



Ontario Clean Water Agency
Agence Ontarienne Des Eaux

136 Main Street East
Shelburne, Ontario
Canada L9V 3K5

TEL: 1 866 214 6987
TEL: 519 925 1938
FAX: 519 925 0322
WWW.OCWA.COM

March 21, 2018

Ms. Denyse Morrissey
CAO
Town of Shelburne
203 Main Street East
Shelburne, ON
L0N 1S0

Re: 2017 Performance Report for Shelburne Waste Water Treatment Facility

Attached is the 2017 Performance Report for the **Shelburne Waste Water Treatment Facility** located at Centennial Street in the Town of Shelburne. This report has been completed in accordance with the Amended Certificate of Approval # 6413-ABLQQS dated July 19, 2016 and issued to the Town of Shelburne.

This report was prepared by the Ontario Clean Water Agency on behalf of the Town of Shelburne based on the information we have in our records. The report covers the period from January 1, 2017 to December 31, 2017.

If you have questions regarding the attached report please do not hesitate to contact me at (519) 925-1938.

Kind Regards,

A handwritten signature in blue ink, appearing to read "Scott Craggs".

Scott Craggs
Senior Operations Manager
Ontario Clean Water Agency
Highlands Hub

SC/di



Ontario Clean Water Agency Agence Ontarienne Des Eaux

Annual Report

for the

Shelburne Water Pollution Control Plant

Certificate of Approval No. 6413-ABLQQS

for the year

2017

prepared for the Town of Shelburne

by the Ontario Clean Water Agency

Prepared by: Don Irvine
Process & Compliance Technician
Ontario Clean Water Agency
Highlands Hub

2017 Annual Performance Report for The Town of Shelburne Wastewater Treatment Plant Certificate of Approval No. 6413-ABLQQS

**Operated by the Ontario Clean Water Agency (OCWA)
under contract to the Town of Shelburne
for the year 2017**

Section 1 - Introduction:

The Ontario Clean Water Agency is pleased to provide the Ministry of the Environment and Climate Change (MOECC) with the 2017 Annual Performance Report for the Shelburne Wastewater Treatment Plant.

This report is designed to inform the MOECC of the quality of effluent being discharged from this facility. The entire treatment process at the Shelburne Wastewater Treatment Plant can best be described as a "transformation".

A transformation from a harmful wastewater into two useful end products:

- a) A disinfected treated effluent
- b) An agricultural liquid fertilizer

Inquiries regarding this report can be directed to Scott Craggs, Senior Operations Manager at the Ontario Clean Water Agency office located at 136 Main St. East, in Shelburne, Ontario. (Tel) (519) 925-1938, Fax (519) 925-0322, email: scraggs@ocwa.com.

Section 2 - Project Description:

The Town of Shelburne is a community of approximately 8,900 people located approximately 100 kilometers northwest of Toronto. The community first obtained a waste disposal system in 1968 with the construction of a 5.5 ha lagoon and associated gravity collection and pumping system. The Town grew consistently over the years and eventually overloaded the lagoon system. In July 1981 construction was completed on a wastewater treatment system located at the present location. This expansion consisted of a new trunk sewer, pumping facilities, secondary and tertiary treatment and modifications to the existing lagoons which now provide storm and effluent holding during excess storm flows and plant upsets and maintenance.

The facility consisted of a wet well, a manual screen, grit channels, an oxidation ditch, one secondary clarifier, four effluent sand filters and a chlorine contact chamber. The oxidation ditch used two brush rotors. The facility operated as an extended aeration plant in this configuration from 1981 until December 1999.

2017 Annual Performance Report for the Town of Shelburne Wastewater Treatment Plant Certificate of Approval No. 6413-ABLQQS

A major expansion (Phase 1) took place at the Shelburne WWTP in 1999, changing the configuration of the plant and the method of treating wastewater. The plant went under construction starting in April 1999 with the start-up of the new process in December of 1999. The Shelburne WWTP is still an extended aeration plant. As an extended aeration plant it is designed to remove suspended solids, CBOD₅ and phosphorus from the wastewater. Major improvements were two aeration tanks constructed with fine bubble diffusers. The sludge treatment system consists of a two stage aerobic sludge digestion system with a total storage volume of 580m³, equipped with coarse bubble aeration system and supernatant decanting. The former oxidation ditch was converted to a sludge storage facility with approximately six months storage.

Sludge loading facilities provide for transfer of digested aerobic sludge to trucks. Digested sludge is land-applied as farm fertilizer.

Two ultra-violet radiation banks replaced the sodium hypochlorite disinfection system.

In March 2006 the Ministry of the Environment issued an amended Certificate of Approval # 9046-6GAJUM for the Phase 2 extension and upgrading including;

- Construction of a hauled sewage receiving station;
- Replacement of the raw sewage pumping station - two submersible pumps;
- Replacement of the inlet works;
- Construction of a secondary clarifier ;
- Replacement of the clarifier effluent pump system; and
- Reconfiguration of the stormwater and effluent holding ponds.

New media was introduced into the filters, and OCWA and the Town of Shelburne are debating if a dual media filter is necessary as per the amended Certificate of Approval No. 9972-7FYJUB. Currently the filters are operating on single media, and if the Town of Shelburne continues to use a single media filter an administrative amendment to the Certificate of Approval will have to be submitted to reflect the current plant process. The decommissioning of the filters was completed in January 2017.

In 2017 the Ministry of the Environment and Climate Change issued an amended Environmental Compliance Approval #6413-ABLQQS for upgrading of the filtration and standby power which included;

- Two cloth-filter treatment units with a design capacity of 4,400 m³ each
- One 650 kW standby power diesel generator and 9000L diesel tank with double-walled containment

This facility receives residential, commercial, institutional and industrial wastewater and provides a level of treatment to meet the amended "Environmental Compliance Approval - # 6413-ABLQQS" for discharging into the Beasley Drain a minor tributary of the Boyne River. The

2017 Annual Performance Report for the Town of Shelburne Wastewater Treatment Plant Certificate of Approval No. 6413-ABLQQS

Boyne Creek empties into the Nottawasaga River, ultimately meeting Georgian Bay at Wasaga Beach.

A "Process Flow Schematic" is included in Appendix D of this report.

Section 3 - Plant Facts:

Facilities >	Extended Aeration Sewage Treatment Plant
Design Capacity >	3,420 m ³ /day
Average Daily Flow 2017 >	2,550 m ³ /day
Receiving Water >	Besley Drain to Boyne Creek to Nottawasaga River
Service Population >	approx 8,900 (2018)
Environmental Compliance Approval >	6413-ABLQQS
Plant Classification >	WWT-III
Organization Number >	5773

Effluent Objectives

Table 2 – Effluent Objectives	
Effluent Parameter	Concentration Objective (milligrams per litre unless otherwise indicated)
Column 1	Column 2
CBOD₅	4.0
Total Suspended Solids	4.0
Total Phosphorous	0.12
Total Ammonia Nitrogen	
Oct 1 – May 31	2.0
Jun 1 – Sept 30	0.5
E-coli	100 organisms /100 mL (monthly Geometric Mean Density)
pH of the effluent maintained between 6.5 – 8.5, inclusive, at all times.	

**2017 Annual Performance Report for
the Town of Shelburne Wastewater Treatment Plant
Certificate of Approval No. 6413-ABLQQS**

Effluent Requirements:

Table 1 – Effluent Limits			
Effluent Parameter	Maximum Concentration (milligrams per litre unless otherwise indicated)	Monthly Average Concentration (milligrams per litre unless otherwise indicated)	Annual or Seasonal Average Loading (kilograms per day unless otherwise indicated)
Column 1	Column 2	Column 3	Column 4
CBOD₅	-	5.0	17.1
Total Suspended Solids	-	5.0	17.1
Total Phosphorous	-	0.25	0.86
Total Ammonia Nitrogen			
Oct 1 – May 31	-	2.4	8.2
Jun 1 – Sept 30		0.8	2.7
E-coli	-	200 organisms /100 mL (monthly Geometric Mean Density)	-
pH of the effluent maintained between 6.0 to 9.5, inclusive, at all times.			

Sampling Requirements ➤

Final effluent: a 24 hour composite sample to be collected weekly and tested for BOD₅, CBOD₅, Total Suspended Solids, Total Ammonia Nitrogen, Total Kjeldahl Nitrogen, Nitrite, Nitrate and Total Phosphorus, pH, Alkalinity and Temperature; a weekly grab sample for E.coli.

Raw sewage: a grab sample to be collected monthly and tested for BOD₅, CBOD₅, Total Suspended Solids, Total Kjeldahl Nitrogen, Total Phosphorous, pH and Alkalinity.

Hauled sewage: a grab sample is collected monthly and tested for BOD₅, CBOD₅, Total Suspended Solids, Total Kjeldahl Nitrogen, and Total Phosphorous.

Aerobic sludge: a grab sample is collected monthly during the non-spreading and spreading season and tested for total solids, nitrite, nitrate, total phosphorous, total ammonia nitrogen, total kjeldahl nitrogen, pH and metals.

2017 Annual Performance Report for the Town of Shelburne Wastewater Treatment Plant Certificate of Approval No. 6413-ABLQQS

Section 4 - Sampling Procedures:

Raw sewage is sampled monthly and tested for BOD₅, CBOD₅, Suspended Solids, Total Kjeldahl Nitrogen, pH, Alkalinity and Total Phosphorus. Samples are collected using an automatic composite sampler (over a twenty-four hour period).

Final effluent is sampled weekly and tested for CBOD₅, Total Suspended Solids, Total Phosphorus, pH, Alkalinity, Total Kjeldahl Nitrogen, Total Ammonia Nitrogen, Nitrite and Nitrate. These are collected using an automatic composite sampler (over a twenty-four hour period). A weekly grab sample is collected and tested for E.coli. Grab samples of final effluent is also collected and tested in the plant by the operator for pH and temperature.

The concentration of un-ionized ammonia is calculated using the grab pH and temperature results and the total ammonia concentration result from SGS Lakefield Research Limited.

In-house tests are conducted by licensed operators for monitoring purposes using Standard Methods. The data generated from these tests is used to determine the treatment efficiency while maintaining process control. All in-house monitoring equipment is calibrated based on the manufacturer's recommendations.

Aerobic sludge is collected and tested as per the sampling requirements.

Section 5 - Summary of Report:

In 2017, the Shelburne WWTP provided effective wastewater treatment, producing effluent with removal rates for CBOD₅, TSS, TKN and Total Phosphorus all 98.3 % or better.

The bacteriological quality of the effluent complied with the certificate of approval monthly geometric mean density of <200 organisms per 100 ml sample for every month during 2017.

The aerobic sludge produced at the facility continued to meet all the Guidelines established for agricultural utilization. Wessuc Environmental Services Inc. are contracted to haul and spread sludge from the Shelburne WPCP.

Section 6 - Compliance With Provincial Regulations:

OCWA operates this sewage system in accordance with provincial regulations. Here is how we do it:

- Use of Accredited Labs (SGS Canada Inc.): Analytical tests to monitor the effluent quality are conducted by a laboratory audited by the Canadian Association for Environmental Analytical Laboratories (CAEAL) and accredited by the Standards Council of Canada (SCC). Accreditation ensures that the laboratory has acceptable laboratory protocols and test methods

2017 Annual Performance Report for the Town of Shelburne Wastewater Treatment Plant Certificate of Approval No. 6413-ABLQQS

the analysts performing the test methods. During 2017, all chemical sample analyses were conducted by SGS Lakefield Research Limited.

- **Operation by Licensed Operators:** This sewage system is operated and maintained by the OCWA's licensed staff. The mandatory licensing program for operators of sewage treatment facilities in Ontario is regulated under the Ontario Water Resources Act (OWRA) Ontario
- **Regulation 129/04.** Licensing means that an individual meets the education and experience requirements and has successfully passed the certification exam.

The following are certified operators who operated this facility during 2017 with current certified classification, certificate numbers and certificate expiry dates (TABLE 1):

TABLE 1

Operator	Level	Certificate #	Expiry Date
Alex Solonomov	WWT 2	#49144	Jul 31, 2018
	WWC 2	#16652	Jan 31, 2021
Bill Smith	WWT 2	#65685	Aug 31, 2020
	WWC 1	Deemed	Aug 31, 2020
Curtis Parker	WWT 4	#79166	Mar 31, 2019
	WWC 3	#79167	Jul 31, 2018
Emanuel Castro	WWT 1	#95067	Oct 31, 2019
	WWC 1	Deemed	Oct 31, 2019

- **Sampling and Analytical Requirements:** OCWA follows a sampling and analysis schedule required by the Certificate of Approval.

Section 7 - System Information:

Facility Name:	Town of Shelburne Waste Water Treatment Plant	Client Services: Phone Number	Natalie Baker (705) 730-3480
Receiving Water Disinfection Method	Besley Drain to Boyne River Ultra Violet	E-mail Address	nbaker@ocwa.com
Municipal Location	Town of Shelburne	Senior Operations Manager Phone Number	Scott Craggs (519) 925-1938
Service Population	Approx 8,900 (2018)	E-mail Address	scraggs@ocwa.com

2017 Annual Performance Report for the Town of Shelburne Wastewater Treatment Plant Certificate of Approval No. 6413-ABLQQS

Section 8 - Flows:

The total flow treated in 2017 was 930,344 m³. The annual average daily flow of 2,550 m³/day was 74.6% of the design capacity. The monthly daily average design capacity flow was not exceeded during 2017. The maximum peak flow of 4,922 m³/day represents 55.2% of the design peak flow of 8,921 m³/day.

Section 9 - Raw Sewage Quality:

The annual average raw sewage CBOD₅ concentration to the plant was 245.42 mg/L. This corresponds to an average CBOD₅ loading of 625.82 kg/day. The annual average raw sewage suspended solids (TSS) concentration to the plant was 236.42 mg/L. This corresponds to an average TSS loading of 602.90 kg/day. The annual average raw sewage nitrogen concentration (as represented by TKN) to the plant was 31.37 mg/L. This corresponds to an average TKN loading of 79.99 kg/day. The annual average raw sewage Total Phosphorus concentration to the plant was 4.89 mg/L. This corresponds to an average Total Phosphorus loading of 12.47 kg/day.

Section 10 - Plant Performance & Effluent Quality:

The effluent limit and loading exceedances for Total Ammonia Nitrogen was due to required aeration cell maintenance to correct the low dissolved oxygen levels in both tanks. Refer to Appendix F for more detail. All repairs/maintenance can be found in Section 14.

Detailed analytical results from SGS Lakefield Research Limited are available at the office on request. A summary of flows and plant performance is provided in this report.

The Shelburne WWTP provided effective wastewater treatment with removal rates for CBOD₅, TSS, TKN and Total Phosphorus of 98.3% or better for 2017.

Effluent Limits

The annual average effluent CBOD₅ concentration was 2.38 mg/l with a removal efficiency of 99.4%. The annual average effluent TSS concentration was 2.44 mg/l with a removal efficiency of 99.7%. The annual average effluent Total Kjeldahl Nitrogen (TKN) concentration was 0.54 mg/l with a removal efficiency of 98.3%. The annual average effluent Total Phosphorus concentration was 0.05 mg/l with a removal efficiency of 99.4%. The annual average effluent concentration for Total Ammonia-Nitrogen was 1.13 mg/l for the season (Oct 1 to May 31, 2017). The annual average effluent concentration for Total Ammonia-Nitrogen was 0.13 mg/l for the season (June 1 to Sept 30, 2017).

2017 Annual Performance Report for the Town of Shelburne Wastewater Treatment Plant Certificate of Approval No. 6413-ABLQQS

A notice of non-compliance was issued on June 13, 2017 for elevated Total Ammonia Nitrogen levels due to aeration cell maintenance. A notice of non-compliance was issued on April 17, 2018 due to elevated Total Suspended Solids for the month of November 2017. Refer to Appendix F for more information

This facility was not in compliance with all the effluent concentration and loading limits due to elevated ammonia levels in May and for Total Suspended Solids concentration in November for the year 2017. The average waste loadings for the final effluent can be found in Appendix A.

The 2017 bacteriological quality of the effluent complied with the certificate of approval monthly geometric mean density of <200 organisms per 100 ml sample for every month during 2017. The monthly geometric mean densities of organisms were between 1.74 to 7.77 per 100 ml.

Effluent Objectives

The effluent from the facility met the effluent concentration objectives for Total Phosphorus, CBOD₅, and E.coli. The effluent concentration objective for Total Ammonia Nitrogen in May was not met while the Total Suspended Solids concentration was not met for the month of November.

Section 11 - Sludge Management:

Digested sludge produced at the Shelburne WWTP is land-applied in accordance with the Nutrient Management Act 2002 and Ontario Regulation 267/03.

Grab samples of digested (aerobic) sludge are collected and tested as per these requirements. In 2017 sludge sample analysis were carried out by SGS Lakefield Research Limited. A summary of sludge sample results is provided in Appendix B of this report.

Wessuc Environmental Services Inc. was contracted to haul and spread sludge from the Shelburne plant in 2017. (Certificate of Approval - Waste Management System # 1603-4LGJBN)

The following certified sites were utilized in 2017:

- ***NASM Plan #23009 – David Barker***
- ***NASM Plan #23166 – Jon Blydorp***
- ***NASM Plan #22638 – Clinton Smith***

2017 Annual Performance Report for the Town of Shelburne Wastewater Treatment Plant Certificate of Approval No. 6413-ABLQQS

Section 12 – A summary of any complaints received during the reporting period and any steps taken to address the complaints:

A standard operating procedure (SOP) has been in place for a number of years to deal with complaints received from the community. All complaints are to be addressed and logged in detail in the facility logbook and a generic "Complaint Form". The information from the form would be entered on OCWA's electronic database system "OPEX". This system contains all the required information and history of all complaints.

There were complaints received during this reporting period with regard to the Shelburne Water Pollution Control Plant due to odors from decay in the spring at the holding cells. A copy of the complaints can be found in Appendix E

Section 13 - Bypassing and Abnormal Conditions:

There were no bypasses at the Shelburne Water Pollution Control Plant during the 2017 reporting period.

Section 14 - Maintenance and Calibration Activities:

Plant maintenance, including non-scheduled maintenance is monitored using Maximo Workplace Management System. Detailed maintenance reports are available. All routine and preventative maintenance was conducted as scheduled in 2017.

A number of repairs or improvements to equipment on the works were made or identified in 2017 as follows:

Plant:

- H2Ontario on site for filter upgrade work
- Alum containment area completed by H2Ontario
- Facility lighting replaced by Belwood Electric
- Inspection and cleaning of north & south aeration cells completed
- Overhead cranes installed at filters
- Equipment failure due to flooding from excessive rain fall
- Replacement of potable water lines in basement due to failure
- Davit installed for primary digester
- Extra bio solids hauled due to storm pond clean out
- Electric motor for raw pump replaced 7.5 HP
- Filter feed pump repaired and replaced

2017 Annual Performance Report for the Town of Shelburne Wastewater Treatment Plant Certificate of Approval No. 6413-ABLQQS

- Bar screen over torque switch repaired by Belwood Electric

Flowmetrix Technical Services Inc. was contracted to calibrate all flow measuring equipment on September 18, 2017. Copies of the calibration reports can be found in Appendix C of this report.

Section 15 – Inspection of the Facility by the Ministry of the Environment and Climate Change:

There was a MOECC inspection of the Shelburne Water Pollution Control Plant on March 8, 2017.

Section 16 – Notice of Modifications:

There were no notices of modifications sent to the Water Supervisor during this reporting period with regard to the Shelburne Water Pollution Control Plant.

Section 17 - Operational Objectives:

The Town of Shelburne Wastewater Treatment Plant continues to provide excellent wastewater treatment. OCWA and its operators will continue to strive through expertise and knowledge to meet all objectives and to continually improve and optimize the efficiency of the facility.

Section 18 - Appendix:

- 2017 Annual Performance Summary – Appendix A
- Annual Summary for 2017
- Flows and Effluent Quality 2017
- Sludge Quality Data & Haulage 2017 – Appendix B
- Calibration Reports 2017 – Appendix C
- Process Flow Schematic 2017 – Appendix D
- Community Complaints 2017 – Appendix E
- Letter of Non-Compliance 2017 – Appendix F

**2017 Annual Performance Report for
the Town of Shelburne Wastewater Treatment Plant
Certificate of Approval No. 9972-7FYJUB**

Appendix A

Annual Performance Summary

2017

**2017 Annual Performance Report for
the Town of Shelburne Wastewater Treatment Plant
Certificate of Approval No. 9972-7FYJUB**

Appendix B

Sludge Quality Data & Haulage

2017

SHELburne WWTP
ANNUAL SUMMARY FOR 2017
SLUDGE QUALITY DATA - 2017

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL AVERAGE
Ammonia	223.0	187.0	177.0	200.5	280.1	301.0	370.0	463.0	384.0	350.0	147.0	281.0	480.4
Phosphorus	530.0	400.0	395.0	385.0	240.0	330.0	210.0	430.0	460.0	470.0	460.0	590.0	405.6
Nitrate	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
Ammonia + Nitrate	111.7	83.7	88.7	100.4	140.2	150.7	185.2	231.7	192.2	175.2	73.7	140.7	140.3
TS	26900	29500	22550	20750	18950	18300	10900	20100	24600	23000	31800	34200	22963

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL AVERAGE
Copper	6.60	6.40	6.20	5.40	3.70	5.40	3.20	6.70	7.50	7.50	7.80	12.00	6.70
Nickel	0.33	0.27	0.26	0.23	0.17	0.24	0.15	0.31	0.34	0.32	0.36	0.52	0.29
Lead	0.60	0.40	0.40	0.40	0.20	0.40	0.20	0.40	0.60	0.60	0.80	1.00	0.50
Zinc	11.00	7.60	7.10	6.10	4.30	6.70	4.00	8.40	10.00	11.00	12.00	16.00	8.68
Arsenic	0.50	0.40	0.30	0.30	0.20	0.30	0.20	0.40	0.40	0.40	0.40	0.50	0.38
Cadmium	0.012	0.022	0.015	0.014	0.009	0.012	0.008	0.015	0.011	0.015	0.02	0.03	0.02
Cobalt	0.07	0.07	0.07	0.06	0.04	0.05	0.02	0.07	0.09	0.10	0.09	0.10	0.07
Chromium	0.56	0.40	0.42	0.35	0.26	0.36	0.18	0.46	0.51	0.57	0.60	0.90	0.47
Mercury	0.014	0.016	0.012	0.013	0.004	0.016	0.007	0.007	0.014	0.009	0.012	0.026	0.013
Molybdenum	0.28	0.21	0.21	0.18	0.17	0.26	0.13	0.27	0.28	0.29	0.26	0.35	0.24
Selenium	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	1.00	0.18

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL TOTAL
Copper	319.703	250.960	274.945	260.241	219.289	295.062	293.578	333.333	304.878	326.087	245.283	350.877	289
Nickel	12	11	11	11	10	13	14	15	14	14	11	15	13
Lead	22	16	18	19	12	22	18	20	24	26	25	29	21
Zinc	409	298	315	294	254	366	367	418	407	478	377	468	371
Arsenic	19	16	13	14	12	16	16	20	16	17	13	15	16
Cadmium	0.4	0.9	0.8	0.7	0.5	0.7	0.7	0.7	0.4	0.7	0.7	0.9	0.7
Cobalt	3	3	3	3	2	3	3	3	4	4	3	3	3
Chromium	22	16	18	17	15	20	17	23	21	25	19	26	20
Mercury	0.52	0.71	0.51	0.60	0.24	0.98	0.64	0.35	0.57	0.39	0.38	0.76	0.55
Molybdenum	10	8	9	9	10	14	12	13	11	13	8	10	11
Selenium	4	4	4	5	6	5	9	5	4	4	3	3	5

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL TOTAL
Ammonia	223.0	187.0	177.0	200.5	280.1	301.0	370.0	463.0	384.0	350.0	147.0	281.0	480.4
Phosphorus	530.0	400.0	395.0	385.0	240.0	330.0	210.0	430.0	460.0	470.0	460.0	590.0	405.6
Nitrate	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
Ammonia + Nitrate	111.7	83.7	88.7	100.4	140.2	150.7	185.2	231.7	192.2	175.2	73.7	140.7	140.3
TS	26900	29500	22550	20750	18950	18300	10900	20100	24600	23000	31800	34200	22963

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL TOTAL
Copper	6.60	6.40	6.20	5.40	3.70	5.40	3.20	6.70	7.50	7.50	7.80	12.00	6.70
Nickel	0.33	0.27	0.26	0.23	0.17	0.24	0.15	0.31	0.34	0.32	0.36	0.52	0.29
Lead	0.60	0.40	0.40	0.40	0.20	0.40	0.20	0.40	0.60	0.60	0.80	1.00	0.50
Zinc	11.00	7.60	7.10	6.10	4.30	6.70	4.00	8.40	10.00	11.00	12.00	16.00	8.68
Arsenic	0.50	0.40	0.30	0.30	0.20	0.30	0.20	0.40	0.40	0.40	0.40	0.50	0.38
Cadmium	0.012	0.022	0.015	0.014	0.009	0.012	0.008	0.015	0.011	0.015	0.02	0.03	0.02
Cobalt	0.07	0.07	0.07	0.06	0.04	0.05	0.02	0.07	0.09	0.10	0.09	0.10	0.07
Chromium	0.56	0.40	0.42	0.35	0.26	0.36	0.18	0.46	0.51	0.57	0.60	0.90	0.47
Mercury	0.014	0.016	0.012	0.013	0.004	0.016	0.007	0.007	0.014	0.009	0.012	0.026	0.013
Molybdenum	0.28	0.21	0.21	0.18	0.17	0.26	0.13	0.27	0.28	0.29	0.26	0.35	0.24
Selenium	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	1.00	0.18

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL TOTAL
Copper	319.703	250.960	274.945	260.241	219.289	295.062	293.578	333.333	304.878	326.087	245.283	350.877	289
Nickel	12	11	11	11	10	13	14	15	14	14	11	15	13
Lead	22	16	18	19	12	22	18	20	24	26	25	29	21
Zinc	409	298	315	294	254	366	367	418	407	478	377	468	371
Arsenic	19	16	13	14	12	16	16	20	16	17	13	15	16
Cadmium	0.4	0.9	0.8	0.7	0.5	0.7	0.7	0.7	0.4	0.7	0.7	0.9	0.7
Cobalt	3	3	3	3	2	3	3	3	4	4	3	3	3
Chromium	22	16	18	17	15	20	17	23	21	25	19	26	20
Mercury	0.52	0.71	0.51	0.60	0.24	0.98	0.64	0.35	0.57	0.39	0.38	0.76	0.55
Molybdenum	10	8	9	9	10	14	12	13	11	13	8	10	11
Selenium	4	4	4	5	6	5	9	5	4	4	3	3	5

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL TOTAL
Ammonia	223.0	187.0	177.0	200.5	280.1	301.0	370.0	463.0	384.0	350.0	147.0	281.0	480.4
Phosphorus	530.0	400.0	395.0	385.0	240.0	330.0	210.0	430.0	460.0	470.0	460.0	590.0	405.6
Nitrate	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
Ammonia + Nitrate	111.7	83.7	88.7	100.4	140.2	150.7	185.2	231.7	192.2	175.2	73.7	140.7	140.3
TS	26900	29500	22550	20750	18950	18300	10900	20100	24600	23000	31800	34200	22963

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL TOTAL
Copper	6.60	6.40	6.20	5.40	3.70	5.40	3.20	6.70	7.50	7.50	7.80	12.00	6.70
Nickel	0.33	0.27	0.26	0.23	0.17	0.24	0.15	0.31	0.34	0.32	0.36	0.52	0.29
Lead	0.60	0.40	0.40	0.40	0.20	0.40	0.20	0.40	0.60	0.60	0.80	1.00	0.50
Zinc	11.00	7.60	7.10	6.10	4.30	6.70	4.00	8.40	10.00	11.00	12.00	16.00	8.68
Arsenic	0.50	0.40	0.30	0.30	0.20	0.30	0.20	0.40	0.40	0.40	0.40	0.50	0.38
Cadmium	0.012	0.022	0.015	0.014	0.009	0.012	0.008	0.015	0.011	0.015	0.02	0.03	0.02
Cobalt	0.07	0.07	0.07	0.06	0.04	0.05	0.02	0.07	0.09	0.10	0.09	0.10	0.07
Chromium	0.56	0.40	0.42	0.35	0.26	0.36	0.18	0.46	0.51	0.57	0.60	0.90	0.47
Mercury	0.014	0.016	0.012	0.013	0.004	0.016	0.007	0.007	0.014	0.009	0.012	0.026	0.013
Molybdenum	0.28	0.21	0.21	0.18	0.17	0.26	0.13	0.27	0.28	0.29	0.26	0.35	0.24
Selenium	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	1.00	0.18

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL TOTAL
Copper	319.703	250.960	274.945	260.241	219.289	295.062	293.578	333.333	304.878	326.087	245.283	350.877	289
Nickel	12	11	11	11	10	13	14	15	14	14	11	15	13
Lead	22	16	18	19	12	22	18	20	24	26	25	29	21
Zinc	409	298	315	294	254	366	367	418	407	478	377	468	371
Arsenic	19	16	13	14	12	16	16	20	16	17	13	15	16
Cadmium	0.4	0.9	0.8	0.7	0.5	0.7	0.7	0.7	0.4	0.7	0.7	0.9	0.7
Cobalt	3	3	3	3	2	3	3	3					

Daily Haulage Summary			
Date	Site	NASM #	Shelburne
May			
5/30/2017	D1001	23009	1076
5/31/2017	D1001	23009	879
Total	m3		1955
June			
6/1/2017	D1001	23009	675
Total	m3		675
October			
10/24/2017	D2001	23166	405
10/25/2017	D2001	23166	810
10/26/2017	D2001	23166	675
10/30/2017	S6002	22638	1080
Total	m3		2970
Annual	5600		5600

Daily Haulage Summary			
Date	Site	NASM #	Shelburne Lagoon
October			
10/31/2017	S6002	22638	755.16
Total	m3		755.16
November			
11/1/2017	S6002	22638	396.02
11/8/2017	D1001	23009	829.52
11/9/2017	D1001	23009	748.79
11/14/2017	D1001	23009	437.98
11/15/2017	S6002	22638	606.47
11/16/2017	S6002	22638	256.96
Total	m3		3275.74
Annual			4030.90

**2017 Annual Performance Report for
the Town of Shelburne Wastewater Treatment Plant
Certificate of Approval No. 9972-7FYJUB**

**Appendix C
Calibration Reports
2017**

AS FOUND CERTIFICATION

PASS

CLIENT DETAIL

CUSTOMER Ontario Clean Water Agency
CONTACT Lisa Benoit
Process Compliance Technician
Highlands Hub
136 Main St East
Shelburne, ON L9V 3K5
Tel: 519-925-1938 x225
Cel: 519-938-7255
E: lbenoit@ocwa.com

EQUIPMENT DETAIL

[MUT] MANUFACTURER Magnehelic
MODEL 2000 Series
CONVERTER SERIAL NUMBER N/A

PLANT ID Shelburne WWTP
METER ID Digester Flow
FIT ID N/A
CLIENT TAG N/A
OTHER OCWA# 62546
GPS COORDINATES N/A

VER. BY - FM Joel Van Veller

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

VERIFICATION DATE September 18, 2017
CAL. FREQUENCY Annual
CAL. DUE DATE September 2018

PRIMARY DEVICE

MANUFACTURER unknown
PRIMARY ELEMENT Venturi
DIAMETER inches ?

TEST CRITERIA

AS FOUND CERTIFICATION TEST yes
ALLOWABLE [%] ERROR 5
ERROR, represented as % F.S. no

TRANSMITTER INFORMATION

LSL (Lower Sensor Limit) PSI 0.00
USL (Upper Sensor Limit) PSI 15.00
SCALING INFORMATION
LVL (Lower Value Limit) PSI 0.00
UVL (Upper Value Limit) PSI 0.92
Full-scale Diff. Pressure PSI 0.92
Full-scale Flow Rate LPS 1000.00

COMPONENTS TESTED

CONVERTER DISPLAY yes
mA OUTPUT NO
Flow (F) or Pressure (P) F
OUTPUT - Linear (L) or SQRT (S) S

COMPARISON TESTING

	0.02	0.06	0.23	0.52	0.92	Target Press.
REF. PRESSURE, actual	0.00	6.51	24.97	56.46	99.89	% dP F.S.
REF. FLOW RATE, calculated	0.00	0.06	0.23	0.52	0.92	PSI
MUT [Reading]		255.24	499.73	751.40	999.46	LPS
MUT [Difference]	0.00	275.00	500.00	750.00	1000.00	LPS
MUT [% Error], PRESSURE	0.00	19.76	0.27	-1.40	0.54	LPS
MUT [% Error], FLOWRATE	n/a	n/a	n/a	n/a	n/a	% O.R.
mA OUTPUT		7.74	0.05	-0.19	0.05	% O.R.
MUT [Reading] min. 4.000 mA						
MUT [Difference] max. 20.000 mA						
MUT [% Error]						

ZERO Balance/Equalization Test

[AF] PSI ? LPS
[AL] PSI ? LPS

QUALITY MANAGEMENT STANDARDS INFO.

[QMS] INFORMATION	IDENT.	ID #
[REFERENCE]	CRYS	1
PROCESS METER	PM	2

COMMENTS

Note: Poor resolution on gauge at lower flows
Flows estimated based on visual observation

TESTING RESULTS

TEST	AVG % O.R.	PASS FAIL
DISPLAY	1.92	PASS
mA OUTPUT	N/A	N/A

A reference pressure gauge was used to verify the overall reading accuracy of this device to within the tolerance limits as define above in this report.

AS FOUND CERTIFICATION

PASS

CLIENT DETAIL

CUSTOMER Ontario Clean Water Agency
CONTACT Lisa Benoit
Process Compliance Technician
Highlands Hub
136 Main St East
Shelburne, ON L9V 3K5
Tel: 519-925-1938 x225
Cel: 519-938-7255
E: lbenoit@ocwa.com

[MUT] MANUFACTURER Magnehelic
MODEL 2000 Series
CONVERTER SERIAL NUMBER N/A

PLANT ID Shelburne WWTP
METER ID Aeration Flow
FIT ID N/A
CLIENT TAG N/A
OTHER OCWA# 62544
GPS COORDINATES N/A

EQUIPMENT DETAIL

VER. BY - FM Joel Van Veller

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

VERIFICATION DATE September 18, 2017
CAL. FREQUENCY Annual
CAL. DUE DATE September 2018

PRIMARY DEVICE

MANUFACTURER unknown
PRIMARY ELEMENT Venturi
DIAMETER inches ?

AS FOUND CERTIFICATION TEST yes
ALLOWABLE [%] ERROR 5
ERROR, represented as % F.S. no

TEST CRITERIA

TRANSMITTER INFORMATION

LSL (Lower Sensor Limit) psi 0.00
USL (Upper Sensor Limit) psi 15.00

SCALING INFORMATION

LVL (Lower Value Limit) psi 0.00
UVL (Upper Value Limit) psi 0.92
Full-scale Diff. Pressure psi 0.92
Full-scale Flow Rate LPS 1000.00

CONVERTER DISPLAY yes
mA OUTPUT no
Flow (F) or Pressure (P) F
OUTPUT - Linear (L) or SQRT (S) S

COMPONENTS TESTED

COMPARISON TESTING

	0.02	0.06	0.23	0.52	0.92	Target Press.
REF. PRESSURE, actual	0.00	6.51	24.97	56.46	100.00	% dP F.S.
REF. FLOW RATE, calculated	0.00	0.06	0.23	0.52	0.92	psi
MUT [Reading]	10.00	255.24	499.73	751.40	1000.00	LPS
MUT [Difference]	10.00	280.00	510.00	760.00	1010.00	LPS
MUT [% Error], PRESSURE	n/a	n/a	n/a	n/a	n/a	% O.R.
MUT [% Error], FLOWRATE		9.70	2.06	1.14	1.00	% O.R.
mA OUTPUT						
MUT [Reading] min. 4.000 mA						
MUT [Difference] max. 20.000 mA						
MUT [% Error]						

ZERO Balance/Equalization Test

[AF] psi ? LPS
[AL] psi ? LPS

QUALITY MANAGEMENT STANDARDS INFO.

[QMS] INFORMATION	IDENT.	ID #
[REFERENCE]	CRYS	1
PROCESS METER	PM	2

COMMENTS

Note: Poor resolution on gauge at lower flows
Flows estimated based on visual observation

TESTING RESULTS

TEST	AVG % O.R.	PASS FAIL
DISPLAY	3.48	PASS
mA OUTPUT	N/A	N/A

A reference pressure gauge was used to verify the overall reading accuracy of this device to within the tolerance limits as define above in this report.

AS FOUND CERTIFICATION
FORWARD FLOW DIRECTION
PASS

CLIENT DETAIL

CUSTOMER Ontario Clean Water Agency
CONTACT Lisa Benoit
Process Compliance Technician
Highlands Hub
136 Main St. East
Shelburne, ON L9V 3K5
Tel: 519-925-1938 x225
Cel: 519-938-7255
E: lbenoit@ocwa.com

[MUT] MANUFACTURER Krohne
MODEL IFC010D
SERIAL NUMBER A99 15693
FUSE

PLANT ID Shelburne WWTP
METER ID WAS Flow
FIT ID FIT-01
CLIENT TAG OCWA# 62478
OTHER N/A
GPS COORDINATES N44 05.063 W080 11.535

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

VERIFICATION DATE September 18, 2017
CAL. FREQUENCY Annual
CAL. DUE DATE September, 2018

PROGRAMMING PARAMETERS

DIAMETER (DN) mm 80
F.S. FLOW - MAG LPS 39.6
F.S. RANGE - O/P LPS 27 800
CAL. K-FACTOR GKL 5 16700

FORWARD TOTALIZER INFORMATION

AS FOUND 416203 M3
AS LEFT 416208 M3
DIFFERENCE 5 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.

Zero Offset Flow LPS 0.0120

FLOW TUBE SIMULATION

		0.0	0.5	1.0	2.0	5.0	m/s
		0.0	5.0	10.0	20.0	50.0	% F.S. Flow
		0.0	7.2	14.3	28.5	71.2	% F.S. Range
REF. FLOW RATE		0.012	1.991	3.970	7.928	19.803	LPS
MUT [Reading]		0.012	1.988	3.962	7.922	19.796	LPS
MUT [Difference]		0.000	-0.003	-0.008	-0.006	-0.007	LPS
MUT [% Error]		0.00	-0.15	-0.21	-0.08	-0.03	%
mA OUTPUT		4.000	5.146	6.285	8.563	15.397	mA
MUT [Reading]		min. 4.000 mA	3.991	5.131	6.209	8.552	mA
MUT [Difference]		max. 20.000 mA	-0.009	-0.015	-0.016	-0.017	mA
MUT [% Error]			-0.22	-0.29	-0.25	-0.13	%
TOTALIZER - REF. FLOW RATE						19.803	LPS
TOTALIZER [MUT]						3	M3
TEST TIME						151.75	SECONDS
CALC. TOTALIZER						3.005	M3
ERROR						-0.17	%

COMMENTS

QUALITY MANAGEMENT STANDARDS INFO.

[QMS] INFORMATION	IDENT.	ID #
[REFERENCE] FTS	KRO	1
PROCESS METER	PM	2
ANALOG METER	AM	N/A
STOP WATCH	SW	N/A

RESULTS

TEST	AVG % o.r.	PASS FAIL
DISPLAY	-0.12	PASS
mA OUTPUT	-0.20	PASS
TOTALIZER	-0.17	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.

AS FOUND CERTIFICATION
FORWARD FLOW DIRECTION
PASS

CLIENT DETAIL

CUSTOMER Ontario Clean Water Agency
CONTACT Lisa Benoit
Process Compliance Technician
Highlands Hub
136 Main St East
Shelburne, ON L9V 3K5
Tel: 519-925-1938 x225
Cel: 519-938-7255
E: lbenoit@ocwa.com

[MUT] MANUFACTURER Krohne
MODEL IFC010D
SERIAL NUMBER A99 15978
FUSE On Board Plug

PLANT ID Shelburne WWTP
METER ID RAS Tank #1
FIT ID FIT-02
CLIENT TAG OCWA# 62479
OTHER N/A
GPS COORDINATES N/A

EQUIPMENT DETAIL

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

VERIFICATION DATE September 18, 2017
CAL. FREQUENCY Annual
CAL. DUE DATE September, 2018

PROGRAMMING PARAMETERS

DIAMETER (DN) mm 100
F.S. FLOW - MAG LPS 62.8
F.S. RANGE - O/P LPS 66 700
CAL. k-FACTOR GKL 5 24300

FORWARD TOTALIZER INFORMATION

AS FOUND 7424444 M3
AS LEFT 7424459 M3
DIFFERENCE 15 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.

Zero Offset Flow LPS 0.0200

FLOW TUBE SIMULATION

		0.0	1.0	2.0	5.0	10.0	m/s
		0.0	10.0	20.0	50.0	100.0	% F.S. Flow
		0.0	9.4	18.8	47.1	94.1	% F.S. Range
REF. FLOW RATE		0.020	6.296	12.571	31.398	62.776	LPS
MUT [Reading]		0.020	6.290	12.580	31.380	62.770	LPS
MUT [Difference]		0.000	-0.006	0.009	-0.018	-0.006	LPS
MUT [% Error]		0.00	-0.09	0.07	-0.06	-0.01	%
mA OUTPUT		4.000	5.510	7.016	11.532	19.059	mA
MUT [Reading]	min. 4.000 mA	3.986	5.490	7.006	11.515	19.035	mA
MUT [Difference]	max. 20.000 mA	-0.014	-0.020	-0.010	-0.017	-0.024	mA
MUT [% Error]		-0.35	-0.37	-0.14	-0.15	-0.12	%
TOTALIZER - REF. FLOW RATE						62.776	LPS
TOTALIZER [MUT]						6	M3
TEST TIME						95.78	SECONDS
CALC. TOTALIZER						6.013	M3
ERROR						-0.21	%

COMMENTS

QUALITY MANAGEMENT STANDARDS INFO.

[QMS] INFORMATION	IDENT.	ID #
[REFERENCE] FTS	KRO	1
PROCESS METER	PM	2
ANALOG METER	AM	N/A
STOP WATCH	SW	N/A

RESULTS

TEST	AVG % o.r.	PASS FAIL
DISPLAY	-0.02	PASS
mA OUTPUT	-0.22	PASS
TOTALIZER	-0.21	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.

AS FOUND CERTIFICATION
FORWARD FLOW DIRECTION
PASS

CLIENT DETAIL

CUSTOMER Ontario Clean Water Agency
CONTACT Lisa Benoit
Process Compliance Technician
Highlands Hub
136 Main St East
Shelburne, ON L9V 3K5
Tel: 519-925-1938 x225
Cel: 519-938-7255
E: lbenoit@ocwa.com

[MUT] MANUFACTURER Krohne
MODEL IFC010D
SERIAL NUMBER A99 15977
FUSE Pull Plug on Board

PLANT ID Shelburne WWTP
METER ID RAS Tank #2
FIT ID FIT-03
CLIENT TAG OCWA# 62480
OTHER N/A
GPS COORDINATES N/A

EQUIPMENT DETAIL

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

VERIFICATION DATE September 18, 2017
CAL. FREQUENCY Annual
CAL. DUE DATE September, 2018

PROGRAMMING PARAMETERS

DIAMETER (DN) mm 100
F.S. FLOW - MAG LPS 63.7
F.S. RANGE - O/P LPS 66 700
CAL. k-FACTOR GKL 5 31800

FORWARD TOTALIZER INFORMATION

AS FOUND 7848832 M3
AS LEFT 7848840 M3
DIFFERENCE 8 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.

Zero Offset Flow LPS 0.0400

FLOW TUBE SIMULATION

		0.0	1.0	2.0	5.0	10.0	m/s
		0.1	10.1	20.1	50.1	100.1	% F.S. Flow
		0.1	9.6	19.1	47.8	95.5	% F.S. Range
REF. FLOW RATE		0.040	6.405	12.771	31.867	63.694	LPS
MUT [Reading]		0.040	6.410	12.780	31.890	63.740	LPS
MUT [Difference]		0.000	0.005	0.009	0.023	0.046	LPS
MUT [% Error]		0.00	0.07	0.07	0.07	0.07	%
mA OUTPUT		4.000	5.537	7.063	11.644	19.279	mA
MUT [Reading]	min. 4 000 mA	3.994	5.527	7.059	11.652	19.290	mA
MUT [Difference]	max. 20 000 mA	-0.006	-0.010	-0.004	0.008	0.011	mA
MUT [% Error]		-0.15	-0.17	-0.06	0.07	0.06	%
TOTALIZER - REF. FLOW RATE						63.694	LPS
TOTALIZER [MUT]						4	M3
TEST TIME						62.60	SECONDS
CALC. TOTALIZER						3.987	M3
ERROR						0.32	%

COMMENTS

QUALITY MANAGEMENT STANDARDS INFO.

[QMS] INFORMATION	IDENT.	ID #
[REFERENCE] FTS	KRO	1
PROCESS METER	PM	2
ANALOG METER	AM	N/A
STOP WATCH	SW	N/A

RESULTS

TEST	AVG % o.r.	PASS FAIL
DISPLAY	0.07	PASS
mA OUTPUT	-0.05	PASS
TOTALIZER	0.32	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.

AS FOUND CERTIFICATION
FORWARD FLOW DIRECTION
PASS

CLIENT DETAIL

CUSTOMER Ontario Clean Water Agency
CONTACT Lisa Benoit
Process Compliance Technician
Highlands Hub
136 Main St East
Shelburne, ON L9V 3K5
Tel: 519-925-1938 x225
Cel: 519-938-7255
E: lbenoit@ocwa.com

[MUT] MANUFACTURER Krohne
MODEL IFC010D
SERIAL NUMBER A99 15979
FUSE Pull plug on Board
PLANT ID Shelburne WWTP
METER ID Truck Fill Flow
FIT ID FIT-04
CLIENT TAG N/A
OTHER OCWA# 62618
GPS COORDINATES N/A

VER. BY - FM Joel Van Veller

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

VERIFICATION DATE September 18, 2017
CAL. FREQUENCY Annual
CAL. DUE DATE September 2018

PROGRAMMING PARAMETERS

DIAMETER (DN) mm 100
F.S. FLOW - MAG LPS 60.4
F.S. RANGE - O/P LPS 75 000
CAL. k-FACTOR GKL 5 04500

FORWARD TOTALIZER INFORMATION

AS FOUND 41042 M3
AS LEFT 41060 M3
DIFFERENCE 18 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.

Zero Offset Flow LPS 0.0300

FLOW TUBE SIMULATION

		0.0	1.0	2.0	5.0	10.0	m/s	
		0.0	10.0	20.0	50.0	100.0	% F.S. Flow	
		0.0	8.1	16.1	40.3	80.6	% F.S. Range	
REF. FLOW RATE		0.030	6.069	12.107	30.223	60.416	LPS	
MUT [Reading]		0.030	6.050	12.080	30.150	60.260	LPS	
MUT [Difference]		0.000	-0.019	-0.027	-0.073	-0.156	LPS	
MUT [% Error]		0.00	-0.31	-0.22	-0.24	-0.26	%	
mA OUTPUT		4.000	5.295	6.583	10.448	16.889	mA	
MUT [Reading]	min. 4 000 mA	3.996	5.289	6.583	10.444	16.868	mA	
MUT [Difference]	max. 20.000 mA	-0.004	-0.006	0.000	-0.004	-0.021	mA	
MUT [% Error]		-0.10	-0.11	0.00	-0.03	-0.12	%	
TOTALIZER - REF. FLOW RATE							60.416	LPS
TOTALIZER [MUT]							10	M3
TEST TIME							166.07	SECONDS
CALC. TOTALIZER							10.033	M3
ERROR							-0.33	%

COMMENTS

Note: Verified programmed parameters matched manufacturer's tube parameters.

QUALITY MANAGEMENT STANDARDS INFO.

[QMS] INFORMATION	IDENT.	ID #
[REFERENCE] FTS	KRO	1
PROCESS METER	PM	2
ANALOG METER	AM	N/A
STOP WATCH	SW	N/A

RESULTS

TEST	AVG % o.r.	PASS FAIL
DISPLAY	-0.26	PASS
mA OUTPUT	-0.07	PASS
TOTALIZER	-0.33	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.

AS FOUND CERTIFICATION

PASS

CLIENT DETAIL

CUSTOMER Ontario Clean Water Agency
CONTACT Lisa Benoit
Process Compliance Technician
Highlands Hub
136 Main St East
Shelburne, ON L9V 3K5
Tel: 519-925-1938 x225
Cel: 519-938-7255
E: lbenoit@ocwa.com

[MUT] MANUFACTURER Milltronics
MODEL OCM-III
CONVERTER SERIAL NUMBER N/A

PLANT ID Shelburne WWTP
METER ID Effluent Flow
FIT ID FIT-05
CLIENT TAG OCWA# 62506
OTHER N/A
GPS COORDINATES N/A

EQUIPMENT DETAIL

VER. BY - FM Paris Machuk/Joel Van Veller
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

VERIFICATION DATE September 18, 2017
CAL. FREQUENCY Annual
CAL. DUE DATE September 2018

PROGRAMMING PARAMETERS

THROAT DIMENSION (DN)	inches	9
EMPTY DISTANCE	m	0.870
MAX. HEAD	m	0.345
DEAD ZONE	m	0.525
BLANKING DISTANCE	m	0.305
MAX. FLOW	LPS	105.0
F.S. RANGE - O/P	LPS	105.0

TOTALIZER
AS FOUND 14368168 M3
AS LEFT 14368188 M3
DIFFERENCE 20 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.

Ultrasonic sensor installed to ensure full scale flow condition

AS FOUND TEST RESULTS

		0.0	15.0	43.5	80.8	89.2	% F.S. Range
		0.000	0.100	0.200	0.300	0.320	m
REF. FLOW RATE		0.000	15.801	45.630	84.854	93.661	LPS
MUT [Reading]		0.024	16.140	45.850	85.200	93.890	LPS
MUT [Difference]		0.024	0.339	0.220	0.346	0.229	LPS
MUT [% Error]		n/a	0.32	0.21	0.33	0.22	%
mA OUTPUT		4.000	6.408	10.954	16.931	18.273	mA
MUT [Reading]	min. 4.000 mA	3.981	6.438	10.974	16.957	18.290	mA
MUT [Difference]	max. 20.000 mA	-0.019	0.030	0.020	0.026	0.017	mA
MUT [% Error]		-0.10	0.15	0.10	0.13	0.08	%
TOTALIZER - REF. FLOW RATE						93.661	LPS
TOTALIZER [MUT]						7	M3
TEST TIME						73.90	SECONDS
CALC. TOTALIZER						6.922	M3
ERROR						1.12	%

COMMENTS

QUALITY MANAGEMENT STANDARDS INFO.

[QMS] INFORMATION	IDENT.	ID #
[REFERENCE] LEVEL	Sim. BOARD	n/a
PROCESS METER	PM	2
STOP WATCH	SW	n/a

RESULTS

TEST	AVG %FS	PASS FAIL
DISPLAY	0.27	PASS
mA OUTPUT	0.07	PASS
TOTALIZER	1.12	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.

AS FOUND CERTIFICATION
FORWARD FLOW DIRECTION
PASS

CLIENT DETAIL

CUSTOMER Ontario Clean Water Agency
CONTACT Lisa Benoit
Process Compliance Technician
Highlands Hub
136 Main St East
Shelburne, ON L9V 3K5
Tel: 519-925-1938 x225
Cel: 519-938-7255
E: lbenoit@ocwa.com

[MUT] MANUFACTURER ROSEMOUNT
MODEL 8712
CONVERTER SERIAL NUMBER 0860188157

PLANT ID Shelburne WWTP
METER ID Raw Sewage Flow
FIT ID FIT-06
CLIENT TAG N/A
OTHER N/A
GPS COORDINATES N/A

VER. BY - FM Joel Van Veller

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

VERIFICATION DATE September 18, 2017
CAL. FREQUENCY Annual
CAL. DUE DATE September 2018

PROGRAMMING PARAMETERS

DIAMETER (DN) mm 200
F.S. FLOW - MAG LPS 387.3
F.S. RANGE - O/P LPS 150.000
TUBE CAL. FACTOR 1025505911000011

FORWARD TOTALIZER INFORMATION

AS FOUND 11825500 LITER
AS LEFT 0 LITER
DIFFERENCE -11825500 LITER

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.

VERIFICATOR CAL. FACTOR 1000015010000000
[16-digits]

FLOW TUBE SIMULATION

DISPLAY	0		3	10	30	ft/s
	MUT Reading	0.000		3.000	10.000	30.000
MUT % Error	n/a		3.000	10.000	30.010	ft/s
mA OUTPUT	4.000		0.00	0.00	0.03	%
MUT Reading	4	mA	5.600	9.333	20.000	mA
MUT % Error	20	mA	5.599	9.333	20.007	mA
TOTALIZER	-0.10		-0.02	0.00	0.04	%
TEST Accumulation					30.00	ft/s
TIME					5000.00	ft
CALC. Velocity					166.59	seconds
% Error					30.01	ft/s
					0.05	%

*All values are for "As Found" values.

COMMENTS

Note: Net totalizer value automatically reset after test performed and unit was powered on.
Note: Verified programmed parameters matched manufacturer's tube parameters.

QUALITY MANAGEMENT STANDARDS INFO.

[QMS] INFORMATION	IDENT.	ID #
[REFERENCE] FTS	ROS	1
PROCESS METER	PM	2
ANALOG METER	AM	1
STOP WATCH	SW	2

RESULTS

TEST	AVG % o.r.	PASS FAIL
DISPLAY	0.01	PASS
mA OUTPUT	0.00	PASS
TOTALIZER	0.05	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.

CLIENT DETAIL

CUSTOMER Ontario Clean Water Agency
CONTACT Lisa Benoit
Process Compliance Technician
Highlands Hub
136 Main St East
Shelburne, ON L9V 3K5
Tel: 519-925-1938 x225
Cel: 519-938-7255
E: lbenoit@ocwa.com

[MUT] MANUFACTURER ABB
MODEL MagMaster
CONVERTER SERIAL NUMBER 3K620000015306
FUSE Panel G - Breaker #4

PLANT ID Shelburne WWTP
METER ID Storm Flow
FIT ID FIT-07
CLIENT TAG N/A
OTHER N/A
GPS COORDINATES N44 05.063 W080 11 535

EQUIPMENT DETAIL

VER. BY - FM Joel Van Veller

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

VERIFICATION DATE September 18, 2017
CAL. FREQUENCY Annual
CAL. DUE DATE September, 2018

PROGRAMMING PARAMETERS

DIAMETER (DN) mm 250
F.S. FLOW - MAG LPS 670.8
F.S. RANGE - O/P LPS 200 000
TUBE CAL. FACTOR 1 1.36650

FORWARD TOTALIZER INFORMATION

AS FOUND 487030 M3
AS LEFT 487059 M3
DIFFERENCE 29 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	0.2	0.5	1.0	2.0	m/s
		0	2	5	10	20	% F.S. Flow
		0.0	6.7	16.8	33.5	67.1	% F.S. Range
REF. FLOW RATE		0.00	13.42	33.54	67.08	134.16	LPS
MUT [Reading]		0.00	13.33	33.46	66.91	133.75	LPS
MUT [Difference]		0.00	-0.09	-0.08	-0.17	-0.41	LPS
MUT [% Error]		n/a	-0.64	-0.24	-0.25	-0.30	%
mA OUTPUT		4.000	5.073	6.683	9.366	14.732	mA
MUT [Reading]	min. 4 000 mA	3.991	5.058	6.662	9.336	14.672	mA
MUT [Difference]	max. 20 000 mA	-0.009	-0.015	-0.021	-0.030	-0.060	mA
MUT [% Error]		-0.22	-0.30	-0.32	-0.32	-0.41	%
TOTALIZER - REF. FLOW RATE						134.156	LPS
TOTALIZER [MUT]						13	M3
TEST TIME						97.85	SECONDS
CALC. TOTALIZER						13.127	M3
ERROR						-0.98	%

COMMENTS

QUALITY MANAGEMENT STANDARDS INFO.

[QMS] INFORMATION IDENT.	ID #
[REFERENCE] FTS ABBMM	1
PROCESS METER PM	1
ANALOG METER AM	N/A
STOP WATCH SW	Yes

RESULTS

TEST	AVG % o.r.	PASS FAIL
DISPLAY	-0.36	PASS
mA OUTPUT	-0.31	PASS
TOTALIZER	-0.98	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.

CLIENT DETAIL

CUSTOMER Ontario Clean Water Agency
CONTACT Lisa Benoit
Process Compliance Technician
Highlands Hub
136 Main St East
Shelburne ON L9V 3K5
Tel: 519 925 1938 x225
Cel: 519 938-7255
E: lbenoit@ocwa.com

[MUT] MANUFACTURER ABB
MODEL MagMaster
CONVERTER SERIAL NUMBER 3KG20000015305
FUSE Panel G - Breaker #6

PLANT ID Shelburne WWTP
METER ID Storm Return Flow
FIT ID FIT-08
CLIENT TAG N/A
OTHER N/A
GPS COORDINATES N44 05.063 W080 11.535

EQUIPMENT DETAIL

VER. BY - FM Joel Van Veller

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

VERIFICATION DATE September 18, 2017
CAL. FREQUENCY Annual
CAL. DUE DATE September, 2018

PROGRAMMING PARAMETERS

DIAMETER (DN) mm 200
F.S. FLOW - MAG LPS 468.4
F.S. RANGE - O/P LPS 100 000
TUBE CAL. FACTOR 1 1.49102

FORWARD TOTALIZER INFORMATION

AS FOUND 509377 M3
AS LEFT 509386 M3
DIFFERENCE 9 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	0.2	0.5	1.0	2.0	m/s
		0	2	5	10	10	% F.S. Flow
		0.0	9.4	23.4	46.8	46.8	% F.S. Range
REF. FLOW RATE		0.00	9.37	23.42	46.84	46.84	LPS
MUT [Reading]		0.00	9.36	23.39	46.72	46.72	LPS
MUT [Difference]		0.00	-0.01	-0.03	-0.12	-0.12	LPS
MUT [% Error]		n/a	-0.09	-0.13	-0.26	-0.26	%
mA OUTPUT		4.000	5.499	7.747	11.495	11.495	mA
MUT [Reading]		min. 4.000 mA	3.991	5.487	7.728	11.456	mA
MUT [Difference]		max. 20.000 mA	-0.009	-0.012	-0.019	-0.039	mA
MUT [% Error]			-0.22	-0.22	-0.25	-0.34	%
TOTALIZER - REF. FLOW RATE						46.842	LPS
TOTALIZER [MUT]						5	M3
TEST TIME						107.87	SECONDS
CALC. TOTALIZER						5.053	M3
ERROR						-1.06	%

COMMENTS

QUALITY MANAGEMENT STANDARDS INFO.

[QMS] INFORMATION	IDENT.	ID #
[REFERENCE] FTS	ABBMM	2
PROCESS METER	PM	N/A
ANALOG METER	AM	N/A
STOP WATCH	SW	N/A

RESULTS

TEST	AVG % o.r.	PASS FAIL
DISPLAY	-0.19	PASS
mA OUTPUT	-0.27	PASS
TOTALIZER	-1.06	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.

CLIENT DETAIL

CUSTOMER Ontario Clean Water Agency
CONTACT Lisa Benoit
Process Compliance Technician
Highlands Hub
136 Main St East
Shelburne, ON L9V 3K5
Tel: 519-925-1938 x225
Cel: 519-938-7255
E: lbenoit@ocwa.com

EQUIPMENT DETAIL

[MUT] MANUFACTURER ABB
MODEL MagMaster
CONVERTER SERIAL NUMBER 3KG20000015302
FUSE Panel G - Breaker #8
PLANT ID Shelburne WWTP
METER ID Sludge Transfer Flow
FIT ID FIT-09
CLIENT TAG N/A
OTHER N/A
GPS COORDINATES N44 05 063 W080 11.535

VER. BY - FM Joel Van Veller

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

VERIFICATION DATE September 18, 2017
CAL. FREQUENCY Annual
CAL. DUE DATE September, 2018

PROGRAMMING PARAMETERS

DIAMETER (DN) mm 200
F.S. FLOW - MAG LPS 468.7
F.S. RANGE - O/P LPS 80 000
TUBE CAL. FACTOR 1 1.49194

FORWARD TOTALIZER INFORMATION

AS FOUND 23094 M3
AS LEFT 23106 M3
DIFFERENCE 12 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	0.1	0.2	0.5	1.0	m/s
		0	1	2	5	10	% F.S. Flow
		0.0	5.9	11.7	29.3	58.6	% F.S. Range
REF. FLOW RATE		0.00	4.69	9.37	23.44	46.87	LPS
MUT [Reading]		0.00	4.69	9.39	23.38	46.75	LPS
MUT [Difference]		0.00	0.00	0.02	-0.06	-0.12	LPS
MUT [% Error]		n/a	0.06	0.17	-0.24	-0.26	%
mA OUTPUT		4.000	4.937	5.875	8.687	13.374	mA
MUT [Reading]	min. 4 000 mA	3.991	4.930	5.864	8.675	13.320	mA
MUT [Difference]	max. 20 000 mA	-0.009	-0.007	-0.011	-0.012	-0.054	mA
MUT [% Error]		-0.22	-0.15	-0.18	-0.14	-0.40	%
TOTALIZER - REF. FLOW RATE						46.871	LPS
TOTALIZER [MUT]						4	M3
TEST TIME						84.89	SECONDS
CALC. TOTALIZER						3.979	M3
ERROR						0.53	%

COMMENTS

QUALITY MANAGEMENT STANDARDS INFO.

[QMS] INFORMATION	IDENT.	ID #
[REFERENCE] FTS	ABBMM	1
PROCESS METER	PM	1
ANALOG METER	AM	N/A
STOP WATCH	SW	Yes

RESULTS

TEST	AVG % o.r.	PASS FAIL
DISPLAY	-0.07	PASS
mA OUTPUT	-0.22	PASS
TOTALIZER	0.53	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.

**2017 Annual Performance Report for
the Town of Shelburne Wastewater Treatment Plant
Certificate of Approval No. 9972-7FYJUB**

Appendix D

Process Flow Schematic

2017

**2017 Annual Performance Report for
the Town of Shelburne Wastewater Treatment Plant
Certificate of Approval No. 9972-7FYJUB**

Appendix E

Community Complaints Received

2017

Ontario Clean Water Agency Community Complaints

Facility ID: 5773
Facility Name: Shelburne Wastewater Treatment Plant
Address: 300 Centennial Street
City: Shelburne
Province: Ontario
Postal Code: L0N 1S0
Name of Person who filed
Complaint: Christine
Address: Area of Hwy 89 and Hwy
124
Phone: _____

NOTE: If there were multiple complaints, provide the name of the person who filed the initial complaint and note the number and details in the "Description" field below

Date of Complaint: 04/02/2017
Time of Complaint: 03:38:17 PM

Nature of Complaint

- Noise
 Visual
 Odour
Other: _____
- Water Supply Taste/Colour
 Service Problem
 Sludge Related
- Water Pressure/No Water
 Basement Flooding

Description:

A storage sewage smell was reported near the area of Hwy 89 and Hwy 124


Action taken in response:

The town staff sent a copy of the OCWA news release

Was the source of the problem identified?: ● Yes ○ No

Was the source an OCWA facility/activity?: ○ Yes ● No If "Yes", describe:

If any remedial action is required, complete action plan form



Updated By: Lisa Benoit 05/25/2017 11:37:53 AM

Investigating Operator:

Comments:

Ontario Clean Water Agency Community Complaints

Facility ID: 5773
Facility Name: Shelburne Wastewater Treatment Plant
Address: 300 Centennial Street
City: Shelburne
Province: Ontario
Postal Code: L0N 1S0
Name of Person who filed Complaint: Jim Ducette
Address: Rintoul Street
Phone: 519-216-0590

NOTE: If there were multiple complaints, provide the name of the person who filed the initial complaint and note the number and details in the "Description" field below

Date of Complaint: 04/05/2017
Time of Complaint: _____

Nature of Complaint

- | | | |
|---|--|--|
| <input type="checkbox"/> Noise | <input type="checkbox"/> Water Supply Taste/Colour | <input type="checkbox"/> Water Pressure/No Water |
| <input type="checkbox"/> Visual | <input type="checkbox"/> Service Problem | <input type="checkbox"/> Basement Flooding |
| <input checked="" type="checkbox"/> Odour | <input type="checkbox"/> Sludge Related | |
- Other: _____

Description:

Resident close to the WWTP complaining about odour from the storm ponds. Media release put on the town website.

Action taken in response:

Media release put on town website

Was the source of the problem identified?: ● Yes ○ No

Was the source an OCWA facility/activity?: ○ Yes ○ No If "Yes", describe:

Storm ponds in place for excessive flows to plant. Part of the plant contingency process

If any remedial action is required, complete action plan form



Updated By: Lisa Benoit 04/13/2017 03:32:55 PM

Investigating Operator: Scott Craggs

Comments:

Ontario Clean Water Agency Community Complaints

Facility ID: 5773
Facility Name: Shelburne Wastewater Treatment Plant
Address: 300 Centennial Street
City: Shelburne
Province: Ontario
Postal Code: L0N 1S0
Name of Person who filed
Complaint: Mary Lynn
Address: Jelly St. N.
Phone _____

NOTE: If there were multiple complaints, provide the name of the person who filed the initial complaint and note the number and details in the "Description" field below

Date of Complaint: 04/18/2017
Time of Complaint: 11:39:19 AM

Nature of Complaint

- | | | |
|---|--|--|
| <input type="checkbox"/> Noise | <input type="checkbox"/> Water Supply Taste/Colour | <input type="checkbox"/> Water Pressure/No Water |
| <input type="checkbox"/> Visual | <input type="checkbox"/> Service Problem | <input type="checkbox"/> Basement Flooding |
| <input checked="" type="checkbox"/> Odour | <input type="checkbox"/> Sludge Related | |
- Other: _____

Description:

Smell from the treatment plant

Action taken in response:

Sent a copy of the OCWA news release

Was the source of the problem identified?: Yes No

Was the source an OCWA facility/activity?: Yes No If "Yes", describe:

If any remedial action is required, complete action plan form

Updated By: Lisa Benoit 05/25/2017 11:58:00 AM



Investigating Operator:

Comments:

Ontario Clean Water Agency Community Complaints

Facility ID: 5773
Facility Name: Shelburne Wastewater Treatment Plant
Address: 300 Centennial Street
City: Shelburne
Province: Ontario
Postal Code: L0N 1S0
Name of Person who filed Complaint: Brian & Marie
Address: Pineview Gardens
Phone: _____

NOTE: If there were multiple complaints, provide the name of the person who filed the initial complaint and note the number and details in the "Description" field below

Date of Complaint: 04/20/2017
Time of Complaint: 10:28:00 AM

Nature of Complaint

- Noise
 Visual
 Odour
Other: _____
- Water Supply Taste/Colour
 Service Problem
 Sludge Related
- Water Pressure/No Water
 Basement Flooding

Description:

Odour coming from the storm ponds at the wastewater treatment plant

Action taken in response:

Town staff followed up with homeowner to advise as to what is happening with the ponds

Was the source of the problem identified?: ● Yes ○ No

Was the source an OCWA facility/activity?: ○ Yes ● No If "Yes", describe:

If any remedial action is required, complete action plan form

Updated By: Lisa Benoit 05/25/2017 11:29:27 AM



Investigating Operator:

Comments:

Ontario Clean Water Agency Community Complaints

Facility ID: 5773
Facility Name: Shelburne Wastewater Treatment Plant
Address: 300 Centennial Street
City: Shelburne
Province: Ontario
Postal Code: L0N 1S0
Name of Person who filed Complaint: Maria Cabral
Address: 109 Morden Drive
Phone: 647-404-3460

NOTE: If there were multiple complaints, provide the name of the person who filed the initial complaint and note the number and details in the "Description" field below

Date of Complaint: 05/18/2017
Time of Complaint: 01:32:05 PM

Nature of Complaint

- | | | |
|---|--|--|
| <input type="checkbox"/> Noise | <input type="checkbox"/> Water Supply Taste/Colour | <input type="checkbox"/> Water Pressure/No Water |
| <input type="checkbox"/> Visual | <input type="checkbox"/> Service Problem | <input type="checkbox"/> Basement Flooding |
| <input checked="" type="checkbox"/> Odour | <input type="checkbox"/> Sludge Related | |
- Other: _____

Description:

Concerned with odour from the holding ponds

Action taken in response:

OCWA called and talked about the town's plans to clean out the holdings, to raise the berms and to plant trees.

Was the source of the problem identified?: ● Yes ○ No

Was the source an OCWA facility/activity?: ○ Yes ● No If "Yes", describe:

If any remedial action is required, complete action plan form



Updated By: Lisa Benoit 05/25/2017 12:08:51 PM

Investigating Operator:

Comments:

**2017 Annual Performance Report for
the Town of Shelburne Wastewater Treatment Plant
Certificate of Approval No. 9972-7FYJUB**

Appendix F

Letter of Non-Compliance

2017



NOTIFICATION OF NON-COMPLIANCE

Phone: (519) 925-1938
 Fax: (519) 925-0322

June 20, 2017

Ms. Carola Serwotka
Provincial Officer
Guelph District Office,
Ministry of the Environment
1 Stone Road West, 4th Floor
Guelph ON
N1G 4Y2

Re: Notification of Non-compliance with Environmental Compliance Approval # 6413-ABLQQS

This is a notification of non-compliance with Environmental Compliance Approval # 6413-ABLQQS Section 7(1); Effluent Limits for the **Shelburne Wastewater Treatment Plant** located in the Town of Shelburne. This written notice confirms the verbal notification provided to Carola Serwotka on June 13th, 2017 by OCWA.

The following effluent limit and loading was exceeded:

Parameter	Date/Year	Type of Limit	Type of Sample	Result	GofA Limit
Total Ammonia Nitrogen	May 2017	Monthly Average Concentration	Composite	2.660 mg/L	2.4 mg/L
Total Ammonia Nitrogen	May 2017	Monthly Average Waste Loading		8.999 kg/d	8.2 kg/d

The analytical results for all five (5) samples collected during the month of May are as follows:

Date	Effluent Parameter	Effluent Limit	Sample Result
May 2, 2017	Total Ammonia Nitrogen	2.4 mg/L monthly average	0.1 mg/L
May 13, 2017	Total Ammonia Nitrogen	2.4 mg/L monthly average	3.5 mg/L

May 19, 2017	Total Ammonia Nitrogen	2.4 mg/L monthly average	5.8 mg/L
May 27, 2017	Total Ammonia Nitrogen	2.4 mg/L monthly average	3.5 mg/L
May 31, 2017	Total Ammonia Nitrogen	2.4 mg/L monthly average	0.4 mg/L

Comments/Actions Taken:

The effluent limit and loading exceedance for Total Ammonia Nitrogen was due to required aeration cell maintenance to correct the low D.O. levels in both the north and south cells. The north cell was taken out of service on April 26th, 2017 and the south cell was taken out of service on May 23, 2017 in order to drain the tanks and steam clean all of the diffusers to remove the buildup of sludge. Processes were adjusted and in house lab was done to monitor the effluent. All of the sample results prior to and for the month of June have been well below the effluent limit of 0.8 mg/L.

If you have any questions or concerns, please feel free to contact the office.

Kind Regards,



Lisa Benoit
 Process & Compliance Technician
 Highlands Hub
 OCWA

cc: John Telfer, CAO/Clerk, Town of Shelburne
 Scott Craggs, Senior Operations Manager, OCWA
 Karen Lorente, Regional Hub Manager, OCWA
 Camille Leung, Manager of Safety, Process & Compliance, OCWA



NOTIFICATION OF NON-COMPLIANCE

Phone: (519) 925-1938

Fax: (519) 925-0322

April 13, 2018

Ms. Carola Serwotka
Provincial Officer
Guelph District Office,
Ministry of the Environment
1 Stone Road West, 4th Floor
Guelph ON
N1G 4Y2

Re: Notification of Non-compliance with Environmental Compliance Approval # 6413-ABLQQS

This is a notification of non-compliance with Environmental Compliance Approval # 6413-ABLQQS Section 7(2(a)); Effluent Limits for the **Shelburne Wastewater Treatment Plant** located in the Town of Shelburne. This written notice confirms the verbal notification provided to Carola Serwotka on April 11th, 2018 by OCWA.

The following effluent limit and loading was exceeded:

Parameter	Date/Year	Type of Limit	Type of Sample	Result	CofA Limit
Total Suspended Solids	Nov 2017	Monthly Average Concentration	Composite	5.5 mg/L	5.0 mg/L

The analytical results for all four (4) samples collected during the month of November are as follows:

Date	Effluent Parameter	Effluent Limit	Sample Result
Nov 6, 2017	Total Suspended Solids	5.0 mg/L monthly average	5.0 mg/L
Nov 14, 2017	Total Suspended Solids	5.0 mg/L monthly average	5.0 mg/L
Nov 20, 2017	Total Suspended Solids	5.0 mg/L monthly average	8.0 mg/L
Nov 29, 2017	Total Suspended Solids	5.0 mg/L monthly average	4.0 mg/L

Comments/Actions Taken:

A spreadsheet has been developed to help keep track of the monthly concentrated averages and Operation Staff has been reminded to review all laboratory results upon receiving them weekly. Historically, the TSS results from the laboratory are less than 2 to 3 mg/l on average. In house labs are completed at least once per week; usually they yield results between 2-4 mg/l.

If you have any questions or concerns, please feel free to contact the office.

Kind Regards,

Don Irvine
Process & Compliance Technician
Highlands Hub
OCWA

cc: Denyse Morrissey, CAO/Clerk, Town of Shelburne
Scott Craggs, Senior Operations Manager, OCWA
Karen Lorente, Regional Hub Manager, OCWA
Camille Leung, Manager of Safety, Process & Compliance, OCWA