Ontario Clean Water Agency
Agence Ontarienne Des Eaux

WIARTON
WASTEWATER TREATMENT PLANT

ANNUAL PERFORMANCE REPORT

For the period of
JANUARY 1, 2016 TO DECEMBER 31, 2016

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

1. System Description

The Wiarton Sewage Lagoon 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, 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 stationis 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 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.

Disinfection that utilizes the UV disinfection system is only required from May 15 to September 15.

The plant discharge utilizes the pipe located on Mary Street to Isaac Street (original) as well as the original abandoned forcemain on Taylor Street. Both pipes intersect at the discharge pipe located at George and Tyson Streets.

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

Table 1. Wiarton Sewage Lagoon System Overview

Facility Name	Wiarton Wastewater Treatment Plant
Facility Type	MBBR 3-cell, Aerated Lagoon3-cell, Sand Filtration, UV disinfection with pumping stations (3)
Plant Classification	II
Works Number	20002681
Recommended Rated Capacity	2,500 m^3/day
Number of Households	1,100
Receiving Water	Colpoy's Bay (Georgian Bay)
Environmental Compliance Approval	6375-A2PKKS
Certificate of Approval	3-0709-82-006 (Air)

Table 2. Monitoring Program for ECA 6375-A2PKKS

Source	Parameter	Frequency	Method
Influent	Flow (m^3)	Daily	Flow Meter
	BOD_5, TSS, TP, TKN	Monthly	External Analysis
Effluent	Flow (m^3)	Daily	Flow Meter
	$CBOD_5$, TSS, Total Ammonia (TAN)) Nitrogen, Total Phosphorus	Bi-Weekly	External Analysis
	E. Coli	Bi-Weekly	External Analysis
	pH	Bi-Weekly	In-House & External Analysis
	Temperature	Bi-Weekly	In-House & External Analysis

2. Monitoring Data

As per ECA 6375-A2PKKS 11.(6)(a), *a summary and interpretation of all monitoring data and a comparison to the effluent limits outlined in Condition 7, including an overview of the success and adequacy the works* is required.

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 and Table 4. The sampling frequencies either meet or exceed the requirements set out in Section 9 of ECA 6375-A2PKKS.

Table 3. Raw Sewage Monitoring – Sampling Frequencies as Required by Section 9 of ECA 9441-78RQ8B

Parameter	Sample Type	Frequency
BOD_5	Grab	Monthly
Total Suspended Solids	Grab	Monthly
Total Phosphorous	Grab	Monthly
Total Kjeldahl Nitrogen	Grab	Monthly

Table 4. Effluent Sampling Monitoring – Sampling Frequencies as Required by Section 9 of ECA 9441-78RQ8B

Parameters	Sample Type	Frequency
$CBOD_5$	Composite	Bi-weekly
Total Suspended Solids	Composite	Bi-weekly
Total Phosphorous	Composite	Bi-weekly
Total Kjeldahl Nitrogen	Composite	Bi-weekly
Total Ammonia Nitrogen (TAN)	Composite	Bi-weekly
E. Coli	Grab	Bi-weekly
pH	Grab	Bi-weekly
Temperature	Grab	Bi-weekly

2.2 Effluent Limits

The effluent limits that are to be met as per Section 6 of ECA 6375-A2PKKS for the Wiarton Sewage Treatment Lagoon are found in Table 5.

Table 5. Effluent Limits as per Section 7 of ECA 6375-A2PKKS

Effluent Parameter	Monthly Average Concentration (mg/L)	Monthly Average Waste Loading (kg/day)
$CBOD_5$	20.0	50.0
Total Suspended Solids	24.0	60.0
Total Phosphorous as P	0.5	1.25
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	

2.3 Comparison of Data to Effluent Limits

Analytical and monitoring data for the Wiarton Sewage Lagoon System is housed in OCWAs data management system (WISKI7). Annual and monthly averages for flows, CBOD, BOD_5, Suspended Solids, Total Phosporous 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 6. 2016 Effluent Annual Average Concentrations and Removal Efficiencies

Parameter	Annual Average Concentration	Removal Efficiency
$CBOD_5$	4.326	99.0%
Total Suspended Solids	7.910	99.1%
Total Phosphorous	0.186	98.0%

The following is a summary and interpretation of all monitoring data and a comparison to the effluent limits outlined in Table 7.

Table 7. Comparison of Wiarton Sewage Lagoon System Monitoring Data to Effluent Limits, 2016

	$CBOD_5$				**Total Suspended Solids**				**Total Phosphorous as P**				**E. Coli**	
	Monthly Average Concentration (mg/L)	Within Limits (20.0 mg/L)	Monthly Average Loading (kg/d)	Within Limits (50.0 mg/L)	Monthly Average Concentration (mg/L)	Within Limits (20.0 mg/L)	Monthly Average Loading (kg/d)	Within Limits (50.0 mg/L)	Monthly Average Concentration (mg/L)	Within Limits (0.5 mg/L)	Monthly Average Loading (kg/d)	Within Limits (1.25mg/L)	Monthly Geometric Mean Density (mg/L)	Within Limits (200 cfu/ 100 mL)
January	4.0	Y	8.892	Y	7.0	Y	15.561	Y	0.180	Y	0.400	Y	<2	n/a
February	5.3	Y	14.095	Y	13.8	Y	36.915	Y	0.213	Y	0.571	Y	<2	n/a
March	5.3	Y	14.257	Y	12.0	Y	32.078	Y	0.113	Y	0.303	Y	<2	n/a
April	4.7	Y	15.333	Y	8.7	Y	28.475	Y	0.007	Y	0.219	Y	<2	n/a
May	7	Y	6.950	Y	10.3	Y	10.260	Y	0.290	Y	0.288	Y	<2	Y
June	2.7	Y	1.388	Y	8.3	Y	4.336	Y	0.500	Y	0.260	Y	<2	Y
July	2.0	Y	0.152	Y	8.0	Y	0.608	Y	0.110	Y	0.008	Y	<2	Y
August	7	Y	6.460	Y	7.3	Y	6.768	Y	0.163	Y	0.151	Y	2.884	Y
September	6.7	Y	3.959	Y	9.0	Y	5.345	Y	0.190	Y	0.211	Y	<2	Y
October	2.3	Y	1.946	Y	2.0	Y	1.668	Y	0.227	Y	0.189	Y	<2	n/a
November	2	Y	1.356	Y	2.0	Y	1.356	Y	0.125	Y	0.085	Y	<2	n/a
December	3	Y	3.564	Y	6.5	Y	7.772	Y	0.060	Y	0.071	Y	<2	n/a

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

Another measure of effluent quality is pH, as per ECA 6375-A2PKKS , the effluent pH is to remain within the range of 6.0 and 9.5 at all times. In 2016, the effluent was within the effluent limits and ranged from 7.61 to 8.33 with an annual average of 8.00. A monthly summary of pH can be found in Table 8

Table 8. Monthly Summary of pH for the Wiarton Sewage Lagoon System, 2016

	Average	**Minimum**	**Maximum**
January	8.12	8.10	8.13
February	8.07	7.99	8.19
March	8.12	8.05	8.18
April	8.15	7.99	8.33
May	8.01	7.91	8.18
June	8.13	8.01	8.22
July	7.89	7.89	7.89
August	7.92	7.83	8.07
September	7.85	7.69	8.06
October	7.81	7.61	7.96
November	7.88	7.84	7.91
December	8.01	7.84	8.17

2.4 Effluent Objectives

The effluent objectives as per Section 6 of ECA 6375-A2PKKS for the Wiarton Sewage Treatment Lagoon are found in
Table 9.

Table 9. Effluent Objectives as per Section 6 of ECA 6375-A2PKKS

Effluent Parameter	Concentration Objective (mg/L)	Waste Loading Objective (kg/day)
$CBOD_5$	15.0	37.5
Suspended Solids	15.0	37.5
Total Phosphorous	0.3	0.75
(Ammonia + Ammonium) Nitrogen May 1 to November 30	3.0	7.5
(Ammonia + Ammonium) Nitrogen December 1 to April 30	8.0	20.0

2.5 Comparison of Data to Effluent Objectives

As per ECA 6375-A2PKKS 11.(6)(f) *a description of efforts made and results achieved in meeting the effluent objectives of Condition 6* is required.

During the reporting period, the plant effluent was within the effluent objectives 97.9% of the time. Refer to Table 10 for detailed laboratory analysis results in comparison to the effluent objectives. When necessary, additional alum was used to assist in staying within the effluent objectives, particularly for total phosphorous.

Table 10. Comparison of Wiarton Sewage Lagoon System Monitoring Data to Effluent Objectives, 2016

	$CBOD_5$				**Total Suspended Solids**				**Total Phosphorous as P**				**(Ammonia + Ammonium) Nitrogen**					
	Monthly Average Concentration (mg/L)	Within Objectives (15.0 mg/L)	Monthly Average Loading (kg/d)	Within Objectives (37.5 mg/L)	Monthly Average Concentration (mg/L)	Within Objectives (15.0 mg/L)	Monthly Average Loading (kg/d)	Within Objectives (37.5 mg/L)	Monthly Average Concentration (mg/L)	Within Objectives (0.3 mg/L)	Monthly Average Loading (kg/d)	Within Objectives (0.75 mg/L)	Monthly Average Concentration (mg/L)	Within Objectives, May to November (3.0 mg/L)	Within Objectives, December to April (8.0 mg/L)	Monthly Average Loading (kg/d)	Within Objectives, May to November (7.5 kg/d)	Within Objectives, December to April (20.0 kg/d)
January	4.0	Y	8.892	Y	7.0	Y	15.561	Y	0.180	Y	0.400	Y	5.15	n/a	Y	11.45	n/a	Y
February	5.3	Y	14.095	Y	13.8	Y	36.915	Y	0.213	Y	0.571	Y	4.925	n/a	Y	13.22	n/a	Y
March	5.3	Y	14.257	Y	12.0	Y	32.078	Y	0.113	Y	0.303	Y	3.00	n/a	Y	8.02	n/a	Y
April	4.7	Y	15.333	Y	8.7	Y	28.475	Y	0.0067	Y	0.219	Y	1.43	n/a	Y	4.71	n/a	Y
May	7	Y	6.950	Y	10.3	Y	10.260	Y	0.290	Y	0.288	Y	1.73	Y	n/a	1.72	Y	n/a
June	2.7	Y	1.388	Y	8.3	Y	4.336	Y	**0.500**	**N**	0.260	Y	**4.97**	**N**	n/a	2.58	Y	n/a
July	2.0	Y	0.152	Y	8.0	Y	0.608	Y	0.110	Y	0.008	Y	0.20	Y	n/a	0.02	Y	n/a
August	7	Y	6.460	Y	7.3	Y	6.768	Y	0.163	Y	0.151	Y	0.13	Y	n/a	0.12	Y	n/a
September	6.7	Y	3.959	Y	9.0	Y	5.345	Y	0.190	Y	0.2113	Y	0.37	Y	n/a	0.22	Y	n/a
October	2.3	Y	1.946	Y	2.0	Y	1.668	Y	0.227	Y	0.189	Y	1.70	Y	n/a	1.42	Y	n/a
November	2	Y	1.356	Y	2.0	Y	1.356	Y	0.125	Y	0.085	Y	1.25	Y	n/a	0.850	Y	n/a
December	3	Y	3.564	Y	6.5	Y	7.772	Y	0.060	Y	0.071	Y	0.45	n/a	Y	0.54	n/a	Y

2.6 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 6375-A2PKKS. Table 11 summarizes the monitoring data for the reporting period.

2.6.1 Flows

The total effluent flow in 2016 was 506,407 m^3 with an annual average daily flow of 1,389.39 m^3/day, which is 56% of the recommended rated capacity of the system. Total effluent flows in 2016 have slightly decreased in comparison to2016. The daily effluent flow remained within the recommended rated capacity % (i.e. out of 365 days) of the time during 2016. A summary of the average and maximum daily flows on a monthly basis can be found in Table 11. 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. For more detailed information regarding flows, refer to Appendix A. Daily flows which exceeded the recommended rated capacity were typically due to high temperatures, snow melt and heavy rains.

Table 11. Average Daily Raw Sewage Flows by Month for 2016

Month	Average Day Flow (m^3)	Maximum Day Flow (m^3)
January	2,223	3,229
February	2,685	4,187
March	2,673	4,574
April	3,285	5,643
May	993	1,505
June	520	1,433
July	76	1,048
August	923	3,005
September	594	1,069
October	834	1,905
November	6,78	979
December	1,188	1,927

2.6.2 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. 3.46 mg/L in 2016 versus 4.75 mg/L in 2015).

Table 12. Monitoring Parameters as Required by ECA 6375-A2PKKS for Wiarton Sewage Lagoon System, 2016

Parameters	Average	Minimum	Maximum
Total Kjeldahl Nitrogen (N mg/L)	3.46	1.10	7.50

2.7 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 Sewage Lagoon System is performing adequately and successfully. The system shows a high removal efficiency and was within effluent limits the vast majority of the time, 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

As per Section 11.(6)(b) of ECA 6375-A2PKKS, *a description of any operating problems encountered and corrective actions taken* is required. There were no bypasses of raw sewage or spills at the Wiarton Sewage Lagoon System or any associated pumping station and the sewage lagoon system operated within its rated capacity. For 2016 an operating challenge was the intermittent power bumps which caused the treated sewage to bypass UV disinfection, the required reporting was completed and Operations staff were able to maintain good overall performance of the sewage lagoon system.

4. Major Maintenance Activities

As per ECA 6375-A2PKKS 11.(6)(c), *a summary of all maintenance carried out on any major structure, equipment, apparatus, mechanism or thing forming part of the works* is required. For 2016, major maintenance activities that occurred include:

- Final construction phase of the new Moving Bed Bioreactor System by the Town of South Bruce Peninsula.
- Installation of a new Septage Receiving Station by the Town of South Bruce Peninsula.
- Installation of a new Aluminum Sulfate injection system with poly tank in the new MBBR System by OCWA.
- Replaced pump end on both SPS no.1 pumps.
- Cylinder for UV unit no. 2 was rebuilt.

5. Effluent Quality Assurance and Control

As per Section 11.(6)(d) of ECA 6375-A2PKKS, *a summary of any effluent quality assurance or control measures undertaken in the reporting period* is required.

All laboratory analyzed 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 all 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.

6. Calibration and Maintenance

As per ECA 6375-A2PKKS 11.(6)(e) *a summary of the calibration and maintenance carried out on all effluent monitoring equipment* is required

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 sign-off and the work order is considered closed.

On May 9, 2016, Flowmetrix performed an annual third party instrument verification of the final effluent 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.

7. Sludge Generation and Handling

As per ECA 6375-A2PKKS 11.(6)(g) *a tabulation of the volume of sludge generated in the reporting period, an outline of anticipated volumes to be generated in the next reporting period and a summary of the locations where the sludge was disposed* is required.

Since the facility is a sewage lagoon system, sludge was not generated or disposed of. The volume of sludge generated during the reporting period was 0 m^3. It is anticipated that 0 m^3 of sludge will be produced during 2017.

8. Septage Receiving Works

In 2016, approximately 2,312.92 m^3 (508,771 imperial gallons) of sewage was received by the Wiarton Sewage Lagoon System. The sewage was received from various sources including:

- Owen Sound Septic Services
- Grey Bruce Septic Services
- D&S Portables

The total monthly volume of sewage received can be found in Table 13. Detailed haulage volumes can be found in Appendix C.

Table 13. Total Volume of Sewage Received in 2016

Month	Total Volume of Sewage Received (m^3)
January	155.04
February	160.63
March	202.39
April	245.03
May	200.93
June	154.57
July	247.3
August	340.05
September	171.47
October	170.02
November	125.93
December	139.56

9. Community Complaints

As per ECA 6375-A2PKKS 11.(6)(h) *a summary of any complaints received during the reporting period and any steps taken to address the complaints* is required.

During 2016, nine (9) community complaints for the Wiarton Sewage Lagoon System were received regarding sewer lateral services blockage. A detailed summary of the community complaints can be found in Appendix D.

10. By-passes, Spills or Abnormal Discharge Events

As per ECA 6375-A2PKKS 10.(6)(i) *a summary of all by-pass, spill or abnormal discharge events* is required.

There were no primary treatment bypasses and no abnormal discharge events in 2016 at the Wiarton Sewage Lagoon System.

Due to the requirement set out by Provincial Office Victoria Black (May 2012) to report instances of power loss at the filter building where filtered lagoon effluent does not receive full UV dosage, four (4) reports of final effluent (total volume of 70.98 m^3) being discharged without receiving UV disinfection were reported. All required information was recorded and the appropriate notifications were made to the Spills Action Centre, Ministry of Environment and Climate Change, Ministry of Health, the Municipality of Northern Bruce Peninsula and Environment Canada. Refer to Appendix E for detailed by-pass reports.

Appendix A
Performance Assessment Report

Ontario Clean Water Agency
Performance Assessment Report Wastewater/Lagoon

Report extracted 03/23/2017 16:56

From: **01/01/2016 to 31/12/2016**

Facility: **[5620] WIARTON WASTEWATER TREATMENT LAGOON**

Works: **[110000819]**

		01/2016		02/2016		03/2016		04/2016		05/2016		06/2016		07/2016		08/2016		09/2016		10/2016		11/2016		12/2016		<--Total-->		<--Avg.-->		<--Max.-->		<--Criteria-->
Flows:																														
Raw Flow: Total - Raw Sewage (m^3)		63391.00		73459.00		102498.00		72629.00		41338.00		29538.00		29540.00		35267.00		28226.00		30727.00		26625.00		45128.00		578366.00						
Raw Flow: Avg - Raw Sewage (m^3/d)		2044.87		2533.07		3306.39		2420.97		1333.48		984.60		952.90		1137.65		940.87		991.19		887.50		1455.74				1582.44				
Raw Flow: Max - Raw Sewage (m^3/d)		4074.00		5761.00		9904.00		5071.00		2637.00		1309.00		1411.00		4310.00		1373.00		1519.00		1236.00		4505.00						9904.00		
Eff. Flow: Total - Effluent (m^3)		68914.00		77858.00		82867.00		98569.00		30779.00		15611.00		2355.00		28610.00		17816.00		25860.00		20339.00		36829.00		506407.00						
Eff. Flow: Avg - Effluent (m^3/d)		2223.03		2684.76		2673.13		3285.63		992.87		520.37		75.97		922.90		593.87		834.19		677.97		1188.03				1389.39				
Eff. Flow: Max - Effluent (m^3/d)		3229.00		4187.00		4574.00		5643.00		1505.00		1433.00		1048.00		3005.00		1069.00		1905.00		979.00		1927.00						5643.00		
Carbonaceous Biochemical Oxygen Demand: CBOD:																														
Raw: Avg cBOD5 - Raw Sewage (mg/L)		101.000		76.000		78.000		59.000		92.000		20.000		86.000		178.000		181.000		216.000		201.000		167.000				121.250		216.000		
Raw: # of samples of cBOD5 - Raw Sewage (mg/L)		1		1		1		1		1		1		1		1		1		1		1		1		12						
Eff: Avg cBOD5 - Effluent (mg/L)	<	4.000	<	5.250	<	5.333	<	4.667		7.000	<	2.667	<	2.000		7.000	<	6.667	<	2.333	<	2.000		3.000			<	4.326		7.000		20.0
Eff: # of samples of cBOD5 - Effluent (mg/L)		2		4		3		3		3		3		1		3		3		3		2		2		32						
Loading: cBOD5 - Effluent (kg/d)	<	8.892	<	14.095	<	14.257	<	15.333		6.950	<	1.388	<	0.152		6.460	<	3.959	<	1.946	<	1.356		3.564			<	6.529		15.333		
Percent Removal: cBOD5 - Raw Sewage (mg/L)		96.040		93.092		93.162		92.090		92.391		86.667		97.674		96.067		96.317		98.920		99.005		98.204						99.005		
Biochemical Oxygen Demand: BOD5:																														
Total Suspended Solids: TSS:																														
Raw: Avg TSS - Raw Sewage (mg/L)		88.000		88.000		169.000		105.000		125.000		47.000		116.000		263.000		277.000		231.000		215.000		159.000				156.917		277.000		
Raw: # of samples of TSS - Raw Sewage (mg/L)		1		1		1		1		1		1		1		1		1		1		1		1		12						
Eff: Avg TSS - Effluent (mg/L)		7.000		13.750		12.000		8.667		10.333		8.333		8.000		7.333		9.000	<	2.000		2.000		6.500			<	7.910		13.750		24.0
Eff: # of samples of TSS - Effluent (mg/L)		2		4		3		3		3		3		1		3		3		3		2		2		32						
Loading: TSS - Effluent (kg/d)		15.561		36.915		32.078		28.475		10.260		4.336		0.608		6.768		5.345	<	1.668		1.356		7.722			<	12.591		36.915		
Percent Removal: TSS - Raw Sewage (mg/L)		92.045		84.375		92.899		91.746		91.733		82.270		93.103		97.212		96.751		99.134		99.070		95.912						99.134		
Total Phosphorus: TP:																														
Raw: Avg TP - Raw Sewage (mg/L)		1.860		2.010		2.630		1.200		2.060		1.210		2.090		4.810		4.800		3.560		3.950		2.960				2.762		4.810		
Raw: # of samples of TP - Raw Sewage (mg/L)		1		1		1		1		1		1		1		1		1		1		1		1		12						
Eff: Avg TP - Effluent (mg/L)		0.180		0.213		0.113		0.067		0.290		0.500		0.110		0.163		0.190		0.227		0.125		0.060				0.186		0.500		0.5
Eff: # of samples of TP - Effluent (mg/L)		2		4		3		3		3		3		1		3		3		3		2		2		32						
Loading: TP - Effluent (kg/d)		0.400		0.571		0.303		0.219		0.288		0.260		0.008		0.151		0.113		0.189		0.085		0.071				0.221		0.571		
Percent Removal: TP - Raw Sewage (mg/L)		90.323		89.428		95.691		94.444		85.922		58.678		94.737		96.604		96.042		93.633		96.835		97.973						97.973		
Nitrogen Series:																														
Raw: Avg TKN - Raw Sewage (mg/L)		17.300		14.300		22.600		8.300		23.600		18.600		18.800		38.400		42.900		30.200		36.700		25.000				24.725		42.900		
Raw: # of samples of TKN - Raw Sewage (mg/L)		1		1		1		1		1		1		1		1		1		1		1		1		12						
Eff: Avg TAN - Effluent (mg/L)		5.150		4.925		3.000		1.433		1.733		4.967		0.200		0.133	<	0.367		1.700		1.250		0.450			<	2.109		5.150		3.0 - 8.0
Eff: # of samples of TAN - Effluent (mg/L)		2		4		3		3		3		3		1		3		3		3		2		2		32						
Loading: TAN - Effluent (kg/d)		11.449		13.222		8.019		4.709		1.721		2.584		0.015		0.123	<	0.218		1.418		0.847		0.535			<	3.738		13.222		
Eff: Avg NO3-N - Effluent (mg/L)		1.350		1.280		1.400		1.170		0.890		1.253		0.540		0.480		0.523		1.640		2.355		2.700				1.298		2.700		
Eff: # of samples of NO3-N - Effluent (mg/L)		2		4		3		3		3		3		1		3		3		3		2		2		32						
Eff: Avg NO2-N - Effluent (mg/L)	<	0.030	<	0.033		0.050		0.063		0.197		0.210	<	0.030	<	0.030	<	0.053		0.120		0.100		0.065			<	0.082		0.210		
Eff: # of samples of NO2-N - Effluent (mg/L)		2		4		3		3		3		3		1		3		3		3		2		2		32						
Disinfection:																														
Eff: GMD E. Coli - Effluent (cfu/100mL)		2.000		2.000		2.000		2.000		2.000		2.000		2.000		2.884		2.000		2.000		2.000		2.000				2.074		2.884		

Appendix B
Calibration Reports

Flowmetrix
Technical Services Inc.

Western Office
2088 Jetstream Road
London, Ontario
N5V 3P6

Eastern Office
1602 Old Wooler Road
Wooler, Ontario
K0K 3M0

Krohne
Verification Report

AS FOUND CERTIFICATION

FORWARD FLOW DIRECTION

PASS

CLIENT DETAIL	
CUSTOMER	OCWA - West Highlands
CONTACT	Leo Paul Frigault
	Cluster Manager
	519-797-3080
VER. BY - FM	Paris Machuk

Quality Management Standards Information - Reference equipment and instrumentation used to conduct this verification test is found in our AC-QMS document at the time this test was conducted.

EQUIPMENT DETAIL		
[MUT] MANUFACTURER		Krohne
MODEL		IFC 010D
SERIAL NUMBER		A99 11651
FUSE		On board plug
PLANT ID		Wiarton SPS No1 (Taylor St)
METER ID		Station Flow
FIT ID		N/A
CLIENT TAG		OCWA# 165372
OTHER		ORG# 5620
GPS COORDINATES	N44 44.503	W81 08.018
VERIFICATION DATE		May 09, 2016
CAL. FREQUENCY		Annual
CAL. DUE DATE		May, 2017

PROGRAMMING PARAMETERS		
DIAMETER (DN)	mm	200
F.S. FLOW - MAG	LPS	215.7
F.S. RANGE - O/P	LPS	200.0
CAL. k-FACTOR	GKL	4.50500
Zero Offset Flow	LPS	0.53

FORWARD TOTALIZER INFORMATION		
AS FOUND	3695113	M3
AS LEFT	3695130	M3
DIFFERENCE	17	M3
TEST CRITERIA		
AS FOUND CERTIFICATION TEST		Yes
FORWARD FLOW DIRECTION		Yes
ALLOWABLE [%] ERROR		5
COMPONENTS TESTED		
CONVERTER DISPLAY		Yes
mA OUTPUT		Yes
TOTALIZER		Yes
ACCURACY BASED ON [% o.r.]		Yes

ERROR DOCUMENTED IN THIS REPORT; BASED ON % o.r.

FLOW TUBE SIMULATION

				0.0	0.5	1.0	2.0	5.0	m/s
				0.2	5.2	10.2	20.2	50.2	% F.S. Flow
				0.3	5.7	11.0	21.8	54.2	% F.S. Range
REF. FLOW RATE				**0.53**	**11.31**	**22.10**	**43.67**	**108.37**	LPS
MUT [Reading]				0.53	11.39	22.10	43.68	108.47	LPS
MUT [Difference]				0.00	0.08	0.00	0.01	0.10	LPS
MUT [% Error]				0.00	0.67	0.00	0.03	0.09	%
mA OUTPUT				**4.000**	**4.905**	**5.768**	**7.493**	**12.670**	mA
MUT [Reading]	min.	4.000	mA	4.154	5.067	5.907	7.632	12.786	mA
MUT [Difference]	max.	20.000	mA	0.154	0.162	0.139	0.139	0.116	mA
MUT [% Error]				3.85	3.30	2.41	1.85	0.92	%
TOTALIZER - REF. FLOW RATE								**108.375**	LPS
TOTALIZER [MUT]								9	M3
TEST TIME								82.36	SECONDS
CALC. TOTALIZER								8.926	M3
ERROR								0.83	%

COMMENTS

QUALITY MANAGEMENT STANDARDS INFO.

[QMS] INFORMATION	IDENT.	ID #
[REFERENCE] FTS	KRO	1
PROCESS METER	DMM	3
ANALOG METER	AM	N/A
STOP WATCH	SW	YES

RESULTS

TEST	AVG % o.r.	PASS FAIL
DISPLAY	0.20	PASS
mA OUTPUT	2.47	PASS
TOTALIZER	0.83	PASS

This report reflects the test results of the overall accuracy for the above flow converter using the specified manufacturers flow tube simulator to within the specified tolerance as identified within this report.

Flowmetrix
Technical Services Inc.

Western Office
2088 Jetstream Road
London, Ontario
N5V 3P6

Eastern Office
1602 Old Wooler Road
Wooler, Ontario
K0K 3M0

Krohne
Verification Report

AS FOUND CERTIFICATION

FORWARD FLOW DIRECTION

PASS

CLIENT DETAIL	
CUSTOMER	OCWA - West Highlands
CONTACT	Leo Paul Frigault
	Cluster Manager
	519-797-3080
VER. BY - FM	Paris Machuk

Quality Management Standards Information - Reference equipment and instrumentation used to conduct this verification test is found in our AC-QMS document at the time this test was conducted.

EQUIPMENT DETAIL		
[MUT] MANUFACTURER		Krohne
MODEL		IFC 010D
SERIAL NUMBER		A98 17181
FUSE		On board plug
PLANT ID		Wiarton SPS No2 (441048 Elm St)
METER ID		Station Flow
FIT ID		N/A
CLIENT TAG		OCWA# 165385
OTHER		ORG# 5620
GPS COORDINATES	N44 44.148	W81 08.008
VERIFICATION DATE		May 09, 2016
CAL. FREQUENCY		Annual
CAL. DUE DATE		May, 2017

PROGRAMMING PARAMETERS		
DIAMETER (DN)	mm	250
F.S. FLOW - MAG	LPS	339.9
F.S. RANGE - O/P	LPS	250.0
CAL. k-FACTOR	GKL	4.54400
Zero Offset Flow	LPS	-1.27

FORWARD TOTALIZER INFORMATION		
AS FOUND	8601110	M3
AS LEFT	8601141	M3
DIFFERENCE	31	M3

TEST CRITERIA	
AS FOUND CERTIFICATION TEST	Yes
FORWARD FLOW DIRECTION	Yes
ALLOWABLE [%] ERROR	5

COMPONENTS TESTED	
CONVERTER DISPLAY	Yes
mA OUTPUT	Yes
TOTALIZER	Yes
ACCURACY BASED ON [% o.r.]	Yes

ERROR DOCUMENTED IN THIS REPORT; BASED ON % o.r.

FLOW TUBE SIMULATION

				0.0	0.5	1.0	2.0	5.0	m/s
				-0.4	4.6	9.6	19.6	49.6	% F.S. Flow
				-0.5	6.3	13.1	26.7	67.5	% F.S. Range
REF. FLOW RATE				**-1.27**	**15.73**	**32.72**	**66.72**	**168.70**	LPS
MUT [Reading]				-1.27	15.83	32.69	66.71	168.66	LPS
MUT [Difference]				0.00	0.10	-0.03	-0.01	-0.04	LPS
MUT [% Error]				0.00	0.66	-0.10	-0.01	-0.02	%
mA OUTPUT				**4.000**	**5.007**	**6.094**	**8.270**	**14.797**	mA
MUT [Reading]	min.	4.000	mA	4.157	5.167	6.247	8.404	14.903	mA
MUT [Difference]	max.	20.000	mA	0.157	0.160	0.153	0.134	0.106	mA
MUT [% Error]				3.93	3.21	2.51	1.62	0.72	%
TOTALIZER - REF. FLOW RATE								**168.696**	LPS
TOTALIZER [MUT]								20	M3
TEST TIME								118.57	SECONDS
CALC. TOTALIZER								20.002	M3
ERROR								-0.01	%

COMMENTS

QUALITY MANAGEMENT STANDARDS INFO.

[QMS] INFORMATION	IDENT.	ID #
[REFERENCE] FTS	KRO	1
PROCESS METER	DMM	3
ANALOG METER	AM	N/A
STOP WATCH	SW	YES

RESULTS

TEST	AVG % o.r.	PASS FAIL
DISPLAY	0.13	PASS
mA OUTPUT	2.40	PASS
TOTALIZER	-0.01	PASS

This report reflects the test results of the overall accuracy for the above flow converter using the specified manufacturers flow tube simulator to within the specified tolerance as identified within this report.

Flowmetrix
Technical Services Inc.

Western Office
2088 Jetstream Road
London, Ontario
N5V 3P6

Eastern Office
1602 Old Wooler Road
Wooler, Ontario
K0K 3M0

Rectangular Weir W/End Contractions

Verification/Calibration Report

AS FOUND CERTIFICATION

PASS

CLIENT DETAIL	
CUSTOMER	OCWA - West Highlands
CONTACT	Leo Paul Frigault
	Cluster Manager
	519-797-3080

EQUIPMENT DETAIL	
[MUT] MANUFACTURER	Milltronics
MODEL	MultiRanger
CONVERTER SERIAL NUMBER	05w023466
PLANT ID	Wiarton WWTP
METER ID	Final Effluent
FIT ID	1001
CLIENT TAG	OCWA# 209316
OTHER	ORG# 5620
GPS COORDINATES	N44 44.014 W81 07.965

VER. BY - FM Paris Machuk

Quality Management Standards Information - Reference equipment and instrumentation used to conduct this verification test is found in our AC-QMS document at the time this test was conducted.

VERIFICATION DATE	May 10, 2016
CAL. FREQUENCY	Annual
CAL. DUE DATE	May, 2017

PROGRAMMING PARAMETERS		
THROAT WIDTH, (exp 1.5)	m	1.010
EMPTY DISTANCE, TX to notch	m	0.5038
TRANSDUCER (TX), to sump floor	m	n/a
SUMP LEVEL, zero flow	m	n/a
MAX. HEAD	m	0.200
BLANKING DISTANCE	m	0.300
DEAD ZONE	m	0.304
MAX. FLOW	M3/H	574.1
F.S. RANGE - O/P	M3/H	574.1

Ultrasonic sensor installed to ensure full scale flow condition

TOTALIZER		
AS FOUND	390897.39	M3
AS LEFT	390937.9	M3
DIFFERENCE	40.51	M3
TEST CRITERIA		
AS FOUND CERTIFICATION TEST		Yes
ALLOWABLE [%] ERROR		5
COMPONENTS TESTED		
CONVERTER DISPLAY		yes
mA OUTPUT		yes
TOTALIZER		yes
ACCURACY BASED ON [% o.r.]		No

ERROR DOCUMENTED IN THIS REPORT; BASED ON % F.S.

AS FOUND TEST RESULTS

				0.0	12.9	36.1	65.6	100.0	% F.S. Range
				0.000	0.050	0.100	0.150	0.200	m
REF. FLOW RATE				**0.0**	**74.0**	**207.1**	**376.7**	**574.1**	M3/H
MUT [Reading]				0.0	72.3	202.0	375.9	575.8	M3/H
MUT [Difference]				0.0	-1.7	-5.1	-0.8	1.7	M3/H
MUT [% Error]				0.0	-0.3	-0.9	-0.1	0.3	%
mA OUTPUT				**4.000**	**6.062**	**9.773**	**14.499**	**20.000**	mA
MUT [Reading]	min.	4.000	mA	4.000	5.950	9.418	14.160	19.565	mA
MUT [Difference]	max.	20.000	mA	0.000	-0.112	-0.355	-0.339	-0.435	mA
MUT [% Error]				0.00	-0.56	-1.78	-1.70	-2.17	%
TOTALIZER - REF. FLOW RATE								**574.070**	M3/H
TOTALIZER [MUT]								17.75	M3
TEST TIME								111.33	SECONDS
CALC. TOTALIZER								17.753	M3
ERROR								-0.02	%

COMMENTS

Note: for test used Flowmetrix transducer and have to change transducer type P-31 from '0' to '112' and back to original after verification is complete.

QUALITY MANAGEMENT STANDARDS INFO.

[QMS] INFORMATION	IDENT.	ID #
[REFERENCE] LEVEL	Sim. BOARD	Yes
PROCESS METER	DMM	3
STOP WATCH	SW	Yes

RESULTS

TEST	AVG %FS	PASS FAIL
DISPLAY	-0.26	PASS
mA OUTPUT	-1.24	PASS
TOTALIZER	-0.02	PASS

This report reflects the test results of the overall accuracy for the above flow converter using the specified manufacturers flow tube simulator to within the specified tolerance as identified within this report.

Appendix C
Septage Receiving Volumes

2016 Sewage Hauled to Wiarton Sewage Lagoons

Date	Cubic Metres	Location	Hauler
January 2016	131.04	Tim Hortons (Hep)	Owen Sound Septic Services
January 2016	24.00		Grey Bruce Septic Service
February 2016	122.40	Tim Hortons (Hep)	Owen Sound Septic Services
February 2016	38.23		Grey Bruce Septic Service
March 2016	123.65	Tim Hortons (Hep)	Owen Sound Septic Services
March 2016	78.74		Grey Bruce Septic Service
April 2016	185.48	Tim Hortons (Hep)	Owen Sound Septic Services
April 2016	59.55		Grey Bruce Septic Service
May 2016	200.93	Tim Hortons (Hep)	Owen Sound Septic Services
June 2016	154.57	Tim Hortons (Hep)	Owen Sound Septic Services
July 2016	247.30	Tim Hortons (Hep)	Owen Sound Septic Services
August 2016	340.05	Tim Hortons (Hep)	Owen Sound Septic Services
September 2016	170.02	Tim Hortons (Hep)	Owen Sound Septic Services
Aug-Sep 2016	1.45		D&S Portables
October 2016	170.02	Tim Hortons (Hep)	Owen Sound Septic Services
November 2016	125.93	Tim Hortons (Hep)	Owen Sound Septic Services
December 2016	108.20	Tim Hortons (Hep)	Owen Sound Septic Services
December 2016	31.36		Grey Bruce Septic Service

Total **2,312.92**

Appendix D
Community Complaints

Wiarton Wastewater System Community Complaints 2016

January 21: blockage at 418 Brown St. sent camera and found an obstruction at 84 feet from clean out in basement – located in center of road.

February 27: Called back to 408 Claude St. for sewer blockage, found a blockage at the bottom of the clean out and confirmed that the pipe was in good condition.

March 17: 408 Claude St. sanitary service was backed up. Pushed camera through line. Offset joint causing root infiltration.

June 17: Complaint from #613 Centennial Cres. of water in a sump hole (blocked sanitary main).

August 16: Complaint from a resident of 640 Watson St. due to a sewage pump alarm. Bob (Town of South Bruce Peninsula) responded. Repairs and cleaning were completed by the Town plumber on

August 18: Blocked sewer line at 637 Berford St. Cleaned out the line and found it to be full of grease, pulled a brush through to clear the blockage. The owners of the property called the plumber to clean out the lines.

September 2: Karen from the Town of South Bruce Peninsula informed OCWA Operations staff of a reported septage smell at the Wiarton Service Centre on Berford St. Upon investigation, good flow was found through the New Orleans Pizza service and down Boyd St, but the flow at the Berford St. sanitary main was found to be moving slowly.

November 16: 525 FRANK ST – sewer back up – cleared blockage with snake, sent camera through clean out

December 17: 423 Brown St – snaked sanitary line, then pushed camera through and pipe looks crushed at end of drive and sidewalk, water flowing.

Appendix E
Effluent By-Pass Reports

Wiarton Water Treatment Plant
897, Bayview Street, Wiarton, ON, NOH 2TO
TEL: 519.534.1610 Fax: 519.534.3526

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Fax

		Fax Number
TO:	Spills Action Centre:	1-800-268-6061
	MOE Owen Sound:	519-371-2905
	MOH Owen Sound:	519-376-6310
	Town of South Bruce Peninsula (Attention Public Works Manager)	519-534-4976
	OCWA (Attention PCT)	519-797-3080
	Environment Canada {Attention Wastewater Program)	1-819-420-7380

FROM: Megan Edney

DATE: January 14, 2016

RE: Partial Bypass of Filtered Lagoon Effluent (No UV)

PAGES: 4 (including this one)

MESSAGE:

Partial bypass of filtered lagoon effluent which did not receive the required UV dose.

If you have any questions, concerns, or require additional information, please contact this office at 519-534-1610

FACILITY NAME: Wiarton Wastewater Control Plant

WORKS#: WW 110000819

LOCATION: 441048 Elm St. Lagoon Filter Bldg

DATE/TIME - January 14/16

START: 1019

STOP: 1029

TOTAL TIME: 10min

OPERATOR RESPONDING: ---------- (OIC) OIT ORO (circle one) IF OIT - WHO IS IN CHARGE FOR PROCESS CHANGES? _____

BRIEF DESCRIPTION OF SITUATION: UV LAMP FAILURE

REASON FOR OCCURRENCE: Power bump

WAS THIS A BYPASS? (YES) NO Partial

IF YES, WHAT WAS BYPASSED?

RAW SEWAGE BYPASS

(PARTIAL TERTIARY BYPASS OF SECONDARY EFFLUENT)

OTHER: _____

WHAT WAS DISCHARGED? Filtered Lagoon Effluent

APPROXIMATE QUANTITY OF BYPASS: 19.49 LITRES/ Kg/ (m3) (circle one) SHOW

CALCULATIONS:

2807 m^3/day

= 116.95 m^3/hr

= 1.94 m^3/min X 10 min. = 19.49 m^3

WERE SAMPLES TAKEN? YES (NO)

IF YES,

LOCATION	DATE	TIME	RESULTS	FREE Cl2 (mg/L)	TOTALCl2 (mg/L)

YES (NO) SAMPLES TAKEN (BOD SS PHOSPHOROUS E.COLI)

YES (NO) DISINFECT BYPASS

(YES) NO DID RELEASE ENTER WATER COURSE

(YES) NO DID RELEASE GO OFFSITE

NOTES:

Operator onsite when power bump occurred. Power came back on & UV lights took a couple minutes to start up.

NOTIFICATIONS:

PLACE	NUMBERS	VERBAL COMPLETE?	WRITTEN COMPLETE?	RESOLUTION COMPLETE?	CONTACT NAME
SAC (get reference number from them)	P: 1-800-268-6060 F: 1-800-268-6061	11:20	1140	1030	BRENDA
OWEN SOUND MOE	P: 519-371-2901 F: 519-371-2905	1130	1140	1030	
OWEN SOUND MOH	P: 519-376-9420 ONCALL: P: 519-376-5420 F: 519-376-6310	1130	1140	1030	Karen Gventer
CLIENT TOWN OF SOUTH BRUCE PENINSULA	P: 519-534-1400 X 131 Public Works Manager F: 519-534-4976	LM 1135	1140	1030	Andrew Sprunt
MANAGER	P: 519-379-2225 F: 519-534-3526	1020	1146	1030	Leo
OCWA PCT SOUTHAMPTON	P: (519) 373-1398 F: (519) 797-3080	1125	1140	1030	CAMILLE.
ENVIRONMENT CANADA (attention WASTEWATER PROGRAM)	F :1-819-420-7389	X	1140	1030	X

Waste Reference # 0647-A66M3D

Operator name: Megan Edney

Operator signature: MEdney Position: Operator.

Wiarton Water Treatment Plant
897, Bayview Street, Wiarton, ON, NOH 2TO
TEL: 519.534.1610 Fax: 519.534.3526

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Fax

		Fax Number
TO:	Spills Action Centre:	1-800-268-6061
	MOE Owen Sound:	519-371-2905
	MOH Owen Sound:	519-376-6310
	Town of South Bruce Peninsula (Attention Public Works Manager)	519-534-4976
	OCWA (Attention PCT)	519-797-3080
	Environment Canada {Attention Wastewater Program)	1-819-420-7380

FROM: Megan Edney

DATE: February 3, 2016

RE: Partial Bypass of filtered Lagoon Effluent.

PAGES: 4 (including this one)

MESSAGE:

Partial bypass of filtered lagoon effluent. which did not receive the required UV dose.

If you have any questions, concerns, or require additional information, please contact this office at 519-534-1610

FACILITY NAME: Wiarton Wastewater Control Plant

WORKS#: WW 110000819

LOCATION: 441048 Elm St. Lagoon Filter bldg

DATE/TIME - Feb 3/16

START: 1600

STOP: 1615

TOTAL TIME: 15 mins

OPERATOR RESPONDING: Megan Edney OIC OIT ORO (circle one) IF OIT - WHO IS IN CHARGE FOR PROCESS CHANGES?

BRIEF DESCRIPTION OF SITUATION: Power outage

REASON FOR OCCURRENCE: Power bump.

WAS THIS A BYPASS? YES NO Partial

IF YES, WHAT WAS BYPASSED?

RAW SEWAGE BYPASS

PARTIAL TERTIARY BYPASS OF SECONDARY EFFLUENT

OTHER:

WHAT WAS DISCHARGED? Filtered lagoon Effluent

APPROXIMATE QUANTITY OF BYPASS: 32.96 LITRES/ Kg/ m3 (circle one) SHOW

CALCULATIONS:

131.875 m^3/hr

= 2.19 m^3/min x 15min = 32.96

WERE SAMPLES TAKEN? YES NO

IF YES,

LOCATION	DATE	TIME	RESULTS	FREE Cl2 (mg/L)	TOTALCl2 (mg/L)

YES NO SAMPLES TAKEN (BOD SS PHOSPHOROUS E.COLI)

YES NO DISINFECT BYPASS

YES NO DID RELEASE ENTER WATER COURSE

YES NO DID RELEASE GO OFFSITE

NOTES:

Operator called out @ 1600. Onsite & shutdown flow @ 1615. Restarted power & UV lights.

NOTIFICATIONS:

PLACE	NUMBERS	VERBAL COMPLETE?	WRITTEN COMPLETE?	RESOLUTION COMPLETE?	CONTACT NAME
SAC (get reference number from them)	P: 1-800-268-6060 F: 1-800-268-6061	1700	1730	1630	Mark. Harris.
OWEN SOUND MOE	P: 519-371-2901 F: 519-371-2905	1711	1730	1630	Shane Findley
OWEN SOUND MOH	P: 519-376-9420 ONCALL: P: 519-376-5420 F: 519-376-6310	~~LM 1708~~ 1715 LM returned call.	1730	1630	
CLIENT TOWN OF SOUTH BRUCE PENINSULA	P: 519-534-1400 X 131 Public Works Manager F: 519-534-4976	LM. 1713	1730	1630	Andrew
MANAGER	P: 519-379-2225 F: 519-534-3526	1650	1730	1630	Leo
OCWA PCT SOUTHAMPTON	P: (519) 373-1398 F: (519) 797-3080	1723	1730	1630	CAMILLE
ENVIRONMENT CANADA (attention WASTEWATER PROGRAM)	F :1-819-420-7389	X	1730	1630	X

Waste Reference # 7547-A6STT7

Operator name: Megan Edney

Operator signature: _____ Position: _____

Wiarton Water Treatment Plant
897, Bayview Street, Wiarton, ON, NOH 2TO
TEL: 519.534.1610 Fax: 519.534.3526

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Fax

		Fax Number
TO:	Spills Action Centre:	1-800-268-6061 . 416 325 3011
	MOE Owen Sound:	519-371-2905
	MOH Owen Sound:	519-376-6310
	Town of South Bruce Peninsula (Attention Public Works Manager)	519-534-4976
	OCWA (Attention PCT)	519-797-3080
	Environment Canada {Attention Wastewater Program)	1-819-420-7380

FROM: Megan Edney

DATE: May 27, 2016

RE: Partial Bypass of filtered Lagoon Effluent (No UV)

PAGES: 4 (including this one)

MESSAGE:

Partial bypass of filtered chlorinated lagoon effluent which did not receive the required UV dose.

If you have any questions, concerns, or require additional information, please contact this office at 519-534-1610

FACILITY NAME: Wiarton Wastewater Control Plant

WORKS#: WW 110000819

LOCATION: 441048 Elm St. Lagoon filter Bldg.

DATE/TIME - May 27, 2016

START: 1130

STOP: 1150

TOTAL TIME: 20 mins

OPERATOR RESPONDING: Megan Edney (OIC) OIT ORO (circle one) IF OIT - WHO IS IN CHARGE FOR PROCESS CHANGES?

BRIEF DESCRIPTION OF SITUATION: Power Outage

REASON FOR OCCURRENCE: Power outage

WAS THIS A BYPASS? (YES) NO Partial

IF YES, WHAT WAS BYPASSED?

RAW SEWAGE BYPASS

(PARTIAL TERTIARY BYPASS OF SECONDARY EFFLUENT)

OTHER:

WHAT WAS DISCHARGED? Filtered chlorinated lagoon effluent.

APPROXIMATE QUANTITY OF BYPASS: ---10.39-- LITRES/ Kg/(m3) (circle one) SHOW

CALCULATIONS:

$31.19\ m^3/hr$

$= 0.519/min \quad \times 20\ mins \quad = 10.39$

WERE SAMPLES TAKEN? YES (NO)

IF YES,

LOCATION	DATE	TIME	RESULTS	FREE Cl2 (mg/L)	TOTALCl2 (mg/L)

YES (NO) SAMPLES TAKEN (BOD SS PHOSPHOROUS E.COLI)

(YES) NO DISINFECT BYPASS

(YES) NO DID RELEASE ENTER WATER COURSE

(YES) NO DID RELEASE GO OFFSITE

NOTES:

Power outage started @ 1130. Operator arrived onsite & shutdown flow @ 1144h.

NOTIFICATIONS:

PLACE	NUMBERS	VERBAL COMPLETE?	WRITTEN COMPLETE?	RESOLUTION COMPLETE?	CONTACT NAME
SAC (get reference number from them)	P: 1-800-268-6060 F: 1-800-268-6061	1238	1255	1150	Michaela
OWEN SOUND MOE	P: 519-371-2901 F: 519-371-2905	LM 1240	1255	1150	Shayne Findley
OWEN SOUND MOH	P: 519-376-9420 ONCALL: P: 519-376-5420 F: 519-376-6310	1250	1255	1150	georgia Stanley.
CLIENT TOWN OF SOUTH BRUCE PENINSULA	P: 519-534-1400 X 131 Public Works Manager F: 519-534-4976	1250	1255	1150	Andrew Sprunt
MANAGER	P: 519-379-2225 F: 519-534-3526	1200	1255	1150	Leo-Paul Frigault
OCWA PCT SOUTHAMPTON	P: (519) 373-1398 F: (519) 797-3080	1220	1255	1150	Camille Leung
ENVIRONMENT CANADA (attention WASTEWATER PROGRAM)	F :1-819-420-7389	X	1255	1150	X

Waste Reference # 1333-AACMC3

Operator name: Megan Edney

Operator signature: MG Position: Operator.

Wiarton Water Treatment Plant
897, Bayview Street, Wiarton, ON, N0H 2T0
TEL: 519.534.1610 Fax: 519.534.3526

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

▶Fax

		Fax Number
TO:	Spills Action Centre:	1-800-268-6061
	MOE Owen Sound:	519-371-2905
	MOH Owen Sound:	519-376-0980
	Town of South Bruce Peninsula (Attention ~~Tom Grey~~)	519-534-4976
	OCWA (Attention ~~Dave Trombley~~)	1-519-~~941-1794~~ 797 3080
	Environment Canada (Attention Wastewater Program)	1-819-994-0237

FROM: Josh Marx

DATE: Oct 18 2016

RE: Partial bypass of filtered Lagoon Effluent

PAGES: 4 (including this one)

MESSAGE:

Partial bypass of filtered chlorinated lagoon effluent which did not ~~rece~~ receive the required UV dosage for treatment.

If you have any questions, concerns, or require additional information, please contact this office at 519-534-1610

FACILITY NAME: Wiarton Wastewater Control Plant

WORKS #: WW 110000819

LOCATION: 441048 Elm St. Lagoon filter Building

DATE/TIME - Oct 18 2016

START: 1023

STOP: 1033

TOTAL TIME: 10 minutes

OPERATOR RESPONDING: Josh Marx OIC (OIT) ORO (circle one)

IF OIT – WHO IS IN CHARGE FOR PROCESS CHANGES? James Learn

BRIEF DESCRIPTION OF SITUATION: Power Outage

REASON FOR OCCURRENCE: Power Outage

WAS THIS A BYPASS? YES NO

IF YES, WHAT WAS BYPASSED?

RAW SEWAGE BYPASS

(PARTIAL TERTIARY BYPASS OF SECONDARY EFFLUENT)

OTHER: _____

WHAT WAS DISCHARGED? Filtered chlorinated lagoon effluent

APPROXIMATE QUANTITY OF BYPASS: 8.14 LITRES/ Kg/(m3) (circle one)

SHOW CALCULATIONS:

1173 m^3 / day ~~24 hrs~~ ÷ 24

= 48.875 m^3/hr ÷ 60

= 0.81458 m^3/min x 10 min

= 8.14 m^3

WERE SAMPLES TAKEN? YES (NO)

IF YES,

LOCATION	DATE	TIME	RESULTS	FREE Cl2 (mg/L)	TOTAL Cl2 (mg/L)

YES (NO) SAMPLES TAKEN (BOD SS PHOSPHOROUS E.COLI)

(YES) NO DISINFECT BYPASS

(YES) NO DID RELEASE ENTER WATER COURSE

(YES) NO DID RELEASE GO OFFSITE

NOTES:

Power outage started @1023. Flow shut off to building at 1033.

NOTIFICATIONS:

PLACE	NUMBERS	VERBAL COMPLETE?	WRITTEN COMPLETE?	RESOLUTION COMPLETE?	CONTACT NAME
SAC (get reference number from them)	P: 1-800-268-6060 F: 1-800-268-6061	1140	1205	1033	Aaron
OWEN SOUND MOE	P: 519-371-2901 F: 519-371-2905	LM 1145	1205	1033	Shayne Findlay
OWEN SOUND MOH	P: 519-376-9420 ONCALL: P: 519-376-5420 F: 519-376-0980	1157	1205	1033	Karen Giventer
CLIENT TOWN OF SOUTH BRUCE PENINSULA	P: 519-534-1400 X 131 TOM GRAY F: 519-534-4976	1200	1205	1033	Andrew Sprunt
MANAGER	P: 519-534-1610 F: 519-534-3526	1146	1205	1033	Leo-Paul Frigualt
OCWA ORANGEVILLE	P: 1-866-214-6987 X 233 DAVE or LISA X 225 F: 519-941-1794	1150	1205	1033	Camille Leung
ENVIRONMENT CANADA (attention WASTEWATER PROGRAM)	F :1-819-994-0237	X	1205	1033	X

Waste Reference # 4618-AEUL96

Operator name: Josh Marx

Operator signature: _____ Position: Operator