PUBLIC UTILITIES COMMISSION
FOR THE MUNICIPALITY OF CHATHAM-KENT

WALLACEBURG WASTEWATER TREATMENT PLANT

2019 PERFORMANCE REPORT

January 1 to December 31, 2019

Environmental Compliance Approval 1739-AXNJMV

Plant Type and Brief Description

The Wallaceburg Water Pollution Control Plant provides treatment of wastewater for approximately 11,000 residents of the community of Wallaceburg. Wastewater is collected and pumped to the plant by 10 sanitary pump stations located throughout the community.

The Wallaceburg Water Pollution Control Plant is a Conventional Activated Sludge Plant with the plant final effluent passing through an Ultra Violet Light Disinfection System. The processed final effluent is then discharged to the Sydenham River. The plant was first built in the late 1960s with a major expansion and upgrading of the facility in 1991.

The rated capacity of the plant is 10,800m³/day average day flow calculated for the calendar year. Maximum hydraulic capacity for primary treatment and disinfection facilities is 35,000m³/day. The following processes are included in this treatment system:

- Raw sewage pumping
- Screening collection and removal
- Aerated grit tank
- Primary treatment of raw sewage with sludge collection
- Chemical phosphorus removal
- Biological treatment using Conventional Activated Sludge for secondary treatment
- Final Settling
- Disinfection of final effluent using Ultra Violet Light
- Sludge holding tanks

Since December 2012, biosolids handling has been centralized, and the sludge is being transferred to Chatham WPCP for further processing.

REPORTING REQUIREMENTS
Amended Environmental Compliance Approval # 1739-AXNJMV

Summary and Interpretation of Monitoring and Comparison to the Effluent Limits: Condition 11 (3) (a)

Tables 1 and 2 outline monthly average results of parameters tested compared to the limits outlined in the Environmental Compliance Approval Table 2 Effluent Limits.

No criteria were exceeded during this reporting period for the effluent limits as outlined in the Environmental Compliance Approval Table 2 Effluent Limits

Success and Adequacy of the Works

During the reporting period, the annual average daily flow was 8,387 m^3/day, which represents approximately 78% of the rated capacity of 10,800 m^3/day. The maximum daily flow was 35,230 m^3/day, which is 50% of the Peak Flow Rate of 70,000 m^3/day.

Overall, the facility performed well during the reporting period.

Table 1: Summary of Influent and Imported Sewage monitoring data as well as rated capacity to the sewage works

Plant Rated Capacity: 10,800 m^3/day average daily flow

Total sewage flow to the works during a calendar year divided by the number of days during which sewage was flowing to the works that year

Month	Total Monthly Raw Flow m^3	Total Monthly Imported Sewage Flow m^3	Avg Daily Raw Flow /Month m^3/day	Avg Daily Raw Flow /Year m^3/day	% of Plant Capacity	Raw BOD_5 mg/L	Raw Total S.S. mg/L	Raw Total P mg/L	Raw Alkalinity mg/L	Raw TKN mg/L
Limits:	**None**	**Included in Raw Flow**	**None**	**10,800**	**100**					
Objectives:					**80**					
Jan	179,410	30.0	5,787			99	154	2.2	244.4	19.2
Feb	220,730	49.8	7,883			109	181	2.5	238.5	16.5
Mar	193,920	86.6	6,255			86	140	2.6	239.8	19.0
Apr	299,110	48.4	9,970			89	156	11.2	254.0	78.6
May	357,810	155.0	11,542			39	103	2.3	234.5	10.5
Jun	321,670	124.6	10,722			41	71	1.5	230.3	10.6
Jul	339,280	70.2	10,945			39	83	1.6	211.2	15.9
Aug	318,490	72.4	10,274			28	56	1.2	170.5	9.0
Sept	225,280	43.4	7,509			39	76	1.6	174.0	13.1
Oct	211,190	75.4	6,813			58	58	1.7	194.4	14.4
Nov	215,030	83.9	7,168			52	103	1.9	210.0	14.4
Dec	179,220	10.2	5,781			63	88	2.3	215.2	17.8
Year				8387	78%					
	Yearly Total Flow m^3	**Maximums**								
	3,061,140	155.0	11,542			109	181	11.2	254	78.6

Summary and Interpretation of Final Effluent Monitoring Data and Rated Capacity Condition 11 (3) (b) of the ECA

Tables 2 & 3 under this section outline 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;

Table 2: Summary of Monitoring Data and Comparison to Final Effluent Limits & Objectives

Month	Total Monthly Effluent Flow m^3	Avg Daily Effluent Flow /Month m^3/day	Avg Daily Flow/Year m^3/day	$CBOD_5$ mg/L	Total S.S. mg/L	Total Ammonia mg/L	Total P mg/L	pH	E.Coli cfu/100mL GeoMean
Limits: Dec 15 – Apr 15	**None**	**None**		**25**	**25**	**3.0**	**1.0**	**6.0 - 9.5**	**200**
Limits: Apr 16 – Dec 14	**None**	**None**		**25**	**25**	**1.5**	**1.0**	**6.0 - 9.5**	**200**
Objectives: Dec 15 – Apr 15	**None**	**None**		**15**	**15**	**2.0**	**0.5**	**6.5 - 8.5**	**150**
Objectives: Apr 16 – Dec 14	**None**	**None**		**15**	**15**	**1.0**	**0.5**	**6.5 - 8.5**	**150**
Jan	204,380	6,593		3.4	13.2	0.13	0.38	7.36	8.42
Feb	241,160	8,613		4.0	7.5	0.26	0.36	7.49	2.38
Mar	221,830	7,156		3.8	10.5	0.19	0.43	7.53	2.00
Apr	310,480	10,349		3.0	7.8	0.15	0.46	7.65	4.98
May	364,360	11,754		3.0	10.3	0.15	0.45	7.70	14.83
Jun	348,550	11,618		3.0	7.0	0.18	0.49	7.86	17.02
Jul	360,810	11,639		3.0	5.0	0.15	0.50	7.84	6.42
Aug	304,440	9,821		3.3	4.8	0.24	0.57	7.71	23.72
Sep	231,080	7,703		3.0	5.8	0.19	0.43	7.51	15.79
Oct	237,840	7,672		3.0	5.2	0.15	0.40	7.76	2.86
Nov	248,420	8,281		3.0	5.0	0.14	0.36	7.75	2.00
Dec	209,110	6,745		3.0	6.0	0.16	0.48	7.66	6.58
Year			8,993						
	Yearly Total Flow m^3	**Yearly Maximums**							
	3,282,460	11,754		4.0	13.2	0.26	0.57	7.86	23.72

Table 3: Summary of Monitoring Data and Comparison to Effluent Loading Limits

Month	Avg Daily Influent Flow /Month m^3/day	$CBOD_5$ Kg/Day	Total S.S. Kg/Day	Total P Kg/Day	Total Ammonia Kg/day
Limits: Dec 15 – Apr 15	**None**	**270**	**270**	**10.8**	**32.4**
Limits: Apr 16 – Dec 14	**None**	**270**	**270**	**10.8**	**16.2**
Jan	5,787	19.68	76.39	2.18	0.75
Feb	7,883	31.53	59.12	2.86	2.05
Mar	6,255	23.46	65.68	2.69	1.16
Apr	9,970	29.91	77.77	4.59	1.48
May	11,542	34.63	118.3	5.14	1.67
Jun	10,722	32.17	75.06	5.25	1.88
Jul	10,945	32.83	54.72	5.52	1.66
Aug	10,274	33.39	48.80	5.86	2.44
Sep	7,509	22.53	43.18	3.25	1.39
Oct	6,813	20.44	35.43	2.73	0.99
Nov	7,168	21.50	35.84	2.54	1.00
Dec	5,781	17.34	34.69	2.78	0.95
		Maximums			
		34.63	118.3	5.86	2.44

Success and Adequacy of the Works

No criteria were exceeded during this reporting period for the effluent limits as outlined in Schedule B – Concentration Limits and Loading Limits of the ECA.

Monitoring Schedule and Summary of any Deviations from the Monitoring Schedule Condition 11 (3) (c)

Monitoring Samples from September 1st, 2018 to December 31st, 2019 will be sampled weekly, generally on Tuesdays.

Monitoring Samples from January 1st, 2020 to December 31st, 2020 will be sampled weekly, generally on Wednesdays.

The regular weekly sampling day may be impacted by Statutory Holidays and Union Holidays.

Summary of all Operating Issues encountered and Corrective Actions taken Condition 11 (3) (d)

There were no significant operating issues encountered during this reporting period.

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 Condition 11 (3) (e)

All regular and routine maintenance in the plant was carried out during this reporting period. Primary and final clarifiers were drained and cleaned, and mechanical maintenance was performed on the chains and drive motors. Aeration tanks were drained and cleaned, and the diffusers inspected and cleaned. The Ultra Violet disinfection system was cleaned and maintained at regular intervals throughout the year.

A computerized maintenance system is in place at this facility in order to track regularly scheduled maintenance tasks. In addition to the routine maintenance, the following additional maintenance activities and equipment replacement was completed for the reporting period:

• Baseline Generator Replacement	$ 111,000
• Aeration Tank and Concrete	40,000
• Pump Replacement (Wellington Pump Station)	35,000
• Electrical Upgrade (Napier and Queen Pump Station)	22,000
• Main Sewage Inlet Gate	21,000
• New UV Bulbs (one Bank)	17,000
• Electrical Upgrade (Arnold Street)	15,000
• Flights and Chains	11,000
• Blower Rehab	5,000

Summary of any Effluent Quality Assurance or Control Measures undertaken
Condition 11 (3) (f)

Wallaceburg Water Pollution Plant followed a sampling schedule developed in accordance with the Certificate of Approval and applicable regulations for this reporting period.

Composite chemistry samples of the raw flow were collected using an auto sampler. Chemistry samples were submitted weekly to an accredited laboratory for analysis of BOD_5, Total Suspended Solids, Total Phosphorus, Alkalinity, Total Kjeldahl Nitrogen, Total Ammonia, pH, Nitrite and Nitrate.

Composite chemistry samples of the effluent were collected using an auto sampler. Chemistry samples were submitted weekly to an accredited laboratory for analysis of CBOD, Total Suspended Solids, Total Phosphorus, Alkalinity, Total Kjeldahl Nitrogen, Total Ammonia, pH, Alkalinity, Nitrite and Nitrate.

Bacteriological samples of the effluent were collected weekly according to the Sampling Program. Bacteriological samples were submitted weekly to an accredited laboratory for analysis.

In house samples were analyzed by a licensed operator for pH, DO, and temperature.

Summary of the Calibration and Maintenance carried out on all Influent, Imported Sewage and Final Effluent Monitoring Equipment
Condition 11 (3) (g)

All required probes and sensors are cleaned, maintained and/or calibrated on a monthly basis or as required by manufacturers' specifications.

Monitoring equipment calibration/verification report(s) included for the following:

- Influent flow meters
- Effluent flow meter
- Spectrophotometer
- DO meter
- pH meter

Summary of any Effluent Quality Assurance or Control Measures Undertaken to Achieve Design Objectives
Condition 11 (3) (h)

Table 2 outlines monthly average results of parameters tested compared to the objectives outlined in the Environmental Compliance Approval Schedule B Final Effluent Design Objectives.

The following criteria was exceeded during this reporting period for the effluent objectives outlined in Condition 6 Effluent Objectives of the Environmental Compliance Approval:

Total Phosphorus concentration: August.

Continuing optimization of chemical feed was practiced throughout the year with the goal of achieving effluent objectives.

i) Design Objectives have been met > 50% of the time
There are no increasing trends in deterioration of Final Effluent Quality

ii) The Annual Average Daily Influent Flow has been maintained under 80% of the Rated Capacity during the reporting period

Sludge Management
Condition 11 (3) (i)

During the reporting period, no dry sludge was transferred from the site. Liquid sludge from the digester was transferred to the Chatham WPCP by Logan Agri-Flush & Dover Sanitation.

Tabulation of the Volume of Sludge Generated

	SLUDGE VOLUME in m^3	**TRANSFER TO LOCATION**
Total transferred during the reporting period January 1, 2019 to December 31, 2019	11,526.2	Chatham WPCP

Outline of Anticipated Volumes and Handling Methods in Next Reporting Period

It is anticipated that approximately 15,000 m^3 liquid sludge will be generated during the next reporting period and that all liquid sludge produced will be transferred to Chatham WPCP.

Community Complaints:
Condition 11 (3) (j)

There were no Customer Complaints received during the reporting period.

Summary of all Bypasses, Overflows, Spills within the meaning of Part X of EPA and abnormal discharge events, and other abnormal discharge events
Condition 11 (3) (k)

A secondary treatment by-pass of 140 m^3 occurred on April 20. Heavy rainfall received at the plant resulted in a by-pass event.

A secondary treatment by-pass of 1,840 m^3 occurred on April 26. Heavy rainfall received at the plant resulted in a by-pass event.

A secondary treatment by-pass of 3,555.56 m^3 occurred on May 01. Heavy rainfall received at the plant resulted in a by-pass event.

An oily spill was discovered on May 24 of 1,200 imperial gallons at the Libby St Pump Station and of 2,200 imperial gallons at the Wallaceburg WPCP Wet Well. The spill was removed by vactor trucks.

Notice of Modifications to Sewage Works completed under Paragraph 1.d. of Condition 10, including a Report on the Status of Implementation of all Modifications
Condition 11 (3) (l)

- Baseline Road Pump Station generator replacement

Summary of Efforts made to Achieve Conformance with Procedure F-5-1 including Projects Undertaken and Completed in the Sanitary Sewer System that result in overall Bypass/Overflow Elimination
Condition 11 (3) (m)

***Proposed Projects including Expenditures*:**

The following are budget approved projects that are scheduled for the next reporting period.

New Weirs for Final and Primary Tanks	$ 175,000
Generator Replacement (Napier Pump Station)	140,000
SCADA Upgrades	50,000
New Pump (Libby St. Pump Station)	35,000
New Pump (Wellington Pump Station)	30,000
New Pump (Baseline Pump Station)	30,000
Scum Pump Replacement	25,000
Lifting Device for RAS Pumps	20,000
Main Lift #1 Overhaul	15,000
Portable 4” Pump	15,000
Verbatim Unit Replacement	11,000
Flight and Chain Replacement	10,000
Transfer Switch for Blower Room	8,000
UV Bulb Replacement and Parts	7,500
Analyzer Replacement Parts	3,000

Estimated Budget Forecast for Following Year:

The estimated budget forecasted for 2020 Bypass/Overflow Elimination projects in the sanitary sewer system is $ 20,000 for a replacement pump at the Napier Street Pump Station.

Changes / Updates to the Schedule for the Completion of Construction and Commissioning Operation of Major Process(es) / Equipment Groups in the Proposed Works Condition 11 (3) (n)

There are no changes/updates to the schedule for any of the proposed works.

APPENDIX A

Yearly Operational Data Summary for the Reporting Period

Operational Data Summary Yearly

	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	TOTAL	MAX	MIN	AVG
Raw Sewage																
Flow 1000 m^3	179.410	220.730	193.920	299.110	357.810	321.670	339.280	318.490	225.280	211.190	215.030	179.220	3061.14	357.810	179.220	255.095
Avg. Daily Flow 1000 m^3/d	5.787	7.883	6.255	9.970	11.542	10.722	10.945	10.274	7.509	6.813	7.168	5.781		11.542	5.781	8.388
Peak Flow 1000 m3/d	Not Captured	29.150	34.450	32.850	34.970	31.300	31.000	30.740	22.630	36.680	25.040	55.500		55.500	22.630	33.119
Max Daily Flow 1000 m^3/d	9.440	17.900	11.790	30.900	35.230	12.320	21.730	24.260	13.100	12.700	12.340	8.140		35.230	8.140	17.488
Final Effluent																
Flow 1000 m^3	204.380	241.160	221.830	310.480	364.360	348.550	360.810	304.440	231.080	237.840	248.420	209.110	3282.46	364.360	204.380	273.538
Avg. Daily Flow 1000 m^3/d	6.593	8.613	7.156	10.349	11.754	11.618	11.639	9.821	7.703	7.672	8.281	6.745		11.754	6.593	8.995
Raw Sludge to Holding																
Total Volume Out m^3	1019.94	1111.60	1157.32	1030.05	725.72	970.67	1086.03	941.96	847.45	1000.18	994.57	1348.89	12234.38	1348.89	725.72	1019.532
Holding Tank to CWPCP																
Total Volume Out m^3	925.85	1204.32	1044.01	1128.57	741.26	641.87	1047.20	921.71	801.48	962.01	957.05	1150.87	11526.20	1204.32	641.87	960.517
Avg. T.S. %	3.10	3.25	3.94	4.08	5.55	4.40	2.84	2.67	2.42	2.09	2.30	2.32		5.6	2.1	3.246
Ferrous Chloride Usage																
Total Litres Used	4910	4327	4666	4104	2707	2592	2678	2916	3622	3794	3672	3708	43696.8	4910.4	2592.0	3641.400
Final Effluent Loadings																
$COD_{5,}$ kg/d	19.68	31.53	23.46	29.91	34.63	32.17	32.83	33.39	22.53	20.44	21.50	17.34		34.63	17.34	26.62
Solids, Suspended kg/d	76.39	59.12	65.68	77.77	118.31	75.06	54.72	48.80	43.18	35.43	35.84	34.69		118.31	34.69	60.42
Phosphorous, Total as P, kg/d	2.18	2.86	2.69	4.59	5.14	5.25	5.52	5.86	3.25	2.73	2.54	2.78		5.86	2.18	3.78
Ammonia as N, kg/d	0.75	2.05	1.16	1.48	1.67	1.88	1.66	2.44	1.39	0.99	1.00	0.95		2.44	0.75	1.45

Operational Data Summary Yearly

	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	TOTAL	MAX	MIN	AVG
Disinfection																
results are geometric means																
E. Coli Before U.V. CFU/100ml														0	0	
E. Coli After U.V. CFU/100ml	8.42	2.38	2.00	4.98	14.83	17.02	6.42	23.72	15.79	2.86	2.00	6.58		23.72	2.0	8.9
# of Samples	5	4	4	5	4	4	5	4	4	5	4	5	53			
Raw Sewage																
Ammonia as N, mg/L	12.76	9.67	12.13	9.02	6.61	6.61	11.34	5.80	9.07	8.63	11.06	12.82		12.82	5.80	9.63
BOD5, mg/L	99	109	86	89	39	41	39	28	39	58	52	63		109.3	28	61.78
Nitrogen, T. Kjeldahl as N, mg/L	19.20	16.50	18.98	78.60	10.48	10.63	15.86	9.03	13.13	14.42	14.43	17.84		78.60	9.025	19.92
pH	7.57	7.64	7.55	7.54	7.56	7.57	7.61	7.52	7.58	7.47	7.51	7.47		7.640	7.47	7.55
Phosphorous, Total as P, mg/L	2.2	2.5	2.6	11.2	2.3	1.5	1.6	1.2	1.6	1.7	1.9	2.3		11.18	1.20	2.71
Solids, Suspended, mg/L	154	181	140	156	103	71	83	56	76	58	103	88		181.25	56.25	105.75
Alkalinity CaC03, mg/L	244.40	238.50	239.75	254.00	234.50	230.25	211.20	170.50	174.00	194.40	210.00	215.20		254.00	170.50	218.06
Nitrite as N, mg/L	0.12	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10		0.12	0.10	0.10
Nitrate as N, mg/L	0.12	0.15	0.10	0.18	0.10	0.13	0.10	0.10	0.10	0.14	0.10	0.10		0.18	0.10	0.12
# of Samples	5	4	4	5	4	4	5	4	4	5	4	5	53			
Final Effluent																
Ammonia as N, mg/L	0.13	0.26	0.19	0.15	0.15	0.18	0.15	0.24	0.19	0.15	0.14	0.16		0.26	0.13	0.17
Total CBOD5, mg/L	3.40	4.00	3.75	3.00	3.00	3.00	3.00	3.25	3.00	3.00	3.00	3.00		4.00	3.00	3.20
Nitrogen, T. Kjeldahl as N, mg/L	1.78	1.80	2.05	2.58	1.25	1.33	1.24	1.45	1.40	1.40	1.35	1.56		2.58	1.24	1.60
PH	7.36	7.49	7.53	7.65	7.70	7.86	7.84	7.71	7.51	7.76	7.75	7.66		7.86	7.36	7.65
Phosphorous, Total as P, mg/L	0.38	0.36	0.43	0.46	0.45	0.49	0.50	0.57	0.43	0.40	0.36	0.48		0.57	0.36	0.44
Solids, Suspended, mg/L	13.20	7.50	10.50	7.80	10.25	7.00	5.00	4.75	5.75	5.20	5.00	6.00		13.20	4.75	7.33
Alkalinity CaC03, mg/L	157.40	156.75	150.75	183.40	179.25	175.25	162.20	121.25	7.76	121.60	134.75	125.40		183.40	7.76	139.65
Nitrite as N, mg/L	0.10	0.13	0.13	0.10	0.10	0.10	0.28	0.10	0.10	0.10	0.10	0.58		0.58	0.10	0.16
Nitrate as N, mg/L	14.60	12.55	14.40	10.66	9.70	9.45	32.86	9.28	14.18	10.32	11.95	14.32		32.86	9.28	13.69
# of Samples	5	4	4	5	4	4	5	4	4	5	4	5	53			
Temperature C	10.2	8.6	9.3	10.8	13.2	17.5	22.0	22.8	21.6	18.5	14.0	12.3		22.8	8.6	15.1
D.O. mg/L	6.6	5.9	6.1	7.4	7.8	7.0	6.7	6.3	6.2	6.4	7.3	7.1		7.8	5.9	6.7
# of Samples	31	28	31	30	31	30	31	31	29	31	30	29	362			
Unionized Ammonia (Pro) ug/L	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010		0.01	0.01	0.01

Federal (Quarterly)								
Final Flow Qtr. m3	667370.0	1023390.0	896330.0	695370.00				
CBOD Qtr. mg/L	3.7	3.0	3.1	3.00				
SS Qtr. mg/L	10.4	8.4	5.2	5.40				
Number of Days	90	91	92	92				

Operational Data Summary Yearly

Imported Sewage																
BOD5, mg/L	1590.00	738.00	1726.80	2079.20	295.30	1096.25	1384.20	791.00	2429.67	1259.40	1982.50	2208.00		2429.666667	295.30	1465.03
Nitrogen, T. Kjeldahl as N, mg/L	5600	89	387	270	200	158	159	116	504	227	665	208		5600.0	88.5	715.26
Phosphorous, Total as P, mg/L	119.60	13.30	62.70	57.10	44.80	16.63	37.02	25.64	111.07	50.02	175.65	38.10		175.65	13.3	62.64
Solids, Suspended, mg/L	20600.00	12000.00	7065.00	9310.00	1513.00	1785.00	4156.00	4856.67	13000.00	4568.00	13225.00	10333.33		20600.000	1513.00	8534.33

Federal WSER Acute Lethality	
Average Daily Volume Effluent (m^3):	8993

APPENDIX B

Calibration Reports for the Reporting Period

Flowmetrix
Technical Services Inc.

Western Office
2088 Jetstream Road
London, Ontario
N5V 3P6

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

F+P (ABB) Mag-meter
Verification Report

AS FOUND CERTIFICATION

FORWARD FLOW DIRECTION

PASS

CLIENT DETAIL

CUSTOMER	Chatham-Kent - NORTH - Wallaceburg
CONTACT	Stew Bechard, Senior Operator
	OWRC Wallaceburg Pollution Control Plant
	795 Gillard Street, Wallaceburg ON
	Cell: 519-359-2697

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

EQUIPMENT DETAIL

[MUT] MANUFACTURER	ABB (Fisher & Porter)
MODEL	SFM4000
CONVERTER SERIAL NUMBER	240664339/Y011
FUSE	Disconnect Switch at Unit
PLANT ID	OWRC Wallaceburg PCP
METER ID	Pump 1 Flow Meter
FIT ID	FIT-01
CLIENT TAG	N/A
OTHER	N/A
GPS COORDINATES	N/A
VERIFICATION DATE	January 28, 2019
CAL. FREQUENCY	Annual
CAL. DUE DATE	January, 2020

PROGRAMMING PARAMETERS

DIAMETER (DN)	mm	150
F.S. FLOW - MAG	M3/D	14400.0
F.S. RANGE - O/P	M3/D	11360.0
SYSTEM ZERO SETTING (%)		1.278

FORWARD TOTALIZER INFORMATION

AS FOUND	4665564	M3
AS LEFT	4665630	M3
DIFFERENCE	66	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

		0.00	1.97	3.94	5.92	7.89	% Dial (m/s)
		0.00	19.72	39.44	59.17	78.89	% F.S. Flow
		0.0	25.0	50.0	75.0	100.0	% F.S. Range
REF. FLOW RATE		0.00	2840.00	5680.00	8520.00	11360.00	M3/D
MUT [Reading]		0.00	2846.05	5690.31	8549.48	11393.60	M3/D
MUT [Difference]		0.00	6.05	10.31	29.48	33.60	M3/D
MUT [% Error]		n/a	0.21	0.18	0.35	0.30	%
mA OUTPUT		4.000	8.000	12.000	16.000	20.000	mA
MUT [Reading]	min. 4.000 mA	4.000	8.007	12.011	16.037	20.041	mA
MUT [Difference]	max. 20.000 mA	0.000	0.007	0.011	0.037	0.041	mA
MUT [% Error]		0.00	0.09	0.09	0.23	0.21	%
TOTALIZER - REF. FLOW RATE						11360.000	M3/D
TOTALIZER [MUT]						17	M3
TEST TIME						132.36	SECONDS
CALC. TOTALIZER						17.403	M3
ERROR						-2.37	%

COMMENTS

QUALITY MANAGEMENT STANDARDS INFO.

[QMS] INFORMATION	IDENT.	ID #
[REFERENCE] FTS	F&P (ABB)	1
PROCESS METER	DMM	1
ANALOG METER	AM	N/A
STOP WATCH	SW	Yes

RESULTS

TEST	AVG % o.r.	PASS FAIL
DISPLAY	0.26	PASS
mA OUTPUT	0.12	PASS
TOTALIZER	-2.37	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

F+P (ABB) Mag-meter
Verification Report

AS FOUND CERTIFICATION

FORWARD FLOW DIRECTION

PASS

CLIENT DETAIL

CUSTOMER	Chatham-Kent - NORTH - Wallaceburg
CONTACT	Stew Bechard, Senior Operator
	OWRC Wallaceburg Pollution Control Plant
	795 Gillard Street, Wallaceburg ON
	Cell: 519-359-2697

VER. BY - FM BrendonJacksic

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

EQUIPMENT DETAIL

[MUT] MANUFACTURER	ABB (Fisher & Porter)
MODEL	SFM4000
CONVERTER SERIAL NUMBER	240969335/Y007
FUSE	Disconnect Switch at Unit
PLANT ID	OWRC Wallaceburg PCP
METER ID	Pump 2 Flow Meter
FIT ID	FIT-02
CLIENT TAG	N/A
OTHER	N/A
GPS COORDINATES	N/A
VERIFICATION DATE	January 28, 2019
CAL. FREQUENCY	Annual
CAL. DUE DATE	January, 2020

PROGRAMMING PARAMETERS

DIAMETER (DN)	mm	150
F.S. FLOW - MAG	M3/D	14400.0
F.S. RANGE - O/P	M3/D	11360.0
SYSTEM ZERO SETTING (%)		-1.487

FORWARD TOTALIZER INFORMATION

AS FOUND	5737612	M3
AS LEFT	5737669	M3
DIFFERENCE	57	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

		0.00	1.97	3.94	5.92	7.89	% Dial (m/s)
		0.00	19.72	39.44	59.17	78.89	% F.S. Flow
		0.0	25.0	50.0	75.0	100.0	% F.S. Range
REF. FLOW RATE		0.00	2840.00	5680.00	8520.00	11360.00	M3/D
MUT [Reading]		0.00	2839.37	5679.45	8533.70	11374.30	M3/D
MUT [Difference]		0.00	-0.63	-0.55	13.70	14.30	M3/D
MUT [% Error]		n/a	-0.02	-0.01	0.16	0.13	%
mA OUTPUT		4.000	8.000	12.000	16.000	20.000	mA
MUT [Reading]	min. 4.000 mA	3.997	7.994	11.994	16.015	20.016	mA
MUT [Difference]	max. 20.000 mA	-0.003	-0.006	-0.006	0.015	0.016	mA
MUT [% Error]		-0.08	-0.08	-0.05	0.09	0.08	%
TOTALIZER - REF. FLOW RATE						11360.000	M3/D
TOTALIZER [MUT]						13	M3
TEST TIME						98.74	SECONDS
CALC. TOTALIZER						12.982	M3
ERROR						0.13	%

COMMENTS

QUALITY MANAGEMENT STANDARDS INFO.

[QMS] INFORMATION	IDENT.	ID #
[REFERENCE] FTS	F&P (ABB)	1
PROCESS METER	DMM	1
ANALOG METER	AM	N/A
STOP WATCH	SW	Yes

RESULTS

TEST	AVG % o.r.	PASS FAIL
DISPLAY	0.06	PASS
mA OUTPUT	-0.01	PASS
TOTALIZER	0.13	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

Endress Hauser ProMag Series
Verification Report

AS FOUND CERTIFICATION

FORWARD FLOW DIRECTION

PASS

CLIENT DETAIL

CUSTOMER	Chatham-Kent - NORTH - Wallaceburg
CONTACT	Stew Bechard, Senior Operator
	OWRC Wallaceburg Pollution Control Plant
	795 Gillard Street, Wallaceburg ON
	Cell: 519-359-2697

VER. BY - FM *BrendonJacksic*

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

EQUIPMENT DETAIL

[MUT] MANUFACTURER	ENDRESS & HAUSER
MODEL	Promag 53P
CONVERTER S/N:	5B013016000
PLANT ID	OWRC Wallaceburg PCP
METER ID	Raw Pump 3 Flow
FIT ID	FIT-210
CLIENT TAG	N/A
OTHER	N/A
GPS COORDINATES	N/A
VERIFICATION DATE	January 28, 2019
CAL. FREQUENCY	Annual
CAL. DUE DATE	January 2020

PROGRAMMING PARAMETERS

DIAMETER (DN)	mm	250
F.S. FLOW - MAG	M3/D	42410.250
F.S. RANGE - O/P	M3/D	22030.000
TUBE k-FACTOR		1.16040
TUBE zero		0.00000

FORWARD TOTALIZER INFORMATION

AS FOUND	7319252	M3
AS LEFT	7319347	M3
DIFFERENCE	95	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	**5507.5**	**11015.0**	**16522.5**	**22030.0**	**M3/D**
					0.0	**13.0**	**26.0**	**39.0**	**51.9**	**% F.S. Flow**
					0.0	**25.0**	**50.0**	**75.0**	**100.0**	**% F.S. Range**
REF. FLOW RATE					**0.0**	**5507.5**	**11015.0**	**16522.5**	**22030.0**	M3/D
MUT [Reading]					0.0	5506.0	11017.0	16525.0	22034.0	M3/D
MUT [Difference]					0.0	-1.5	2.0	2.5	4.0	M3/D
MUT [% Error]					n/a	-0.03	0.02	0.02	0.02	% O.R
mA OUTPUT					**4.000**	**8.000**	**12.000**	**16.000**	**20.000**	mA
MUT [Reading]	min.	4	mA		3.998	8.003	12.001	16.004	20.005	mA
MUT [Difference]	max.	20	mA		-0.002	0.003	0.001	0.004	0.005	mA
MUT [% Error]					-0.05	0.04	0.01	0.03	0.02	% O.R
TOTALIZER - REF. FLOW RATE									**22030.000**	**M3/D**
TOTALIZER [MUT]									21	M3
TEST TIME									80.87	SECONDS
CALC. TOTALIZER									20.620	M3
ERROR									1.81	%

COMMENTS

QUALITY MANAGEMENT STANDARDS INFO.

[QMS] INFORMATION	IDENT.	ID #
[REFERENCE] FTS	E&H (FC)	1
PROCESS METER	DMM	1
ANALOG METER	AM	N/A
STOP WATCH	SW	Yes

RESULTS

TEST	AVG % o.r.	PASS FAIL
DISPLAY	0.01	PASS
mA OUTPUT	0.01	PASS
TOTALIZER - R	1.81	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

ABB WATERMASTER
Verification Report

AS FOUND CERTIFICATION

PASS

CLIENT DETAIL

CUSTOMER	Chatham-Kent - NORTH - Wallaceburg
CONTACT	Stew Bechard, Senior Operator
	OWRC Wallaceburg Pollution Control Plant
	795 Gillard Street, Wallaceburg ON
	Cell: 519-359-2697

VER. BY - FM Paris Machuk/Brendon Jacksic

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

EQUIPMENT DETAIL

MODEL	FEV125 WaterMaster
SENSOR SERIAL NUMBER	3K620000184144
CONVERTER SERIAL NUMBER	3K620000184144
SENSOR SIZE (DN)	300
PLANT ID	Wallaceburg STP
METER ID	Raw Pump Flow# 4 Meter
FIT ID	N/A
CLIENT TAG	Raw Pump Flow# 4
OTHER	N/A
GPS COORDINATES	N/A
VERIFICATION DATE	January 28, 2019
CAL. FREQUENCY	Annual
CAL. DUE DATE	January, 2020

SENSOR INFORMATION

Q3	m3/d	60000.00
CALIBRATION ACCURACY		OIML Class 2
SENSOR CAL. ACCURACY	%	159.5
	mm/sec	0
	~	11
DATE OF MANUFACTURE		June 10, 2015
RUN HOURS	d/h/m	879/18/55

TRANMITTER INFORMATION

APPLICATION VERSION		V01.05.00	12/07/12
MSP VERSION		01.00.00	
DATE OF MANUFACTURE		June 10, 2015	
RUN HOURS	d/h/m	1202/15/26	
ALLOWABLE TOLERANCE	%	5.0	

CURRENT OUTPUT

OUTPUT TEST	4.00 / 20.00	READING mA	ERROR %	PASS FAIL
4.0 mA	4.00	3.997	-0.08	PASS
12.0 mA	12.00	11.984	-0.13	PASS
20.0 mA	20.00	19.996	-0.02	PASS

PULSE OUTPUT

OUTPUT TEST		READING mA	ERROR %	PASS FAIL
OUTPUT 1, Hz	500	N/A	N/A	N/A
OUTPUT 1, Hz	250	N/A	N/A	N/A
OUTPUT 2, Hz	100	N/A	N/A	N/A
OUTPUT 2, Hz	50	N/A	N/A	N/A

VERIFICATION HISTORY

OIML Accuracy Alarms	0

TOTALIZER INFORMATION

FORWARD	200235.70	m3
REVERSE	10783.21	m3
NET	189452.49	m3

SENSOR DATA

COIL CURRENT	179.9	mA
COIL INDUCTANCE	282.4	mH
COIL SHIFT	0.5	%
COIL/LOOP RESISTANCE	35	ohm

TRANSMITTER DATA

TX GAIN - ADJUSTMENT	-0.1	%

VeriMASTER INFORMATION

VERSION	01.00.01
LIMIT VERSION	01.00.01

CONFIGURATION SETTINGS

MAINS/FREQUENCY		60	Hz
QMAX		57781	m3/d
PULSES/UNIT		10	
PULSES LIMIT FREQUENCY		1200	Hz
SENSOR USER	SPAN	100	%
	ZERO	0	mm/s
USER FLOW	CUTOFF	5	%
	HYSTERESIS	20	%
METER MODE		Normal Operation	

COMMENTS

QUALITY MANAGEMENT STANDARDS INFO.

[QMS] INFORMATION	IDENT.	ID #
[REFERENCE] FTS	ABBWM	1
PROCESS METER	DMM	2

The information contained within this report was produced by "VeriMASTER - Flow Meter Verification Report". The AS LEFT information is the same as the AS FOUND information within this report. If changes have been made relative to the accuracy of the calibration, an AS LEFT certificate will be issued

Flowmetrix
Technical Services Inc.

Western Office
2088 Jetstream Road
London, Ontario
N5V 3P6

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

Parshall Flume
Verification/Calibration Report

AS FOUND CERTIFICATION

PASS

CLIENT DETAIL

CUSTOMER	Chatham-Kent - NORTH - Wallaceburg
CONTACT	Stew Bechard, Senior Operator
	OWRC Wallaceburg Pollution Control Plant
	795 Gillard Street, Wallaceburg ON
	Cell: 519-359-2697

VER. BY - FM Paris Machuk/Brandon Jacksic

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

EQUIPMENT DETAIL

[MUT] MANUFACTURER	Siemens
MODEL	LUT400
CONVERTER SERIAL NUMBER	PBD/E0210026
PLANT ID	OWRC Wallaceburg Pollution Control Plant
METER ID	Final Effluent
FIT ID	FIT-498
CLIENT TAG	N/A
OTHER	N/A
GPS COORDINATES	N/A
ADDRESS	795 Gillard Street
VERIFICATION DATE	January 29, 2019
CAL. FREQUENCY	Annual
CAL. DUE DATE	January, 2020

PROGRAMMING PARAMETERS

THROAT DIMENSION (DN)	inches	12
EMPTY DISTANCE	m	1.030
MAX. HEAD	m	0.704
DEAD ZONE	m	0.326
BLANKING DISTANCE	m	0.300
MAX. FLOW	MLD	35.0
F.S. RANGE - O/P	MLD	35.0

Ultrasonic sensor installed to ensure full scale flow condition

TOTALIZER

AS FOUND	n/a	M3
AS LEFT	n/a	M3
DIFFERENCE	n/a	M3

TEST CRITERIA

AS FOUND CERTIFICATION TEST	Yes
ALLOWABLE [%] ERROR	5

COMPONENTS TESTED

CONVERTER DISPLAY	yes
mA OUTPUT	yes
TOTALIZER	No
ACCURACY BASED ON [% o r.]	No

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

AS FOUND TEST RESULTS

		27.3	42.3	59.4	78.4	99.1	% F.S. Range
		0.300	0.400	0.500	0.600	0.700	m
REF. FLOW RATE		9.552	14.800	20.786	27.433	34.687	MLD
MUT [Reading]		9.360	14.426	20.545	27.188	34.514	MLD
MUT [Difference]		-0.192	-0.374	-0.241	-0.245	-0.173	MLD
MUT [% Error]		-0.55	-1.07	-0.69	-0.70	-0.49	%
mA OUTPUT		8.366	10.765	13.501	16.539	19.855	mA
MUT [Reading]	min. 4.000 mA	8.244	10.620	13.386	16.424	19.811	mA
MUT [Difference]	max. 20.000 mA	-0.122	-0.145	-0.115	-0.115	-0.044	mA
MUT [% Error]		-0.61	-0.72	-0.57	-0.58	-0.22	%
TOTALIZER - REF. FLOW RATE							
TOTALIZER [MUT]							
TEST TIME							
CALC. TOTALIZER							
ERROR							

COMMENTS

Note: customer uses SCADA for totalizer - therefore not done

QUALITY MANAGEMENT STANDARDS INFO.

[QMS] INFORMATION	IDENT.	ID #
[REFERENCE] LEVEL	Sim. BOARD	Yes
PROCESS METER	DMM	1
STOP WATCH	SW	Yes

RESULTS

TEST	AVG %FS	PASS FAIL
DISPLAY	-0.74	PASS
mA OUTPUT	-0.54	PASS
TOTALIZER	N/A	N/A

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.

pH
Verification/Calibration Report

SCG FLOWMETRIX

[MUT] AS FOUND **NA**

[MUT] AS LEFT **PASS**

CUSTOMER	Municipality of Chatham-Kent	[MUT] MANUFACTURER	HACH
CONTACT	Stew Bechard	MODEL	Sension +ph
	Chief Operator - Wallaceburg	SERIAL NUMBER	535071
	100 Irvin Street	CLIENT TAG	n/a
	Chatham, ON N7M 5L8	LOCATION	Wallaceburg STP
	c. 519-359-2697	OTHER	n/a
	t. 519-352-1971		
	e. stewbe@chatham-kent.ca		
VER. BY	*Randy Nichol*	TOLERANCE [pH]	0.05

Quality Management Standards Information - Standards, reference equipment, and instrumentation used to conduct this test outlining the lot#, and expiry date is found in our current QMS document.

VERIFICATION DATE	March 4, 2019
CAL. FREQUENCY	Annual
CAL. DUE DATE	March-2020

pH VERIFICATION
NIST TRACEABLE (BUFFERS)

BEFORE CALIBRATION

REFERENCE BUFFER			[MUT] READINGS			
pH BUFFER	TEMP. ° C	pH CORRECTED	pH	TEMP. ° C	pH - ERROR DIFF.	PASS FAIL
4.01	11.4	4.00	3.90	11.6	-0.10	FAIL
7.01	11.4	7.06	6.94	11.6	-0.12	FAIL
10.01	11.4	10.15	10.07	11.7	-0.08	FAIL
					RESULT	**FAIL**

AFTER CALIBRATION

REFERENCE BUFFER			[MUT] READINGS			
pH BUFFER	TEMP ° C	pH CORRECTED	pH	TEMP. ° C	pH - ERROR DIFF.	PASS FAIL
4.01	11.4	4.00	4.03	11.8	0.03	PASS
7.01	11.4	7.06	7.07	11.8	0.01	PASS
10.01	11.4	10.15	10.16	11.9	0.01	PASS
					RESULT	**PASS**

mv offset/Assymetry	n/a
Slope	n/a

COMMENTS

[QMS] INFORMATION	ITEM	ID #
[REFERENCE]		
4.01 BUFFER	pHBUFF4	1
7.01 BUFFER	pHBUFF7	1
10.01 BUFFER	pHBUFF10	1
TEMPERATURE REF.	DDTEMP	1

NIST Traceable Buffers were used to confirm the overall accuracy of this instrument. "AS FOUND" readings and "AS FOUND" readings are reported within this report. A temperature device was used to measure and record the buffer temperature to correct for pH values due to the effects related to buffer temperature.

Dissolved Oxygen
Verification/Calibration Report

FLOWMETRIX

CUSTOMER	Municipality of Chatham-Kent	[MUT] MANUFACTURER	HACH
CONTACT	Stew Bechard	MODEL	HQ40D
	Chief Operator - Wallaceburg	SERIAL NUMBER	081000025041
	100 Irvin Street	CLIENT TAG	Wallaceburg STP
	Chatham, ON N7M 5L8	LOCATION	Wallaceburg STP
	c. 519-359-2697	OTHER	2038
	t. 519-352-1971		
	e. stewbe@chatham-kent.ca		
VER. BY	*Randy Nichol*	TOLERANCE [pH]	0.05

Quality Management Standards Information - Standards, reference equipment, and instrumentation used to conduct this test outlining the lot#, and expiry date is found in our current QMS document.

VERIFICATION DATE	March 4, 2019
CAL. FREQUENCY	Annual
CAL. DUE DATE	March-2020

AS FOUND

DO Concentration [mg/L]	7.98
DO Concentration [%]	83.4
Barometric Pressure [hpa]	1000
Temperature	16.9

AS LEFT

DO Concentration [mg/L]	9.56
DO Concentration [%]	100
Barometric Pressure [hpa]	1000
Temperature	16.9

120.3
Offset 0.00

COMMENTS
Performed calibration as per manufacturer's recommended procedure.

[QMS] INFORMATION	ITEM	ID #

NIST Traceable Buffers were used to confirm the overall accuracy of this instrument. "AS FOUND" readings and "AS FOUND" readings are reported within this report. A temperature device was used to measure and record the buffer temperature to correct for pH values due to the effects related to buffer temperature.

Multi-Wavelength Colorimeter
Verification Report

FLOWMETRIX

PASS

AS FOUND CERTIFICATION

CUSTOMER	Municipality of Chatham-Kent
CONTACT	Stew Bechard Chief Operator - Wallaceburg 100 Irvin Street Chatham, ON N7M 5L8 c. 519-359-2697 t. 519-352-1971 e. stewbe@chatham-kent.ca
VER. BY	*Randy Nichol*

Quality Management Standards Information - Standards, reference equipment, and instrumentation used to conduct this test outlining the lot#, and expiry date is found in our current QMS document.

[MUT] MANUFACTURER	HACH
MODEL	DR3900
SERIAL NUMBER	1662139
CLIENT TAG	ID-n/a
LOCATION	Wallaceburg STP
OTHER	n/a
TOLERANCE [mg/L]	0.05
STANDARD RECOVERY [%]	90
VERIFICATION DATE	March 4, 2019
CAL. FREQUENCY	Annual
CAL. DUE DATE	March-2020

CHLORINE [Cl_2] SECONDARY STANDARDS

STANDARD	BLANK [mg/L]			READING mg/L	PASS FAIL
STD 1	0.25	+/-	0.09	0.23	PASS
STD 2	0.94	+/-	0.10	0.94	PASS
STD 3	1.71	+/-	0.14	1.72	PASS

CHLORINE [Cl_2] PRIMARY STANDARDS

STANDARD VALUE [mg/L]	30
STANDARD ADDITIONS SIZE [mL]	0.200
BLANK SAMPLE SIZE [mL]	10.0
DPD LOT#	A8134
EXPIRY DATE	May-23

SAMPLE TEST #	Cl_2 STANDARD mL	COMBINED SAMPLE mL	REFERENCE STANDARD mg/L	REFERENCE READING mg/L	MUT READING mg/L	DIFF. ERROR mg/L	PASS FAIL	STANDARD RECOVERY %
BLANK	0	10.000	0	0	0	0	PASS	N/A
STD 1	0.200	10.200	0.59	0.57	0.57	0.00	PASS	96.6
STD 2	0.400	10.400	1.15	1.09	1.11	0.02	PASS	94.8
STD 3	0.600	10.600	1.70	1.59	1.61	0.02	PASS	93.5
				AVERAGE RESULTS		0.01	PASS	95.0

COMMENTS

[QMS] INFORMATION	ITEM	ID #
[REFERENCE] HACH PCII	HACH PC II	1
10.0 mL PIPETTE	HACH-PP-10	1
0.2 mL PIPETTE	G-PP-2	1
SECONDARY STANDARDS	AS-CLSS	1
PRIMARY STANDARDS	AS-CLPS	1
ABSORBANCE STANDARDS	AS-ABS	1

ABSORBANCE CHECKS		
WAVELENGTH	TESTED	PASS/FAIL
420 nm	Yes	PASS
520 nm	Yes	PASS
560 nm	Yes	PASS
610 nm	Yes	PASS

Primary and Secondary standards were used to confirm the overall accuracy of this instrument along with conducting an analytical comparative technique against a reference meter. All values are considered "AS FOUND" readings. If the "AS FOUND" readings were not within acceptable limits, an "AS LEFT" report will be issued if the instrument was able to be calibrated to indicate the overall accuracy of the meter. If the meter was not calibrated for any reason, a comment will be issued for this instrument.

APPENDIX C

Limited Operational Flexibility

Ontario
Ministry of
the Environment

Notice of Modification to Sewage Works

RETAIN COPY OF COMPLETED FORM AS PART OF THE ECA AND SEND A COPY TO THE WATER SUPERVISOR (FOR MUNICIPAL) OR DISTRICT MANAGER (FOR NON-MUNICIPAL SYSTEMS)

Part 1 – Environmental Compliance Approval (ECA) with Limited Operational Flexibility

(Insert the ECA's owner, number, issuance date and notice number, which should start with "01" and consecutive numbers thereafter)

ECA Number	Issuance Date (mm/dd/yy)	Notice number (if applicable)
1739-AXNJMV	June 13 2018	

ECA Owner	Municipality
PUBLIC UTILITES COMMISSION - CHATHAM-KENT	CHATHAM-KENT

Part 2: Description of the modifications as part of the Limited Operational Flexibility

(Attach a detailed description of the sewage works)

Replacement of one (1) diesel generator at the Baseline Pumping station located at 7040 Baseline Drive in Wallaceburg.
- The new generator will be a Kohler
- The O&M binder will be updated to include new and updated documentation

Description shall include:
1. A detail description of the modifications and/or operations to the sewage works (e.g. sewage work component, location, size, equipment type/model, material, process name, etc.)
2. Confirmation that the anticipated environmental effects are negligible.
3. List of updated versions of, or amendments to, all relevant technical documents that are affected by the modifications as applicable, i.e. submission of documentation is not required, but the listing of updated documents is (design brief, drawings, emergency plan, etc.)

Part 3 – Declaration by Professional Engineer

I hereby declare that I have verified the scope and technical aspects of this modification and confirm that the design:
1. Has been prepared or reviewed by a Professional Engineer who is licensed to practice in the Province of Ontario;
2. Conforms with the Limited Operational Flexibility as per the ECA;
3. Has been designed consistent with Ministry's Design Guidelines, adhering to engineering standards, industry's best management practices, and demonstrating ongoing compliance with s.53 of the Ontario Water Resources Act; and other appropriate regulations.

I hereby declare that to the best of my knowledge, information and belief the information contained in this form is complete and accurate.

Name (Print)	PEO License Number
MICHAEL LOMBARDI	100163974
Signature: M L	Date (mm/dd/yy): 100163974
Name of Employer: Dillon Consulting Ltd.	

Part 4 – Declaration by Owner

I hereby declare that:
1. I am authorized by the Owner to complete this Declaration;
2. The Owner consents to the modification; and
3. These modifications to the sewage works are proposed in accordance with the Limited Operational Flexibility as described in the ECA.
4. The Owner has fulfilled all applicable requirements of the *Environmental Assessment Act*.

I hereby declare that to the best of my knowledge, information and belief the information contained in this form is complete and accurate.

Name of Owner Representative (Print)	Owner representative's title (Print)
Darren Galbraith	Area Manager
Owner Representative's Signature: Darren Galbraith	Date (mm/dd/yy): Nov 18 2019

APPENDIX D

Yearly Bypass Summary Reports for the Reporting Period

Chatham-Kent
Public Utilities Commission

Municipality of Chatham-Kent
Public Utilities Commission
325 Grand Avenue East,
PO Box 1191 Chatham, Ontario N7M 5L8
Tel: (519) 436-0119 Fax: (519) 352-3432
Toll Free: 1.800.714.7497

Bypass Summary Report – 2019 January

Wallaceburg Water Pollution Control Plant - Works # 110000784

1. Type of Bypass: Emergency ☐ Planned ☐ None ☒
   Reason for the Bypass event:

2. Date, time of the beginning of the Bypass:
   Date, time of the end of the Bypass:
   Duration of the Bypass event:
   Measured or estimated volume of the Bypass:

3. SAC and Public Health have been notified of the beginning of the Overflow on:
   SAC and Public Health have been notified of the end of the Overflow on:

4. Treatment process(es) gone through prior to the Bypass and the treatment process(es) that have been Bypassed:
   NA

5. Effort(s) done to maximize the flow through the downstream treatment process(es) and the reason(s) why the Bypass was not avoided:
   NA

6. Results of all analytical daily samples taken.

Day	CBOD5 (mg/L) (limit 25 / Obj 15)	TSS (mg/L) (limit 25 / Obj 15)	TP (mg/L) (limit 1.0 / Obj 0.5)	Total Ammonia (mg/L) (Apr 16-Dec 14: limit 1.5 / Obj 1) (Dec 15-Apr 15: limit 3 / Obj 2)

Chatham-Kent
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Bypass Summary Report – 2019 February

Wallaceburg Water Pollution Control Plant - Works # 110000784

1. Type of Bypass: Emergency ☐ Planned ☐ None ☒
   Reason for the Bypass event:
2. Date, time of the beginning of the Bypass:
   Date, time of the end of the Bypass:
   Duration of the Bypass event:
   Measured or estimated volume of the Bypass:
3. SAC and Public Health have been notified of the beginning of the Overflow on:
   SAC and Public Health have been notified of the end of the Overflow on:
4. Treatment process(es) gone through prior to the Bypass and the treatment process(es) that have been Bypassed:
   NA
5. Effort(s) done to maximize the flow through the downstream treatment process(es) and the reason(s) why the Bypass was not avoided:
   NA
6. Results of all analytical daily samples taken.

Day	CBOD5 (mg/L) (limit 25 / Obj 15)	TSS (mg/L) (limit 25 / Obj 15)	TP (mg/L) (limit 1.0 / Obj 0.5)	Total Ammonia (mg/L) (Apr 16-Dec 14: limit 1.5 / Obj 1) (Dec 15-Apr 15: limit 3 / Obj 2)

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Bypass Summary Report – 2019 March

Wallaceburg Water Pollution Control Plant - Works # 110000784

1. Type of Bypass: Emergency ☐ Planned ☐ None ☒
   Reason for the Bypass event:

2. Date, time of the beginning of the Bypass:
   Date, time of the end of the Bypass:
   Duration of the Bypass event:
   Measured or estimated volume of the Bypass:

3. SAC and Public Health have been notified of the beginning of the Overflow on:
   SAC and Public Health have been notified of the end of the Overflow on:

4. Treatment process(es) gone through prior to the Bypass and the treatment process(es) that have been Bypassed:
   NA

5. Effort(s) done to maximize the flow through the downstream treatment process(es) and the reason(s) why the Bypass was not avoided:
   NA

6. Results of all analytical daily samples taken.

Day	CBOD5 (mg/L) (limit 25 / Obj 15)	TSS (mg/L) (limit 25 / Obj 15)	TP (mg/L) (limit 1.0 / Obj 0.5)	Total Ammonia (mg/L) (Apr 16-Dec 14: limit 1.5 / Obj 1) (Dec 15-Apr 15: limit 3 / Obj 2)

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Bypass Summary Report – 2019 April

Wallaceburg Water Pollution Control Plant - Works # 110000784

1. Type of Bypass: Emergency ☒ Planned ☐ None ☐
   Reason for the Bypass event: Heavy Rainfall

2. Date, time of the beginning of the Bypass: 2019 April 20 at 11:54
   Date, time of the end of the Bypass: 2019 April 20 at 18:12
   Duration of the Bypass event: 6 hours & 18 minutes
   Measured or estimated volume of the Bypass: 140 m^3 (measured)

3. SAC and Public Health have been notified of the beginning of the Bypass on: 2019 April 20
   SAC and Public Health have been notified of the end of the Bypass on: 2019 April 21

4. Treatment process(es) gone through prior to the Bypass and the treatment process(es) that have been Bypassed:

   Treatment Process prior to the Bypass - *Preliminary and Primary*
   Treatment Process Bypassed - *Secondary*
   **Effluent received UV Disinfection; UV Disinfection process was not bypassed.*

5. Effort(s) done to maximize the flow through the downstream treatment process(es) and the reason(s) why the Bypass was not avoided:

   Flow diverted to 2 old primary tanks, as temporary holding.
   Flow diverted to 1 aeration tank emptied for maintenance, as temporary holding.
   The plant is engineered/designed to Bypass at this rate of flow.
   The increased rate of flow was due to heavy rains.

6. Results of all analytical daily samples taken.

Day	$CBOD_5$ (mg/L) (limit 25 / Obj 15)	TSS (mg/L) (limit 25 / Obj 15)	TP (mg/L) (limit 1.0 / Obj 0.5)	Total Ammonia (mg/L) (Apr 16-Dec 14: limit 1.5 / Obj 1) (Dec 15-Apr 15: limit 3 / Obj 2)
2019 April 20 (Start)	<2	2	0.63	0.28
2019 April 20 (End)	3	1	0.48	0.53

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1. Type of Bypass: Emergency ☒ Planned ☐ None ☐
   Reason for the Bypass event: Heavy Rainfall

2. Date, time of the beginning of the Bypass: 2019 April 26 at 04:29
   Date, time of the end of the Bypass: 2019 April 26 at 15:04
   Duration of the Bypass event: 12 hours, 45 minutes
   Measured or estimated volume of the Bypass: 1,840 m^3 (measured)

3. SAC and Public Health have been notified of the beginning of the Bypass on: 2019 April 26
   SAC and Public Health have been notified of the end of the Bypass on: 2019 April 27

4. Treatment process(es) gone through prior to the Bypass and the treatment process(es) that have been Bypassed:

   Treatment Process prior to the Bypass - *Preliminary and Primary*
   Treatment Process Bypassed - *Secondary*
   **Effluent received UV Disinfection; UV Disinfection process was not bypassed.*

5. Effort(s) done to maximize the flow through the downstream treatment process(es) and the reason(s) why the Bypass was not avoided:

   Flow diverted to 2 old primary tanks, as temporary holding.
   Flow diverted to 1 aeration tank emptied for maintenance, as temporary holding.
   The plant is engineered/designed to Bypass at this rate of flow.
   The increased rate of flow was due to heavy rains.

6. Results of all analytical daily samples taken.

Day	$CBOD_5$ (mg/L) (limit 25 / Obj 15)	TSS (mg/L) (limit 25 / Obj 15)	TP (mg/L) (limit 1.0 / Obj 0.5)	Total Ammonia (mg/L) (Apr 16-Dec 14: limit 1.5 / Obj 1) (Dec 15-Apr 15: limit 3 / Obj 2)
2019 April 26 (Start)	3	29	0.62	0.27
2019 April 26 (End)	10	34	0.75	0.24

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Bypass Summary Report – 2019 May

Wallaceburg Water Pollution Control Plant - Works # 110000784

1. Type of Bypass: Emergency ☒ Planned ☐ None ☐
   Reason for the Bypass event: Heavy Rainfall

2. Date, time of the beginning of the Bypass: 2019 May 01 at 02:33
   Date, time of the end of the Bypass: 2019 May 02 at 10:41
   Duration of the Bypass event: 32 hours, 8 minutes
   Measured or estimated volume of the Bypass: 3,555.56 m^3 (measured)

3. SAC and Public Health have been notified of the beginning of the Bypass on: 2019 May 01
   SAC and Public Health have been notified of the end of the Bypass on: 2019 May 13

4. Treatment process(es) gone through prior to the Bypass and the treatment process(es) that have been Bypassed:
   Treatment Process prior to the Bypass – Preliminary and Primary
   Treatment Process Bypassed – Secondary
   *Effluent received UV Disinfection; UV Disinfection process was not bypassed.

5. Effort(s) done to maximize the flow through the downstream treatment process(es) and the reason(s) why the Bypass was not avoided:
   Flow diverted to 2 old primary tanks, as temporary holding.
   Flow diverted to 1 aeration tank emptied for maintenance, as temporary holding.
   The plant is engineered/designed to Bypass at this rate of flow.
   The increased rate of flow was due to heavy rains.

6. Results of all analytical daily samples taken.

Day	CBOD5 (mg/L) (limit 25 / Obj 15)	TSS (mg/L) (limit 25 / Obj 15)	TP (mg/L) (limit 1.0 / Obj 0.5)	Total Ammonia (mg/L) (Apr 16-Dec 14: limit 1.5 / Obj 1) (Dec 15-Apr 15: limit 3 / Obj 2)
2019 May 01	8	25	0.35	0.98
2019 May 02	7	11	0.47	0.083

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Bypass Summary Report – 2019 June

Wallaceburg Water Pollution Control Plant - Works # 110000784

1. Type of Bypass: Emergency ☐ Planned ☐ None ☒
   Reason for the Bypass event:

2. Date, time of the beginning of the Bypass:
   Date, time of the end of the Bypass:
   Duration of the Bypass event:
   Measured or estimated volume of the Bypass:

3. SAC and Public Health have been notified of the beginning of the Bypass on:
   SAC and Public Health have been notified of the end of the Bypass on:

4. Treatment process(es) gone through prior to the Bypass and the treatment process(es) that have been Bypassed:
   NA

5. Effort(s) done to maximize the flow through the downstream treatment process(es) and the reason(s) why the Bypass was not avoided:
   NA

6. Results of all analytical daily samples taken.

Day	CBOD5 (mg/L) (limit 25 / Obj 15)	TSS (mg/L) (limit 25 / Obj 15)	TP (mg/L) (limit 1.0 / Obj 0.5)	Total Ammonia (mg/L) (Apr 16-Dec 14: limit 1.5 / Obj 1) (Dec 15-Apr 15: limit 3 / Obj 2)

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Bypass Summary Report – 2019 July

Wallaceburg Water Pollution Control Plant - Works # 110000784

1. Type of Bypass: Emergency ☐ Planned ☐ None ☒
   Reason for the Bypass event:

2. Date, time of the beginning of the Bypass:
   Date, time of the end of the Bypass:
   Duration of the Bypass event:
   Measured or estimated volume of the Bypass:

3. SAC and Public Health have been notified of the beginning of the Bypass on:
   SAC and Public Health have been notified of the end of the Bypass on:

4. Treatment process(es) gone through prior to the Bypass and the treatment process(es) that have been Bypassed:
   NA

5. Effort(s) done to maximize the flow through the downstream treatment process(es) and the reason(s) why the Bypass was not avoided:
   NA

6. Results of all analytical daily samples taken.

Day	CBOD5 (mg/L) (limit 25 / Obj 15)	TSS (mg/L) (limit 25 / Obj 15)	TP (mg/L) (limit 1.0 / Obj 0.5)	Total Ammonia (mg/L) (Apr 16-Dec 14: limit 1.5 / Obj 1) (Dec 15-Apr 15: limit 3 / Obj 2)

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Bypass Summary Report – 2019 August

Wallaceburg Water Pollution Control Plant - Works # 110000784

1. Type of Bypass: Emergency ☐ Planned ☐ None ☒
   Reason for the Bypass event:

2. Date, time of the beginning of the Bypass:
   Date, time of the end of the Bypass:
   Duration of the Bypass event:
   Measured or estimated volume of the Bypass:

3. SAC and Public Health have been notified of the beginning of the Bypass on:
   SAC and Public Health have been notified of the end of the Bypass on:

4. Treatment process(es) gone through prior to the Bypass and the treatment process(es) that have been Bypassed:
   NA

5. Effort(s) done to maximize the flow through the downstream treatment process(es) and the reason(s) why the Bypass was not avoided:
   NA

6. Results of all analytical daily samples taken.

Day	CBOD5 (mg/L) (limit 25 / Obj 15)	TSS (mg/L) (limit 25 / Obj 15)	TP (mg/L) (limit 1.0 / Obj 0.5)	Total Ammonia (mg/L) (Apr 16-Dec 14: limit 1.5 / Obj 1) (Dec 15-Apr 15: limit 3 / Obj 2)

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Bypass Summary Report – 2019 September

Wallaceburg Water Pollution Control Plant - Works # 110000784

1. Type of Bypass: Emergency ☐ Planned ☐ None ☒
   Reason for the Bypass event:

2. Date, time of the beginning of the Bypass:
   Date, time of the end of the Bypass:
   Duration of the Bypass event:
   Measured or estimated volume of the Bypass:

3. SAC and Public Health have been notified of the beginning of the Bypass on:
   SAC and Public Health have been notified of the end of the Bypass on:

4. Treatment process(es) gone through prior to the Bypass and the treatment process(es) that have been Bypassed:
   Not Applicable

5. Effort(s) done to maximize the flow through the downstream treatment process(es) and the reason(s) why the Bypass was not avoided:
   Not Applicable

6. Results of all analytical daily samples taken.

Day	CBOD5 (mg/L) (limit 25 / Obj 15)	TSS (mg/L) (limit 25 / Obj 15)	TP (mg/L) (limit 1.0 / Obj 0.5)	Total Ammonia (mg/L) (Apr 16-Dec 14: limit 1.5 / Obj 1) (Dec 15-Apr 15: limit 3 / Obj 2)

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Bypass Summary Report – 2019 October

Wallaceburg Water Pollution Control Plant - Works # 110000784

1. Type of Bypass: Emergency ☐ Planned ☐ None ☒
   Reason for the Bypass event:

2. Date, time of the beginning of the Bypass:
   Date, time of the end of the Bypass:
   Duration of the Bypass event:
   Measured or estimated volume of the Bypass:

3. SAC and Public Health have been notified of the beginning of the Bypass on:
   SAC and Public Health have been notified of the end of the Bypass on:

4. Treatment process(es) gone through prior to the Bypass and the treatment process(es) that have been Bypassed:
   Not Applicable

5. Effort(s) done to maximize the flow through the downstream treatment process(es) and the reason(s) why the Bypass was not avoided:
   Not Applicable

6. Results of all analytical daily samples taken.

Day	CBOD5 (mg/L) (limit 25 / Obj 15)	TSS (mg/L) (limit 25 / Obj 15)	TP (mg/L) (limit 1.0 / Obj 0.5)	Total Ammonia (mg/L) (Apr 16-Dec 14: limit 1.5 / Obj 1) (Dec 15-Apr 15: limit 3 / Obj 2)

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Bypass Summary Report – 2019 November

Wallaceburg Water Pollution Control Plant - Works # 110000784

1. Type of Bypass: Emergency ☐ Planned ☐ None ☒
   Reason for the Bypass event:

2. Date, time of the beginning of the Bypass:
   Date, time of the end of the Bypass:
   Duration of the Bypass event:
   Measured or estimated volume of the Bypass:

3. SAC and Public Health have been notified of the beginning of the Bypass on:
   SAC and Public Health have been notified of the end of the Bypass on:

4. Treatment process(es) gone through prior to the Bypass and the treatment process(es) that have been Bypassed:
   Not Applicable

5. Effort(s) done to maximize the flow through the downstream treatment process(es) and the reason(s) why the Bypass was not avoided:
   Not Applicable

6. Results of all analytical daily samples taken.

Day	CBOD5 (mg/L) (limit 25 / Obj 15)	TSS (mg/L) (limit 25 / Obj 15)	TP (mg/L) (limit 1.0 / Obj 0.5)	Total Ammonia (mg/L) (Apr 16-Dec 14: limit 1.5 / Obj 1) (Dec 15-Apr 15: limit 3 / Obj 2)

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Bypass Summary Report – 2019 December

Wallaceburg Water Pollution Control Plant - Works # 110000784

1. Type of Bypass: Emergency ☐ Planned ☐ None ☒
   Reason for the Bypass event:

2. Date, time of the beginning of the Bypass:
   Date, time of the end of the Bypass:
   Duration of the Bypass event:
   Measured or estimated volume of the Bypass:

3. SAC and Public Health have been notified of the beginning of the Bypass on:
   SAC and Public Health have been notified of the end of the Bypass on:

4. Treatment process(es) gone through prior to the Bypass and the treatment process(es) that have been Bypassed:
   Not Applicable

5. Effort(s) done to maximize the flow through the downstream treatment process(es) and the reason(s) why the Bypass was not avoided:
   Not Applicable

6. Results of all analytical daily samples taken.

Day	CBOD5 (mg/L) (limit 25 / Obj 15)	TSS (mg/L) (limit 25 / Obj 15)	TP (mg/L) (limit 1.0 / Obj 0.5)	Total Ammonia (mg/L) (Apr 16-Dec 14: limit 1.5 / Obj 1) (Dec 15-Apr 15: limit 3 / Obj 2)

APPENDIX E

Yearly Overflow Summary Reports for the Reporting Period

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Overflow Summary Report – 2019 January

Wallaceburg Water Pollution Control Plant - Works # 110000784

1. Type of Overflow: Emergency ☐ Planned ☐ None ☒
   Overflow Location: Plant ☐ Pump Station ☐ N/A ☒
   Reason for the Overflow event:

2. Date, time of the beginning of the Overflow:
   Date, time of the end of the Overflow:
   Duration of the Overflow event:
   Measured or estimated volume of the Overflow:

3. SAC and Public Health have been notified of the beginning of the Overflow on:
   SAC and Public Health have been notified of the end of the Overflow on:

4. The Overflow was discharged: ☐ through the effluent disposal facilities
   ☐ to an alternate location_____
   Treatment process(es) gone through prior to the Overflow and the disinfection status of the Overflow:
   N/A

5. Effort(s) done to maximize the flow through the downstream treatment process(es) and Bypasse(s) and the reason(s) why the Overflow was not avoided:
   N/A

6. Results of all analytical samples taken.
   **Use applicable table(s)*

Table of Plant Overflow Results

Day	CBOD5 (mg/L)	TSS (mg/L)	TP (mg/L)	Total Ammonia (mg/L)	E. coli (cfu/100mL)
Beginning					
8 hours					

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Table of Plant Raw Sewage / Primary Effluent Overflow Results

Day	BOD5 (mg/L)	TSS (mg/L)	TP (mg/L)	TKN (mg/L)
Beginning				
8 hours				

Table of Results for Representative Sewage Pumping Station Grab Sample

Day	BOD5 (mg/L)	TSS (mg/L)	TP (mg/L)	TKN (mg/L)

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Overflow Summary Report – 2019 February

Wallaceburg Water Pollution Control Plant - Works # 110000784

1. Type of Overflow: Emergency ☐ Planned ☐ None ☒
   Overflow Location: Plant ☐ Pump Station ☐ N/A ☐
   Reason for the Overflow event:

2. Date, time of the beginning of the Overflow:
   Date, time of the end of the Overflow:
   Duration of the Overflow event:
   Measured or estimated volume of the Overflow:

3. SAC and Public Health have been notified of the beginning of the Overflow on:
   SAC and Public Health have been notified of the end of the Overflow on:

4. The Overflow was discharged: ☐ through the effluent disposal facilities
   ☐ to an alternate location_____
   Treatment process(es) gone through prior to the Overflow and the disinfection status of the Overflow:
   NA

5. Effort(s) done to maximize the flow through the downstream treatment process(es) and Bypasse(s) and the reason(s) why the Overflow was not avoided:
   NA

6. Results of all analytical samples taken.
   **Use applicable table(s)*

Table of Plant Overflow Results

Day	CBOD5 (mg/L)	TSS (mg/L)	TP (mg/L)	Total Ammonia (mg/L)	E. coli (cfu/100mL)
Beginning					
8 hours					

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Table of Plant Raw Sewage / Primary Effluent Overflow Results

Day	BOD5 (mg/L)	TSS (mg/L)	TP (mg/L)	TKN (mg/L)
Beginning				
8 hours				

Table of Results for Representative Sewage Pumping Station Grab Sample

Day	BOD5 (mg/L)	TSS (mg/L)	TP (mg/L)	TKN (mg/L)

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Overflow Summary Report – 2019 March

Wallaceburg Water Pollution Control Plant - Works # 110000784

1. Type of Overflow: Emergency ☐ Planned ☐ None ☒
   Overflow Location: Plant ☐ Pump Station ☐ N/A ☒
   Reason for the Overflow event:

2. Date, time of the beginning of the Overflow:
   Date, time of the end of the Overflow:
   Duration of the Overflow event:
   Measured or estimated volume of the Overflow:

3. SAC and Public Health have been notified of the beginning of the Overflow on:
   SAC and Public Health have been notified of the end of the Overflow on:

4. The Overflow was discharged: ☐ through the effluent disposal facilities
   ☐ to an alternate location_____
   Treatment process(es) gone through prior to the Overflow and the disinfection status of the Overflow:
   NA

5. Effort(s) done to maximize the flow through the downstream treatment process(es) and Bypasse(s) and the reason(s) why the Overflow was not avoided:
   NA

6. Results of all analytical samples taken.
   **Use applicable table(s)*

Table of Plant Overflow Results

Day	CBOD5 (mg/L)	TSS (mg/L)	TP (mg/L)	Total Ammonia (mg/L)	E. coli (cfu/100mL)
Beginning					
8 hours					

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Tel: (519) 436-0119 Fax: (519) 352-3432
Toll Free: 1.800.714.7497

Table of Plant Raw Sewage / Primary Effluent Overflow Results

Day	BOD5 (mg/L)	TSS (mg/L)	TP (mg/L)	TKN (mg/L)
Beginning				
8 hours				

Table of Results for Representative Sewage Pumping Station Grab Sample

Day	BOD5 (mg/L)	TSS (mg/L)	TP (mg/L)	TKN (mg/L)

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Overflow Summary Report – 2019 April

Wallaceburg Water Pollution Control Plant - Works # 110000784

1. Type of Overflow: Emergency ☐ Planned ☐ None ☒
   Overflow Location: Plant ☐ Pump Station ☐ N/A ☒
   Reason for the Overflow event:

2. Date, time of the beginning of the Overflow:
   Date, time of the end of the Overflow:
   Duration of the Overflow event:
   Measured or estimated volume of the Overflow:

3. SAC and Public Health have been notified of the beginning of the Overflow on:
   SAC and Public Health have been notified of the end of the Overflow on:

4. The Overflow was discharged: ☐ through the effluent disposal facilities
   ☐ to an alternate location_____
   Treatment process(es) gone through prior to the Overflow and the disinfection status of the Overflow:
   NA

5. Effort(s) done to maximize the flow through the downstream treatment process(es) and Bypasse(s) and the reason(s) why the Overflow was not avoided:
   NA

6. Results of all analytical samples taken.
   **Use applicable table(s)*

Table of Plant Overflow Results

Day	CBOD5 (mg/L)	TSS (mg/L)	TP (mg/L)	Total Ammonia (mg/L)	E. coli (cfu/100mL)
Beginning					
8 hours					

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Table of Plant Raw Sewage / Primary Effluent Overflow Results

Day	BOD5 (mg/L)	TSS (mg/L)	TP (mg/L)	TKN (mg/L)
Beginning				
8 hours				

Table of Results for Representative Sewage Pumping Station Grab Sample

Day	BOD5 (mg/L)	TSS (mg/L)	TP (mg/L)	TKN (mg/L)

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Overflow Summary Report – 2019 May

Wallaceburg Water Pollution Control Plant - Works # 110000784

1. Type of Overflow: Emergency ☐ Planned ☐ None ☒
   Overflow Location: Plant ☐ Pump Station ☐ N/A ☒
   Reason for the Overflow event:

2. Date, time of the beginning of the Overflow:
   Date, time of the end of the Overflow:
   Duration of the Overflow event:
   Measured or estimated volume of the Overflow:

3. SAC and Public Health have been notified of the beginning of the Overflow on:
   SAC and Public Health have been notified of the end of the Overflow on:

4. The Overflow was discharged: ☐ through the effluent disposal facilities
   ☐ to an alternate location_____
   Treatment process(es) gone through prior to the Overflow and the disinfection status of the Overflow:
   NA

5. Effort(s) done to maximize the flow through the downstream treatment process(es) and Bypasse(s) and the reason(s) why the Overflow was not avoided:
   NA

6. Results of all analytical samples taken.
   **Use applicable table(s)*

Table of Plant Overflow Results

Day	CBOD5 (mg/L)	TSS (mg/L)	TP (mg/L)	Total Ammonia (mg/L)	E. coli (cfu/100mL)
Beginning					
8 hours					

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Table of Plant Raw Sewage / Primary Effluent Overflow Results

Day	BOD5 (mg/L)	TSS (mg/L)	TP (mg/L)	TKN (mg/L)
Beginning				
8 hours				

Table of Results for Representative Sewage Pumping Station Grab Sample

Day	BOD5 (mg/L)	TSS (mg/L)	TP (mg/L)	TKN (mg/L)

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Overflow Summary Report – 2019 June

Wallaceburg Water Pollution Control Plant - Works # 110000784

1. Type of Overflow: Emergency ☐ Planned ☐ None ☒
   Overflow Location: Plant ☐ Pump Station ☐ N/A ☒
   Reason for the Overflow event:

2. Date, time of the beginning of the Overflow:
   Date, time of the end of the Overflow:
   Duration of the Overflow event:
   Measured or estimated volume of the Overflow:

3. SAC and Public Health have been notified of the beginning of the Overflow on:
   SAC and Public Health have been notified of the end of the Overflow on:

4. The Overflow was discharged: ☐ through the effluent disposal facilities
   ☐ to an alternate location_____
   Treatment process(es) gone through prior to the Overflow and the disinfection status of the Overflow:
   NA

5. Effort(s) done to maximize the flow through the downstream treatment process(es) and Bypasse(s) and the reason(s) why the Overflow was not avoided:
   NA

6. Results of all analytical samples taken.
   **Use applicable table(s)*

Table of Plant Overflow Results

Day	CBOD5 (mg/L)	TSS (mg/L)	TP (mg/L)	Total Ammonia (mg/L)	E. coli (cfu/100mL)
Beginning					
8 hours					

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Table of Plant Raw Sewage / Primary Effluent Overflow Results

Day	BOD5 (mg/L)	TSS (mg/L)	TP (mg/L)	TKN (mg/L)
Beginning				
8 hours				

Table of Results for Representative Sewage Pumping Station Grab Sample

Day	BOD5 (mg/L)	TSS (mg/L)	TP (mg/L)	TKN (mg/L)

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Overflow Summary Report – 2019 July

Wallaceburg Water Pollution Control Plant - Works # 110000784

1. Type of Overflow: Emergency ☐ Planned ☐ None ☒
   Overflow Location: Plant ☐ Pump Station ☐ N/A ☒
   Reason for the Overflow event:

2. Date, time of the beginning of the Overflow:
   Date, time of the end of the Overflow:
   Duration of the Overflow event:
   Measured or estimated volume of the Overflow:

3. SAC and Public Health have been notified of the beginning of the Overflow on:
   SAC and Public Health have been notified of the end of the Overflow on:

4. The Overflow was discharged: ☐ through the effluent disposal facilities
   ☐ to an alternate location_____
   Treatment process(es) gone through prior to the Overflow and the disinfection status of the Overflow:
   NA

5. Effort(s) done to maximize the flow through the downstream treatment process(es) and Bypasse(s) and the reason(s) why the Overflow was not avoided:
   NA

6. Results of all analytical samples taken.
   **Use applicable table(s)*

Table of Plant Overflow Results

Day	CBOD5 (mg/L)	TSS (mg/L)	TP (mg/L)	Total Ammonia (mg/L)	E. coli (cfu/100mL)
Beginning					
8 hours					

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Table of Plant Raw Sewage / Primary Effluent Overflow Results

Day	BOD5 (mg/L)	TSS (mg/L)	TP (mg/L)	TKN (mg/L)
Beginning				
8 hours				

Table of Results for Representative Sewage Pumping Station Grab Sample

Day	BOD5 (mg/L)	TSS (mg/L)	TP (mg/L)	TKN (mg/L)

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Overflow Summary Report – 2019 August

Wallaceburg Water Pollution Control Plant - Works # 110000784

1. Type of Overflow: Emergency ☐ Planned ☐ None ☒
   Overflow Location: Plant ☐ Pump Station ☐ N/A ☒
   Reason for the Overflow event:

2. Date, time of the beginning of the Overflow:
   Date, time of the end of the Overflow:
   Duration of the Overflow event:
   Measured or estimated volume of the Overflow:

3. SAC and Public Health have been notified of the beginning of the Overflow on:
   SAC and Public Health have been notified of the end of the Overflow on:

4. The Overflow was discharged: ☐ through the effluent disposal facilities
   ☐ to an alternate location_____
   Treatment process(es) gone through prior to the Overflow and the disinfection status of the Overflow:
   NA

5. Effort(s) done to maximize the flow through the downstream treatment process(es) and Bypasse(s) and the reason(s) why the Overflow was not avoided:
   NA

6. Results of all analytical samples taken.
   **Use applicable table(s)*

Table of Plant Overflow Results

Day	CBOD5 (mg/L)	TSS (mg/L)	TP (mg/L)	Total Ammonia (mg/L)	E. coli (cfu/100mL)
Beginning					
8 hours					

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Table of Plant Raw Sewage / Primary Effluent Overflow Results

Day	BOD5 (mg/L)	TSS (mg/L)	TP (mg/L)	TKN (mg/L)
Beginning				
8 hours				

Table of Results for Representative Sewage Pumping Station Grab Sample

Day	BOD5 (mg/L)	TSS (mg/L)	TP (mg/L)	TKN (mg/L)

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Overflow Summary Report – 2019 September

Wallaceburg Water Pollution Control Plant - Works # 110000784

1. Type of Overflow: Emergency ☐ Planned ☐ None ☒
   Overflow Location: Plant ☐ Pump Station ☐ Not Applicable ☒
   Reason for the Overflow event:

2. Date, time of the beginning of the Overflow:
   Date, time of the end of the Overflow:
   Duration of the Overflow event:
   Measured or estimated volume of the Overflow:

3. SAC and Public Health have been notified of the beginning of the Overflow on:
   SAC and Public Health have been notified of the end of the Overflow on:

4. The Overflow was discharged: ☐ through the effluent disposal facilities
   ☐ to an alternate location_____
   Treatment process(es) gone through prior to the Overflow and the disinfection status of the Overflow:
   Not Applicable

5. Effort(s) done to maximize the flow through the downstream treatment process(es) and Bypasse(s) and the reason(s) why the Overflow was not avoided:
   Not Applicable

6. Results of all analytical samples taken.
   **Use applicable table(s)*

Table of Plant Overflow Results

Day	CBOD5 (mg/L)	TSS (mg/L)	TP (mg/L)	Total Ammonia (mg/L)	E. coli (cfu/100mL)
Beginning					
8 hours					

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Table of Plant Raw Sewage / Primary Effluent Overflow Results

Day	BOD5 (mg/L)	TSS (mg/L)	TP (mg/L)	TKN (mg/L)
Beginning				
8 hours				

Table of Results for Representative Sewage Pumping Station Grab Sample

Day	BOD5 (mg/L)	TSS (mg/L)	TP (mg/L)	TKN (mg/L)

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Overflow Summary Report – 2019 October

Wallaceburg Water Pollution Control Plant - Works # 110000784

1. Type of Overflow: Emergency ☐ Planned ☐ None ☒
   Overflow Location: Plant ☐ Pump Station ☐ Not Applicable ☒
   Reason for the Overflow event:

2. Date, time of the beginning of the Overflow:
   Date, time of the end of the Overflow:
   Duration of the Overflow event:
   Measured or estimated volume of the Overflow:

3. SAC and Public Health have been notified of the beginning of the Overflow on:
   SAC and Public Health have been notified of the end of the Overflow on:

4. The Overflow was discharged: ☐ through the effluent disposal facilities
   ☐ to an alternate location_____
   Treatment process(es) gone through prior to the Overflow and the disinfection status of the Overflow:
   Not Applicable

5. Effort(s) done to maximize the flow through the downstream treatment process(es) and Bypasse(s) and the reason(s) why the Overflow was not avoided:
   Not Applicable

6. Results of all analytical samples taken.
   **Use applicable table(s)*

Table of Plant Overflow Results

Day	CBOD5 (mg/L)	TSS (mg/L)	TP (mg/L)	Total Ammonia (mg/L)	E. coli (cfu/100mL)
Beginning					
8 hours					

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Table of Plant Raw Sewage / Primary Effluent Overflow Results

Day	BOD5 (mg/L)	TSS (mg/L)	TP (mg/L)	TKN (mg/L)
Beginning				
8 hours				

Table of Results for Representative Sewage Pumping Station Grab Sample

Day	BOD5 (mg/L)	TSS (mg/L)	TP (mg/L)	TKN (mg/L)

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Overflow Summary Report – 2019 November

Wallaceburg Water Pollution Control Plant - Works # 110000784

1. Type of Overflow: Emergency ☐ Planned ☐ None ☒
   Overflow Location: Plant ☐ Pump Station ☐ Not Applicable ☒
   Reason for the Overflow event:

2. Date, time of the beginning of the Overflow:
   Date, time of the end of the Overflow:
   Duration of the Overflow event:
   Measured or estimated volume of the Overflow:

3. SAC and Public Health have been notified of the beginning of the Overflow on:
   SAC and Public Health have been notified of the end of the Overflow on:

4. The Overflow was discharged: ☐ through the effluent disposal facilities
   ☐ to an alternate location_____
   Treatment process(es) gone through prior to the Overflow and the disinfection status of the Overflow:
   Not Applicable

5. Effort(s) done to maximize the flow through the downstream treatment process(es) and Bypasse(s) and the reason(s) why the Overflow was not avoided:
   Not Applicable

6. Results of all analytical samples taken.
   **Use applicable table(s)*

Table of Plant Overflow Results

Day	CBOD5 (mg/L)	TSS (mg/L)	TP (mg/L)	Total Ammonia (mg/L)	E. coli (cfu/100mL)
Beginning					
8 hours					

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Table of Plant Raw Sewage / Primary Effluent Overflow Results

Day	BOD5 (mg/L)	TSS (mg/L)	TP (mg/L)	TKN (mg/L)
Beginning				
8 hours				

Table of Results for Representative Sewage Pumping Station Grab Sample

Day	BOD5 (mg/L)	TSS (mg/L)	TP (mg/L)	TKN (mg/L)

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Overflow Summary Report – 2019 December

Wallaceburg Water Pollution Control Plant - Works # 110000784

1. Type of Overflow: Emergency ☐ Planned ☐ None ☒
   Overflow Location: Plant ☐ Pump Station ☐ Not Applicable ☒
   Reason for the Overflow event:

2. Date, time of the beginning of the Overflow:
   Date, time of the end of the Overflow:
   Duration of the Overflow event:
   Measured or estimated volume of the Overflow:

3. SAC and Public Health have been notified of the beginning of the Overflow on:
   SAC and Public Health have been notified of the end of the Overflow on:

4. The Overflow was discharged: ☐ through the effluent disposal facilities
   ☐ to an alternate location_____
   Treatment process(es) gone through prior to the Overflow and the disinfection status of the Overflow:
   Not Applicable

5. Effort(s) done to maximize the flow through the downstream treatment process(es) and Bypasse(s) and the reason(s) why the Overflow was not avoided:
   Not Applicable

6. Results of all analytical samples taken.
   **Use applicable table(s)*

Table of Plant Overflow Results

Day	CBOD5 (mg/L)	TSS (mg/L)	TP (mg/L)	Total Ammonia (mg/L)	E. coli (cfu/100mL)
Beginning					
8 hours					

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Table of Plant Raw Sewage / Primary Effluent Overflow Results

Day	BOD5 (mg/L)	TSS (mg/L)	TP (mg/L)	TKN (mg/L)
Beginning				
8 hours				

Table of Results for Representative Sewage Pumping Station Grab Sample

Day	BOD5 (mg/L)	TSS (mg/L)	TP (mg/L)	TKN (mg/L)