health & Safety statement of conformity decision rule does not consider uncertainty when analytical results are compared to a specified standard or

KUN CP 0001

· 002 374746 400 .

Revision #1

Revised: 2017.12.01

ScE1 - Secondary Effluent, TWAS - Thickened Waste Activated Sludge, IndW - Industrial Wastewater, PSIn - Pump Stn, Sept - Septage, Lott - Leachale, PrTr - Primary Treatment, ReAr - Re-availan, Tert - Tertary Treatment, Allo - Actilit, TeBy - Tertary Bypes, Hold - Holding Tank, CSO - Combined Sever Overflow, SSO - Sanitary Sever Overflow

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lame	Sept	Station Number (Short Name)				H									
	- (0.)-			med	(519	519-	NOH	18 C	Beng	Ident	Attac	Quot	Org	Fac	Wat
Se Ma	Septage - Holding Tank	Sample Location Name	Sample	nev2@ocwa.com) 797-3080	374-5782	hampton, ON 2L0	aroline Street	requested Turnaround Time;	ification of Regulation under which the	ched Parameter List	0	.# 5620	ility Name Wiarton WV	erworks/Project # 11000
Lil	ILIS	Date & Time Collected NOV 2 3 2020	/	mednev2@ocv	(519) 797-308	519-374-5782	Southampton, NOH 2L0	18 Caroline St	Data Transfar	e sample(s) fall: No Requirem	No			VTP	0819
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pler Sig	×	Total Suspended Solids								Sample					
gnature	×	Total Phosphorous	1						8	Resu					
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	X	Total Ammonia Nitrogen		apwe	(519)	(519)	Shelb	136 N	h	er Any		_		Labo	Cof
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1	×	Toluene							7-100		Y		Rec'd:	Samp	0
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	 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) 		Comments	.greenlaw@sgs.com	52-6365	52-2000	ield, ON	oncession St.	Other Specify:				Initials	dition upon receipt	
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OCWA-Grey Bruce (Wiarton WPCP)

Attn : Karla Young

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

Phone: 519-797-2561 Fax:pdf Works #: 110000819 Project : PO#017018

10-December-2020

Date Rec.: 24 November 2020 LR Report: CA12684-NOV20

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: Sept Sept-Septage-Hol ding Tank
Sample Date & Time					23-Nov-20 10:15
Temperature Upon Receipt [°C]					5.0
Biochemical Oxygen Demand (BOD5) [mg/L]	24-Nov-20	16:24	30-Nov-20	11:25	2270
Total Suspended Solids [mg/L]	25-Nov-20	07:36	27-Nov-20	08:22	805
Chemical Oxygen Demand [mg/L]	25-Nov-20	10:46	26-Nov-20	16:32	4200
Ammonia+Ammonium (N) [as N mg/L]	24-Nov-20	16:28	25-Nov-20	10:31	39.5
Total Kjeldahl Nitrogen [as N mg/L]	25-Nov-20	07:25	27-Nov-20	15:24	109
Phosphorus (total) [mg/L]	25-Nov-20	07:25	30-Nov-20	14:22	16.6
Isopropyl Alcohol [mg/L]	08-Dec-20	16:11	10-Dec-20	10:20	< 5
Methyl alcohol [mg/L]	08-Dec-20	16:11	10-Dec-20	10:20	< 5
Acetone [ug/L]	25-Nov-20	12:37	27-Nov-20	16:30	< 1200
Benzene [ug/L]	25-Nov-20	12:37	27-Nov-20	16:30	< 20
Ethylbenzene [ug/L]	25-Nov-20	12:37	27-Nov-20	16:30	< 20
Dichloromethane [ug/L]	25-Nov-20	12:37	27-Nov-20	16:30	< 20
Methyl ethyl ketone [ug/L]	25-Nov-20	12:37	27-Nov-20	16:30	< 800
Toluene [ug/L]	25-Nov-20	12:37	27-Nov-20	16:30	85.4
Xylene (total) [ug/L]	25-Nov-20	12:37	27-Nov-20	16:30	< 20
o-xylene [ug/L]	25-Nov-20	12:37	27-Nov-20	16:30	< 20
m/p-xylene [ug/L]	25-Nov-20	12:37	27-Nov-20	16:30	< 20

Carrie Greenlaw Project Specialist, Environment, Health & Safety

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General Conditions of Services located at https://www.sgs.ca/en/terms-and-conditions (Printed copies are available upon request.) Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples. SGS Canada Inc. Environment-Health & Safety statement of conformity decision rule does not consider uncertainty when analytical results are compared to a specified standard or

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OCWA-Grey Bruce (Wiarton WPCP)

Attn : Karla Young

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

Phone: 519-797-2561 Fax:pdf Works #: 110000819 Project : PO#017018

29-December-2020

Date Rec.: 17 December 2020 LR Report: CA12766-DEC20

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: Sept Sept-Septage-Hol ding Tank
Sample Date & Time					16-Dec-20 08:00
Temperature Upon Receipt [°C]					6.0
Biochemical Oxygen Demand (BOD5) [mg/L]	17-Dec-20	17:05	22-Dec-20	10:55	693
Total Suspended Solids [mg/L]	21-Dec-20	09:22	23-Dec-20	10:17	151
Chemical Oxygen Demand [mg/L]	18-Dec-20	12:27	22-Dec-20	10:55	1900
Ammonia+Ammonium (N) [as N mg/L]	18-Dec-20	15:30	22-Dec-20	09:22	1.6
Total Kjeldahl Nitrogen [as N mg/L]	18-Dec-20	08:16	22-Dec-20	09:38	30.9
Phosphorus (total) [mg/L]	18-Dec-20	08:16	22-Dec-20	15:53	3.9
Isopropyl Alcohol [mg/L]	21-Dec-20	11:11	21-Dec-20	16:47	< 5
Methyl alcohol [mg/L]	21-Dec-20	11:11	21-Dec-20	16:47	< 5
Acetone [ug/L]	24-Dec-20	09:48	29-Dec-20	12:55	< 1200
Benzene [ug/L]	24-Dec-20	09:48	29-Dec-20	12:55	< 20
Ethylbenzene [ug/L]	24-Dec-20	09:48	29-Dec-20	12:55	< 20
Dichloromethane [ug/L]	24-Dec-20	09:48	29-Dec-20	12:55	< 20
Methyl ethyl ketone [ug/L]	24-Dec-20	09:48	29-Dec-20	12:55	< 800
Toluene [ug/L]	24-Dec-20	09:48	29-Dec-20	12:55	36.1
Xylene (total) [ug/L]	24-Dec-20	09:48	29-Dec-20	12:55	< 20
o-xylene [ug/L]	24-Dec-20	09:48	29-Dec-20	12:55	< 20
m/p-xylene [ug/L]	24-Dec-20	09:48	29-Dec-20	12:55	< 20

Carrie Greenlaw Project Specialist, Environment, Health & Safety

0002362840

Page 1 of 1

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Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples. SGS Canada Inc. Environment-Health & Safety statement of conformity decision rule does not consider uncertainty when analytical results are compared to a specified standard or