Collingwood Wastewater Treatment Plant

2015 Annual Compliance Report

Table of Contents

Definitions

BOD	Biochemical Oxygen Demand
$CBOD_5$	Carbonaceous Biochemical Oxygen Demand
cfu	Colony Forming Units
COD	Chemical Oxygen Demand
DO	Dissolved Oxygen
ECA	Environmental Compliance Approval
Hg	Mercury
FP	Filtered Phosphorous
HP	Horsepower
kg	Kilograms
kW	Kilowatt
mg/l	Milligrams per litre
Ml/d	Mega litres per day
m^3/d	Cubic metres per day
NH_3	Ammonia
NO_2	Nitrites
NO_3	Nitrates
SVI	Sludge Volume Index
TBOD	Total Biochemical Oxygen Demand
TKN	Total Kjeldahl Nitrogen
TP	Total Phosphorous
TS	Total Solids
TSS	Total Suspended Solids
UV	Ultraviolet
VFA	Volatile Fatty Acids
VS	Volatile Solids
WWTP	Wastewater Treatment Plant

Executive Summary

This report has been compiled in accordance with the reporting requirements of the ECA (formerly C of A)2639-5TLQB2 Section10 subsection(6). The report is broken down into sections for ease of consumption, and additional information, may be contained in each section over and above that which is required to support and substantiate the required content. If further clarification is required please do not hesitate to contact:

Collingwood Wastewater Treatment Plant
PO Box 157
97 Hurontario Street
Collingwood, ON L9Y 3Z5
705-445-1581
www.collingwood.ca

2015 at a Glance

Total Flow to WWTP		4.999 Ml/d														
Design average daily Flow	24548 m^3/d	24.548 Ml/d														
Average Daily Flow	13658 m^3/d	13.658 Ml/d														
Bypass events	1	13833 M3														
Compliance Parameters			**Actual**	**Number of times criteria exceeded**												
				Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Annual average $CBOD_5$	Objective	15 mg/l	2.9	0	0	0	0	0	0	0	0	0	0	0	0
Annual average $CBOD_5$	Limit	25 mg/l		0	0	0	0	0	0	0	0	0	0	0	0
Annual average $CBOD_5$	Loading	613.7kg/l	47.27	0	0	0	0	0	0	0	0	0	0	0	0
Annual average TSS	Objective	15mg/l	5.4	0	0	0	0	0	0	0	0	0	0	0	0
Annual average TSS	Limit	25mg/l		0	0	0	0	0	0	0	0	0	0	0	0
Annual average TSS	Loading	613.7kg/d	86.56	0	0	0	0	0	0	0	0	0	0	0	0
Monthly average TP	Objective	0.8mg/l	0.12	0	0	0	0	0	0	0	0	0	0	0	0
Monthly average TP	Limit	1.0mg/l		0	0	0	0	0	0	0	0	0	0	0	0
Monthly average TP	Loading	24.5kg/d	1.95	0	0	0	0	0	0	0	0	0	0	0	0
Monthly geomean E-Coli	Objective	100cfu/100 ml	>1<133	0	0	0	0	0	1	0	0	0	0	0	0
Monthly geomean E-Coli	Limit	200cfu/100 ml		0	0	0	0	0	1	0	0	0	0	0	0
.pH range	Objective	6.5 to 9.0		0	0	0	0	0	0	0	0	0	0	0	0
.pH range	Limit	6.0 to 9.0	6.9 to 7.8	0	0	0	0	0	0	0	0	0	0	0	0

General

Plant Reporting: Collingwood WWTP

MOE Works Number: 120000550

Plant Location: 3 Birch Street
Collingwood, Ontario
L9Y 2T8
Tel. (705) 445-1581 Fax. (705) 445-0852

Plant Classification: III

Plant Operating Authority: Town of Collingwood
P.O. Box 157
97 Hurontario St.
Collingwood, Ontario
L9Y 3Z5
Tel. (705) 445-1581 Fax. (705) 445-1286

Contact: Glenn Price
Manager of Wastewater Treatment
705-445-1581 extension 3315
gprice@collingwood.ca

Peggy Slama
Manager of Environmental Services
705-445-1581 extension 3301
pslama@collingwood.ca

Plant Personnel:

Name	WWT Classification	Licence No.	Expiry Date
Glenn Price	3	74063	September 30,2017
Paul Clark	4	11003	August 31, 2017
Jennifer Bell Adams	3	11169	August 31, 2016
Mark Service	4	17111	August 31, 2017
Tyler Barrette	3	73068	January 31, 2018
Evan Orser	3	56428	September 30,2017
Jason MacNicol	OIT	OT90347	July 30, 2018
Cathy Card	1	83840	March 31, 2017
Name	WWC Classification	Licence No.	Expiry Date
Glenn Price	OIT	OT68560	December 31, 2016
Paul Clark	2	11004	November 30, 2017
Mark Service	1	64052	January 31, 2016
Evan Orser	2	67101	April 30, 2017
Tyler Barrette	1	73067	August 31, 2017
Cathy Card	OIT	OT65417	April 30, 2016

Plant Certificate of Approval & Amendments:

The Plant operates under the Certificate of Approval Number 2639-5TLQB2 dated the 17th day of December 2003.

Section 1.0 The Facility

The Collingwood WWTP, owned and operated by the Town of Collingwood, is a conventional activated sludge plant with alum addition for phosphorus removal. Treated effluent from the plant is discharged to Collingwood Harbour, which is situated in Georgian Bay on the south shore of Nottawasaga Bay.

The plant was first constructed in 1958 to provide primary treatment of the Town's domestic and industrial wastewater. The primary plant was expanded in 1968. Secondary treatment was added in 1981. The rated flow capacity is 24,548 m^3 /day with a peak flow rate of 60,900 m^3/day. Wastewater from the serviced area flows to the plant by gravity, although seven (7) pumping stations at Minnesota Street, St. Clair St., Paterson Street, Cranberry Trail and Black Ash Creek, Pretty River Estates and Silver Glen boost the flow throughout the area.

Major unit operations at the Collingwood WWTP include the following:

- Headworks - which provides the following preliminary process treatments:
    - Emergency plant bypass
    - Automated mechanical raked raw sewage screen
    - Manual raked bypass raw sewage screen
    - Raw sewage pumping station
    - Grit removal
    - Bio scrubber for headworks odour control
    - Septic/leachate handling
- Primary Sedimentation
- Activated Sludge with Alum addition for Phosphorus Removal
- Secondary Clarification
- Disinfection with UV
- Effluent discharge to Collingwood Harbour
- Thickening of waste activated sludge by Dissolved Air Flotation
- Anaerobic Sludge Digestion
- Liquid Digested Sludge Land Utilization Disposal
- Sludge Storage Lagoon (off site)
- Standby power source (diesel driven generator)

Data is summarized in Appendix A - Table 2.1

Section 2.0 Annual Average Performance Evaluation

2.1.1 Effluent Quality Assessment

1) Effluent Objectives - See Section 6 subsection(1) of Environmental Compliance Approval (ECA)

The effluent objectives concentration is summarized below in Table 1.

Table 1-Effluent Objectives	
Effluent Parameter	**Concentration Objectives (milligrams per litre unless otherwise indicated)**
$CBOD_5$	15.0
Total Suspended Solids	15.0
Total Phosphorus	0.8
E.Coli	Monthly Geometric Mean Density 100 organisms per 100ml
pH of the effluent maintained between 6.5 to 9.5, inclusive, at all times	

Table 2-Effluent Limits		
Effluent Parameter	**Average Concentration (milligrams per litre unless otherwise indicated)**	**Average Waste Loading (kilograms per day unless otherwise indicated)**
$CBOD_5$	25.0	613.7
Total Suspended Solids	25.0	613.7
Total Phosphorus	1.0	24.5
pH of the effluent maintained between 6.0 to 9.5, inclusive, at all times		

2) For the purposes of determining compliance with and enforcing concentrations and readings in Table 2 see section 7 (subsection 2) of ECA.

   a. The Annual Average Concentration of Carbonaceous Biochemical Oxygen Demand ($CBOD_5$) and Total Suspended Solids named in Column 1 of Table 2 shall not exceed the corresponding maximum concentration set out in Column 3 of Table 2.
   b. The Monthly Average Concentration of Total Phosphorus named in Column 1 of Table 2 shall not exceed the corresponding maximum concentration set out in Column 3 of Table 2.
   c. The Annual Average Loading of a parameter named in Column 1 of Table 2 shall not exceed the corresponding maximum waste loading set out in Column 4 of Table 2.
   d. The pH of the effluent shall be maintained within the limits outlined in Table 2 at all times.

3) Notwithstanding subsection (1), the Owner shall operate and maintain the Works such that the effluent is continuously disinfected so that the monthly Geometric Mean Density of E.Coli does not exceed 200 organisms per 100 millilitres of effluent discharged from the works.

4) Only those monitoring results collected during the corresponding time period shall be used in calculating the Annual Average Concentration/Monthly Average Concentration/Annual Average Loading for this Certificate.

- The annual average effluent concentrations for $CBOD_5$, and TP fell within the applicable objectives.
- The monthly average effluent concentrations for TP fell within the applicable objective.
- The annual average effluent concentrations for $CBOD_5$, and SS fell within the applicable compliance limit.
- The monthly average effluent concentration for TP fell within the applicable compliance limit.
- The annual average effluent loadings for $CBOD_5$, SS, and TP, all fell within the applicable compliance limits.
- The pH values have fallen within the 6.0 to 9.5 range permitted under the certificate.
- The monthly geometric mean densities of E-Coli bacteria in the final effluent met the compliance criteria for all months.
- The monthly geometric mean densities of E-Coli bacteria in the final effluent met the objective criteria for all months except June.

2.1.2 Effluent Sampling Requirements Monitoring and Reporting

1.0 Compliance Testing and Analysis

Monitoring requirements are specified under condition #9 (3) of the Certificate of Approval. Twenty–four (24) hour composite samples of raw sewage are required to be collected quarterly and analyzed for $CBOD_5$, total SS, TP and TKN. Twenty–four (24) hour composite samples of final effluent are required to be collected monthly and analyzed for $CBOD_5$, total SS. Twenty–four (24) hour composite samples of final effluent are required to be collected weekly for analysis for total phosphorus and total ammonia nitrogen. Grab samples of final effluent are required to be collected weekly for analysis for E-Coli bacteria. Lastly, the temperature and pH of the final effluent is required to be tested three times each week.

The plant's current regular monitoring program exceeds these minimum requirements.

Compliance sampling and analysis of raw sewage is carried out quarterly. Twenty–four (24) hour composite samples are collected using an automatic sampler for analysis of $CBOD_5$, total suspended solids, total phosphorus, and total Kjeldahl nitrogen.

Compliance sampling and analysis of final effluent is carried out weekly. Twenty–four (24) hour composite samples are collected using a refrigerated automatic sampler for analysis of $CBOD_5$, total suspended solids, total phosphorus, and total Kjeldahl nitrogen, total ammonia nitrogen, nitrite and nitrate. Grab samples of final effluent are also collected weekly for analysis of E.Coli bacteria. Lastly, grab samples are collected daily (Monday to Friday) and tested for pH and temperature.

With the exception of the samples collected for pH and temperature testing, analysis for all compliance samples is carried out by our external contract laboratory, ALS Environmental Laboratory, in Waterloo.

The plant also complies with Guideline F-10-1 concerning sampling and analysis requirements which satisfies condition 9 (4) (a).

The temperature and pH of the final effluent is taken in the field at the time of sampling for Total Ammonia Nitrogen so as we can calculate the concentration of un-ionized ammonia as set out in condition 9 (5).

The Collingwood WWTP external sampling program is attached as Appendix A.

All external laboratory analysis results are reported in the R1 and R2 Municipal Utility Monitoring forms which are submitted electronically to the Barrie District Office and are used in generating the annual plant performance report.

2.0 In-House Testing and Analysis for Process Control

Twenty–four (24) hour composite samples are collected Monday thru Friday on influent, primary effluent & final effluent. Grab samples are also obtained for other process streams as required for process control purposes. All samples are analysed on-site using techniques in standard methods or using approved methods for HACH DR/2010 Spectrophotometer.

The Collingwood WWTP internal sampling program is attached as Appendix A.

3.0 Flow Measurement

Flows at the Collingwood WWTP are continuously measured at the raw sewage pumps and at the final effluent weir. Raw sewage flows are monitored by ultrasonic flow measuring devices on pumps 1 and 3 and an electromagnetic device (magmeter) on pump 2. All devices are installed on the discharge side of the pumps.

Final effluent flows are continuously monitored by means of rectangular weir with an ultrasonic flow monitor.

A 24-hour chart recorder records the final effluent flow.

Both the influent and final effluent flows are trended through the Scada system.

The meters are calibrated annually for accuracy (must be +/- 15%of flow rate) to satisfy condition 9 (7) of the C of A.

The calibration reports are attached as Appendix E.

2.1.3 Capacity Assessment

The Certificate of Approval specifies that the plant is rated to treat an average daily flow of 24,548 cubic meters/day and a peak flow of 60,900 cubic meters/day.

	Design	Current year
ADF in m^3/d	**24,548**	**13,658**
Maximum daily flow in m^3/d	**60,900**	**31,500**

The annual average daily flow has fallen within these limits for this reporting period.

The peak single day max daily design flow was not exceeded.

The annual average performance data is summarized in Appendix B.

Section 3.0 Biosolids Management

The WWTP currently stabilizes its biosolids (sludge) through anaerobic digestion comprised of 2 primary digesters, each with a capacity of 1,223m^3, one (1) secondary digester for separation of digested sludge and collection and storage of gas, with a capacity of 1,223m^3 and one (1) sludge holding tank with continuous air supply and a capacity of 990m^3. A waste gas burner with a rated capacity of 560m^3/hr. is connected to the system.

Stabilized biosolids are spread on licensed agricultural land as a nutrient and soil conditioner.

Sludge produced at the Collingwood WWTP meets the quality criteria specified in the Ontario Guidelines for Sewage Sludge Utilization on Agricultural Lands. Sludge is applied in accordance with these guidelines and the conditions set out in the site Certificate of Approvals.

Sludge disposal through direct utilization on land is not practical during winter months, during periods of inclement weather and when agricultural fields are inaccessible. The provincial guidelines for biosolids utilization on land recommends municipalities provide 6 months sludge storage facilities. The Town of Collingwood currently owns & operates a 5,000 m^3 STF located on Part Lot 48, Concession 12 in the Town of Collingwood and contracts two 6,800 m^3 STF from Region of Huronia Environmental Services Ltd. to achieve this guideline.

Sludge disposal operations are currently contracted to a private hauler, Region of Huronia Environmental Services Limited, R. R. #1, New Lowell, Ontario, L0M 1N0

A total volume of 24,064.4m^3 of biosolids was disposed of from the Collingwood facility in 2015.

Samples of anaerobic sludge are collected twice monthly and sent for metals, E.Coli, and nutrient analysis to ALS Environmental, Waterloo, Ontario, N2V 2C5. Appendix C provides a detailed summary report of sites utilized for sludge disposal in 2015. Original reporting analysis is available at the plant for viewing.

Section 4.0 Bypass Occurrences

There was one bypass occurrence during this reporting period. Jan 22,2015, an issue with the UV unit control circuit board. See Appendix F.

Section 5.0 Maintenance

A log is kept for each piece of equipment at the Collingwood plant. These logs are available for inspection at the plant.

In 2015 we continued with the Continuous Service Program with Ainsworth Electric Co. Limited being the source provider. This program utilizes such tools as thermography, voltage, load and harmonic checks, vibrations analysis etc. and has been designed using predictive and preventative maintenance to increase safety, reduce down time, reduce maintenance costs, protect asset value and extend equipment life.

Regarding electrical inspections, the WWTP and seven pumping stations are being reviewed under the Electrical Safety Authority. The associated logbook at the site is available for review.

All boiler and pressure vessels were inspected by personnel from the Boiler Inspection and Insurance Company of Canada - no concerns were reported.

All primary and secondary clarifiers were taken out of service for inspection and repairs implemented as required (e.g. damaged flights replaced, drive chains changed, etc.).

UV lamps on the disinfection system were changed out before the 5000 hour limit.

Yearly inspection/maintenance was performed by Toromont CAT on standby power equipment at the main plant and pumping stations

Gas monitoring equipment was calibrated and serviced as OEM recommendation.

Section 6.0 Complaints

The report below outlines each complaint received in 2015. The documented versions of these complaints are held at the Collingwood WWTP and are available for review on request.

Date	Complaint	Action/Observations
May 1, 2015	Odour complaint from unknown in the vicinity of first street.	Waste gas flare extinguished. Relit.
June 11, 2015	Odour complaint from local business. (Beaver and Bulldog).	Transferring Sludge from Digester #3 to Digester #4. Stopped transfer.

Section 7.0 Undertaking Next Reporting Period

Conestoga Rovers and Associates (CRA) (now operating as GHD Canada) have completed a Class Environmental Assessment (EA) related to the next expansion phase for the Collingwood Wastewater Treatment Plant.

Appendix A WWTP Offline Sampling Program

Samples are analyzed using procedures from the most current edition of Standard Methods or HACH DR/2010 spectrophotometer methods. The time and day of the samples is determined by the Laboratory Technician so as to equalize the workload while maintaining representative operations data. The Technician is responsible for obtaining proper and sufficient samples through co-ordination with the process operators.

COLLINGWOOD EXTERNAL SAMPLING PROGRAM			
Unit Process	**Type Sample**	**Parameters Tested**	**Frequency**
Raw Sewage	Composite	$CBOD_{5,}$ TSS, TP, TKN	Quarterly
Primary Effluent	Composite	NH_3,TKN, VFA, NO_3, $CBOD_5$, $NO_{2,}$	Biweekly
Final Effluent	Composite Grab	NH_3, TKN, TP, NO_3, $CBOD_5$, SS, $TBOD_5$ NO_2 Bacti (E-coli)	Weekly Weekly
Biosolids (Anaerobic sludge)	Grab when truck loaded	TS, anions, ICP, Hg, TKN, TP, VS & E-coli	2x/month
Influent	24 hr. composite	pH, SS, TP, FP, Temperature, COD $BOD_{5,}$	Daily M-F WTF
Primary Effluent	24 hr. composite	SS, TP, FP, COD BOD_5	Daily M-F W,Th,F
Final Effluent	24 hr. composite	pH, SS, TP, FP, Temperature. COD NH_3 $BOD_{5,}$	Daily M-F W,Th,F
Aeration (i) mixed liquor (ii) return sludge (iii) waste activated sludge	 Grab Grab Grab	 - half hour settling - SS - Calculate SVI - DO (as required to check against on-line readings) SS SS	 Daily M-F Daily M-F Daily M-F
Thickening	Grab	TS, VS in thickened sludge	4 X/week
Raw Sludge	Grab	TS, VS	4 X/week
Digested Sludge	Grab	TS, VS	Weekly
Digester Supernatant	Grab	TS, VS, BOD_5, TP, alkalinity Volatile acids, pH	As process requires

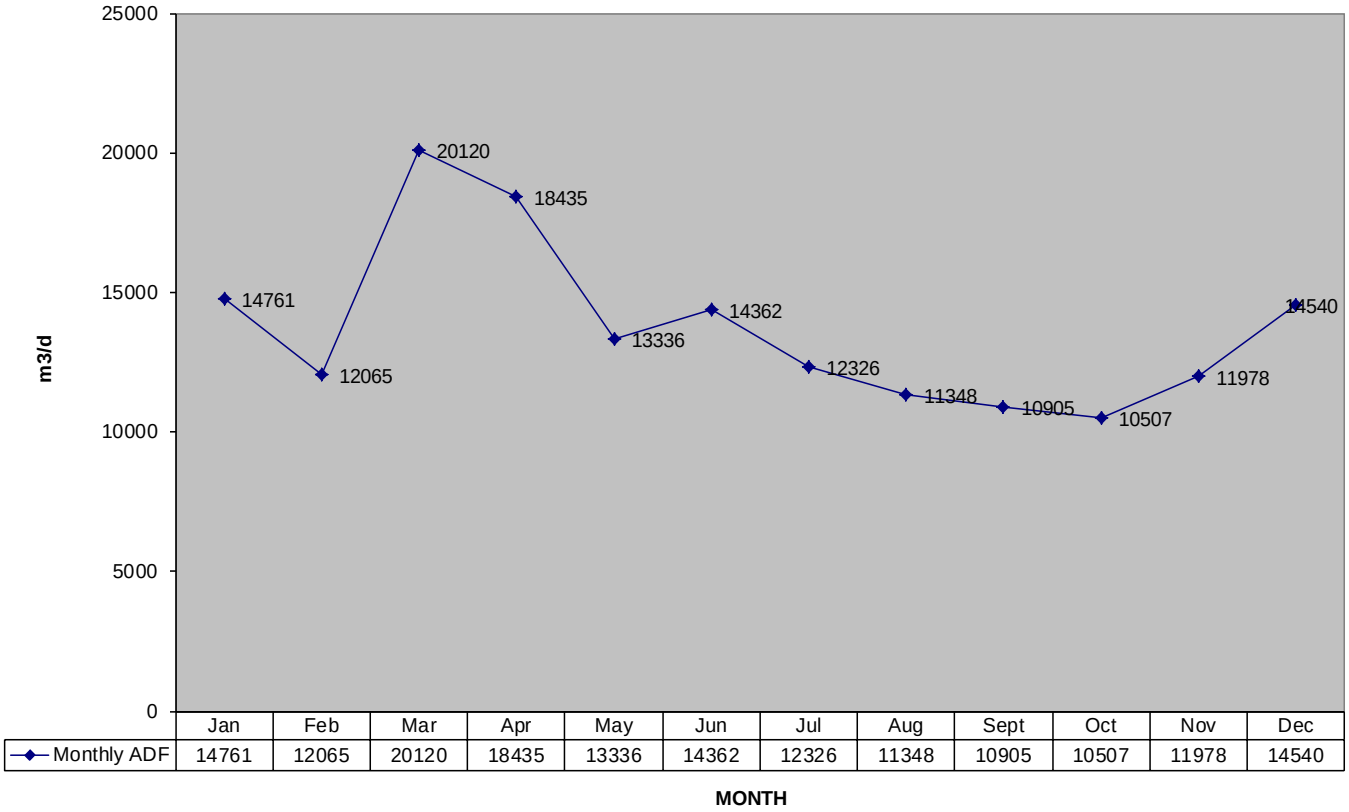
Table 2.1

Major Unit Process Data
Headworks a) Mechanically cleaned bar screen & conveyor (manually raked bypass raw sewage screen) b) Wet Well Pumps Number:3 - 100 HP - 14" Submersible angle flow pumps in a dry well application c) Grit Separators (i) Primary Grit Separation 2 - 3200 mm diameter free standing Grit King Dynamic Separators - with automated control system (ii) Secondary Grit Separation 1 - US Filter type SW grit classifier
Odour Control Within Building CMS Bio Scrub model B13-M175 tank c/w 23,500 square feet of bio scrub media
Primary Sedimentation Number: 3 Rectangular Tanks Surface Area: 560m^2 Total Volume: 1,846m^3
Aeration Tanks Type: Conventional Activated Sludge Number: 2 Trains, 3 cells per train Cell Dimensions:14.6m x 14.6m x 4.6m Total Volume: 5,885m^3 Aeration: 3 - 100 HP fine bubble diffused air
Secondary Clarification Number: 2 Rectangular Tanks Dimensions: 12.2m x 61.0m x 3.2m Surface Area: 1,488m^2
Disinfection System Ultraviolet light process Trojan - UV4000E
Dissolved Air Flotation Unit Number: 1 (Komline-Sanderson) Surface Area: 13.9m^2
Anaerobic Digesters Number: 2 Primaries, 1 Secondary, 1 Holding Tank Total Primary Digester Volume: 2,466m^3 Total Secondary Digester Volume: 1,223m^3 Total Holding Tank Volume: 990m^3
Standby Power Supply 1 - 725kW continuous rated diesel generator set

Appendix B Monthly Flow and Process Quality Data

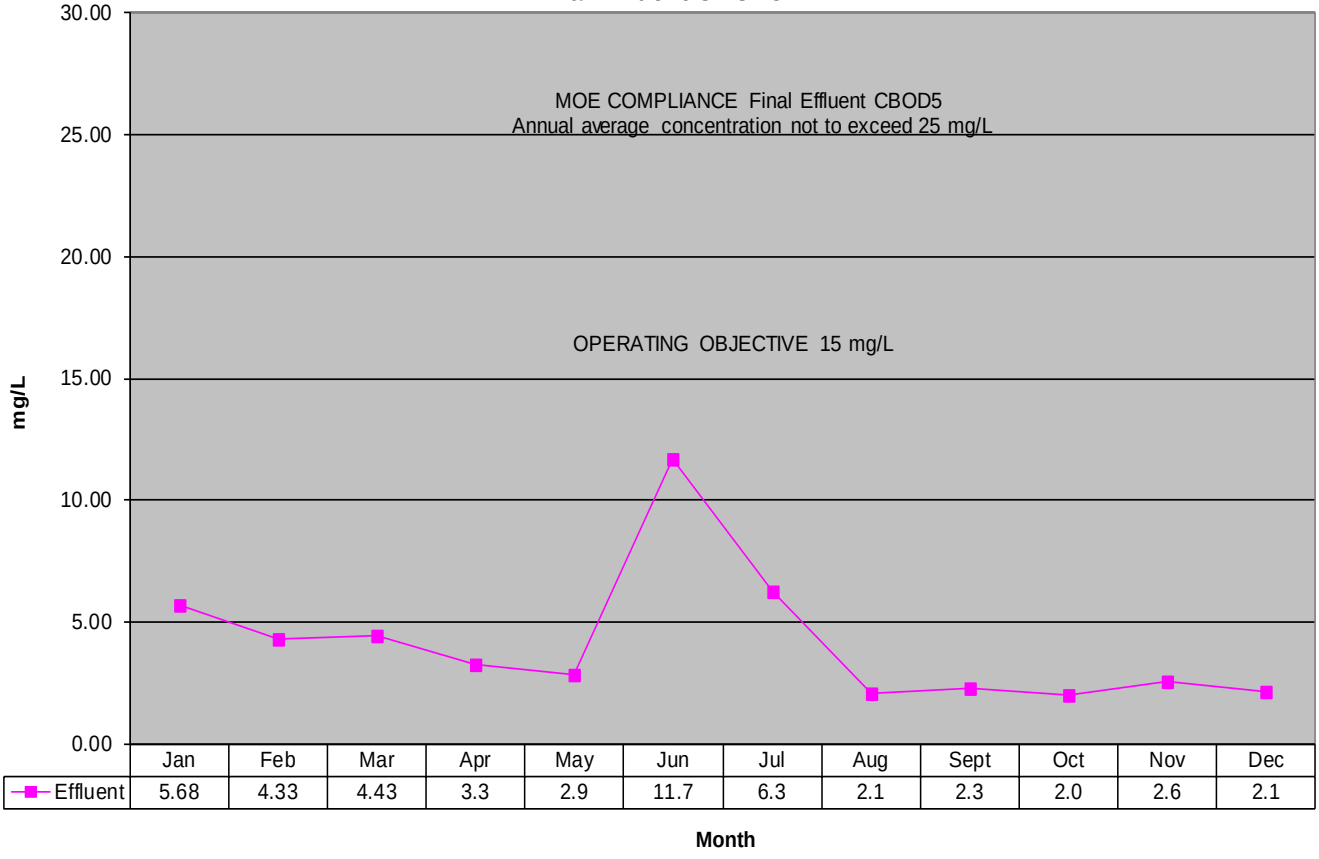
Plant	Collingwood WWTP				Region		Central						Effluent Objectives		
Municipality	Town of Collingwood				District		Simcoe						CBOD5	15mg/L	
Works Number	120000550				Operating Authorit		Municipal						TSS	15mg/L	
Treatment	Conventional Activated Sludge				Watercourse		Collingwood Harbour						TP	0.8 mg/L	
	Phosphorus Removal				Minor Basin		Huron						E-Coli	100 organisms/ 100mL	
Design Capacity	24.548 (1000 m3/d)				Major Basin		Great Lakes						pH	6.5 to 9.0	
					Population Served		19951								
													Annual average	Annual average	Average
2015	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	concentration	Loading	daily flow
FLOWS (m3/d)															13658
Monthly ADF	14761	12065	20120	18435	13336	14362	12326	11348	10905	10507	11978	14540			
Month Total	457580	337810	623720	553050	413410	430850	382110	351790	327160	325710	359340	436210			
Max day	19440	13590	31500	23350	17670	24540	17890	20400	15600	12880	14740	18440			
Min day	11770	10870	11940	14480	11560	10370	10160	8930	9530	9310	9050	11080			
CBOD5 (mg/L)													Compliance is	Compliance is	
Influent		148											25 mg/L	613.7 kg/d	
Effluent	5.68	4.33	4.43	3.3	2.9	11.7	6.3	2.1	2.3	2.0	2.6	2.1	4.1	56.40	
Final Effluent Objective concentration is 15 mg/L															
SS(mg/L)													Compliance is	Compliance is	
Influent		144											25 mg/L	613.7 kg/d	
Effluent	3.7	4.8	5.2	4.2	3.7	20.5	16.8	4.1	3.7	3.0	4.9	4.8	6.6	90.11	
Final Effluent Objective concentration is 15 mg/L															
TP (mg/L)														Compliance is	
Influent		4.25												24.5 kg/d	
Effluent	0.13	0.21	0.25	0.29	0.32	0.75	0.44	0.46	0.26	0.27	0.25	0.13	0.31	4.28	
Monthly average concentration:objective is 0.8mg/L, compliance limit is1.0mg/L and an annual average loading of 24.5 kg/d															
TKN (mg/L)															
Influent		31.1													
Effluent	5.6	7.1	6.0	6.7	10.0	10.2	13.3	15.9	13.9	12.1	11.3	8.6			
TAN (mg/L)															
Influent															
Effluent	4.84	6.98	5.49	5.84	9.60	9.60	13.14	15.78	14.60	12.00	10.61	8.22			
pH of Final Effluent															
Min (6.0)	6.7	7	6.8	7	7	7	7.1	7.1	7	6.9	7	6.9			
Max (9.5)	7.8	7.6	7.5	7.4	7.3	7.2	7.3	7.3	7.3	7.3	7.6	7			
Compliance means maintaining the the pH of the final effluent within the limits 6.0 to 9.5(objective is 6.5 to 9.0)															
E-Coli															
Final effluent	15	15	29	83	7	285	64	29	68	69	3	24			
Monthly geometric mean density of E-Coli: **objective** is100organisms/100mL,**compliance** is 200 organisms /100mL															

TOWN of COLLINGWOOD WWTP
2015Monthly Average
Final Effluent Flow



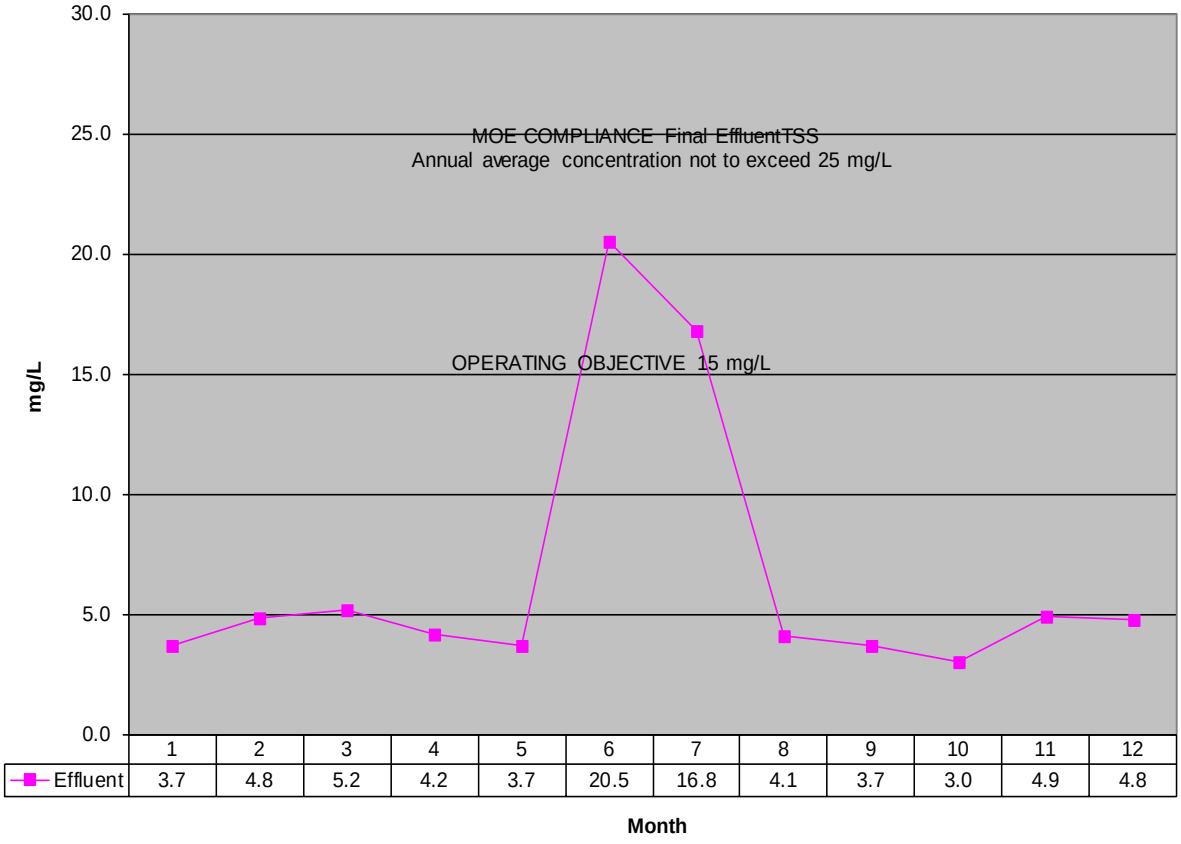
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
Monthly ADF	14761	12065	20120	18435	13336	14362	12326	11348	10905	10507	11978	14540

TOWN of COLLINGWOOD WWTP
2015 Monthly Average Concentration
Final Effluent CBOD5



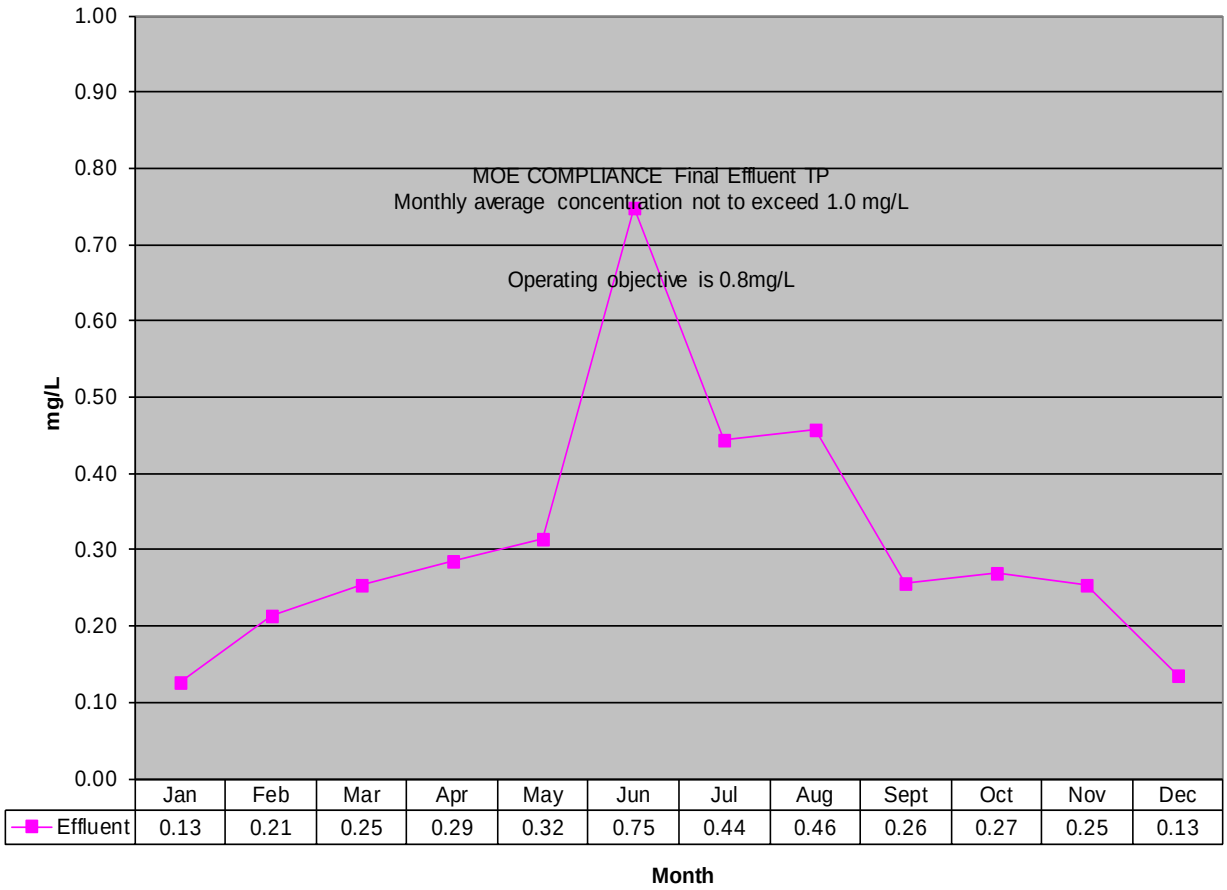
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
Effluent	5.68	4.33	4.43	3.3	2.9	11.7	6.3	2.1	2.3	2.0	2.6	2.1

TOWN of COLLINGWOOD WWTP
2015 Monthly Average Concentration
Final EffluentTSS



	1	2	3	4	5	6	7	8	9	10	11	12
Effluent	3.7	4.8	5.2	4.2	3.7	20.5	16.8	4.1	3.7	3.0	4.9	4.8

TOWN of COLLINGWOOD WWTP
2015Monthly Average Concentration
Final Effluent TP



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
Effluent	0.13	0.21	0.25	0.29	0.32	0.75	0.44	0.46	0.26	0.27	0.25	0.13

Month

Ontario | Ministry of the Environment

Municipal Utility Monitoring Program

Mechanical Plants

R1

Municipality:	Town of Collingwood	Operating Authority:	Town of Collingwood
Project Name:	W.W.T.P.	Address:	Box 157, Collingwood
Address:	3 Birch Street		

File No.	Works Number	Data Month	Period Year		Discharge Type	Update Code
46	**120000550**	Jan	2015	**31**	**2**	**R**
1 2	3 11	16	19	20 21	22	80

CP			PARAMETER CODE	Dec.	Monthly Results	
01	Total Flow	(10^3m3)	**50010**	**3**	457.580	
12 13	Avg. Day Flow	(10^3m3/d)	**50015**	**3**	14.761	
	Max. Day Flow	(10^3m3/d)	**50020**	**3**	19.440	
			30 34	35	38 46	
26	BYPASS					No. of Occurences
12 13	Plant BypassVol.	(10^3m3)	**50026**	**3**		
	Duration	(hrs)	**80563**	**1**		
	Sec. Bypass Vol.	(10^3m3)	**50040**	**3**		
	Duration	(hrs)	**80565**	**1**		48 51
			30 34	35	38 46	
03	RAW SEWAGE			Monthly Average Results		No. of Samples
12 13	BOD	(mg/L)	**00011**	**0**	0	01
	SS	(mg/L)	**00006**	**0**	0	01
	TKN	(mg/L)	**00020**	**0**	0.00	01
	Total P.	(mg/L)	**00033**	**0**	0.0	01
			30 34	35	38 46	48 51
04	FINAL EFFLUENT					
12 13	BOD	(mg/L)	**00001**	**1**	5.7	04
	SS	(mg/L)	**00006**	**1**	3.7	04
	AMMONIA	(mg/L)	**00019**	**1**	4.84	04
	TKN	(mg/L)	**00020**	**1**	5.64	04
	Total P.	(mg/L)	**00033**	**1**	0.13	04
			30 34	35	38 46	48 51
07	DISINFECTION					
12 13	Chlorine Used	(kg as Cl2)	**50100**	**1**		
	Chlorine Dosage	(mg/L as Cl2)	**80410**	**1**		
	Chlorine Resid.	(mg/L as Cl2)	**80420**	**1**		
			30 34	35	38 46	48 51

Operator's Comments:

Don Green705-445-1631

dgreen@collus.com

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Ontario | Ministry of the Environment

Municipal Utility Monitoring Program

Mechanical Plants

R1

Municipality:	Town of Collingwood	Operating Authority:	Town of Collingwood
Project Name:	W.W.T.P.	Address:	Box 157, Collingwood
Address:	3 Birch Street		

File No.	Works Number	Data Month	Period Year		Discharge Type	Update Code
46	**120000550**	Feb	2015	**31**	**2**	**R**
1 2	3 11	16	19	20 21	22	80

CP			PARAMETER CODE	Dec.	Monthly Results	
01	Total Flow	(10^3m3)	**50010**	**3**	337.810	
12 13	Avg. Day Flow	(10^3m3/d)	**50015**	**3**	12.065	
	Max. Day Flow	(10^3m3/d)	**50020**	**3**	13.590	
			30 34	35	38 46	
26	BYPASS					No. of Occurences
12 13	Plant BypassVol.	(10^3m3)	**50026**	**3**		
	Duration	(hrs)	**80563**	**1**		
	Sec. Bypass Vol.	(10^3m3)	**50040**	**3**		
	Duration	(hrs)	**80565**	**1**		48 51
			30 34	35	38 46	
03	RAW SEWAGE			Monthly Average Results		No. of Samples
12 13	BOD	(mg/L)	**00011**	**0**	148	01
	SS	(mg/L)	**00006**	**0**	144	01
	TKN	(mg/L)	**00020**	**0**	31.10	01
	Total P.	(mg/L)	**00033**	**0**	4.3	01
			30 34	35	38 46	48 51
04	FINAL EFFLUENT					
12 13	BOD	(mg/L)	**00001**	**1**	4.3	04
	SS	(mg/L)	**00006**	**1**	4.8	04
	AMMONIA	(mg/L)	**00019**	**1**	6.98	04
	TKN	(mg/L)	**00020**	**1**	7.05	04
	Total P.	(mg/L)	**00033**	**1**	0.21	04
			30 34	35	38 46	48 51
07	DISINFECTION					
12 13	Chlorine Used	(kg as Cl2)	**50100**	**1**		
	Chlorine Dosage	(mg/L as Cl2)	**80410**	**1**		
	Chlorine Resid.	(mg/L as Cl2)	**80420**	**1**		
			30 34	35	38 46	48 51

Operator's Comments:
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dgreen@collus.com
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Municipal Utility Monitoring Program

Mechanical Plants

R1

Municipality:	Town of Collingwood	Operating Authority:	Town of Collingwood
Project Name:	W.W.T.P.	Address:	Box 157, Collingwood
Address:	3 Birch Street		

File No.	Works Number	Data Month	Period Year		Discharge Type	Update Code
46	**120000550**	Mar	2015	**31**	**2**	**R**
1 2	3 11	16	19	20 21	22	80

CP			PARAMETER CODE	Dec.	Monthly Results	
01	FLOWS					
	Total Flow	(10^3m3)	**50010**	**3**	623.720	
12 13	Avg. Day Flow	(10^3m3/d)	**50015**	**3**	20.120	
	Max. Day Flow	(10^3m3/d)	**50020**	**3**	31.500	
			30 34	35	38	46
26	BYPASS					No. of Occurences
12 13	Plant BypassVol.	(10^3m3)	**50026**	**3**		
	Duration	(hrs)	**80563**	**1**		
	Sec. Bypass Vol.	(10^3m3)	**50040**	**3**		
	Duration	(hrs)	**80565**	**1**		48 51
			30 34	35	38	46
03	RAW SEWAGE			Monthly Average Results		No. of Samples
12 13	BOD	(mg/L)	**00011**	**0**	0	00
	SS	(mg/L)	**00006**	**0**	0	00
	TKN	(mg/L)	**00020**	**0**	0.00	00
	Total P.	(mg/L)	**00033**	**0**	0.0	00
			30 34	35	38	46 48 51
04	FINAL EFFLUENT					
12 13	BOD	(mg/L)	**00001**	**1**	4.4	04
	SS	(mg/L)	**00006**	**1**	5.2	04
	AMMONIA	(mg/L)	**00019**	**1**	5.49	04
	TKN	(mg/L)	**00020**	**1**	6.00	04
	Total P.	(mg/L)	**00033**	**1**	0.26	04
			30 34	35	38	46 48 51
07	DISINFECTION					
12 13	Chlorine Used	(kg as Cl2)	**50100**	**1**		
	Chlorine Dosage	(mg/L as Cl2)	**80410**	**1**		
	Chlorine Resid.	(mg/L as Cl2)	**80420**	**1**		
			30 34	35	38	46 48 51

Operator's Comments:
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Municipal Utility Monitoring Program

Mechanical Plants

R1

Municipality:	Town of Collingwood	Operating Authority:	Town of Collingwood
Project Name:	W.W.T.P.	Address:	Box 157, Collingwood
Address:	3 Birch Street		

File No.	Works Number	Data Month	Period Year		Discharge Type	Update Code
46	**120000550**	Apr	2015	**31**	**2**	**R**
1 2	3 11	16	19	20 21	22	80

CP			PARAMETER CODE	Dec.	Monthly Results	
01	Total Flow	(10^3m3)	**50010**	**3**	553.050	
12 13	Avg. Day Flow	(10^3m3/d)	**50015**	**3**	18.435	
	Max. Day Flow	(10^3m3/d)	**50020**	**3**	23.350	
			30 34	35	38 46	
26	BYPASS					No. of Occurences
12 13	Plant BypassVol.	(10^3m3)	**50026**	**3**		
	Duration	(hrs)	**80563**	**1**		
	Sec. Bypass Vol.	(10^3m3)	**50040**	**3**		
	Duration	(hrs)	**80565**	**1**		48 51
			30 34	35	38 46	
03	RAW SEWAGE			Monthly Average Results		No. of Samples
12 13	BOD	(mg/L)	**00011**	**0**	0	00
	SS	(mg/L)	**00006**	**0**	0	00
	TKN	(mg/L)	**00020**	**0**	0.00	00
	Total P.	(mg/L)	**00033**	**0**	0.0	00
			30 34	35	38 46	48 51
04	FINAL EFFLUENT					
12 13	BOD	(mg/L)	**00001**	**1**	3.3	05
	SS	(mg/L)	**00006**	**1**	4.2	05
	AMMONIA	(mg/L)	**00019**	**1**	5.84	05
	TKN	(mg/L)	**00020**	**1**	6.75	05
	Total P.	(mg/L)	**00033**	**1**	0.29	05
			30 34	35	38 46	48 51
07	DISINFECTION					
12 13	Chlorine Used	(kg as Cl2)	**50100**	**1**		
	Chlorine Dosage	(mg/L as Cl2)	**80410**	**1**		
	Chlorine Resid.	(mg/L as Cl2)	**80420**	**1**		
			30 34	35	38 46	48 51

Operator's Comments:

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Mechanical Plants

R1

Municipality:	Town of Collingwood	Operating Authority:	Town of Collingwood
Project Name:	W.W.T.P.	Address:	Box 157, Collingwood
Address:	3 Birch Street		

File No.	Works Number	Data Month	Period Year		Discharge Type	Update Code
46	**120000550**	May	2015	**31**	**2**	**R**
1 2	3 11	16	19	20 21	22	80

CP			PARAMETER CODE	Dec.	Monthly Results	
01	FLOWS					
	Total Flow	(10^3m3)	**50010**	**3**	413.410	
12 13	Avg. Day Flow	(10^3m3/d)	**50015**	**3**	13.336	
	Max. Day Flow	(10^3m3/d)	**50020**	**3**	17.670	
			30 34	35	38	46
26	BYPASS					No. of Occurences
12 13	Plant BypassVol.	(10^3m3)	**50026**	**3**		
	Duration	(hrs)	**80563**	**1**		
	Sec. Bypass Vol.	(10^3m3)	**50040**	**3**		
	Duration	(hrs)	**80565**	**1**		48 51
			30 34	35	38	46
03	RAW SEWAGE			Monthly Average Results		No. of Samples
12 13	BOD	(mg/L)	**00011**	**0**	0	01
	SS	(mg/L)	**00006**	**0**	0	01
	TKN	(mg/L)	**00020**	**0**	0.00	01
	Total P.	(mg/L)	**00033**	**0**	0.0	01
			30 34	35	38	46 48 51
04	FINAL EFFLUENT					
12 13	BOD	(mg/L)	**00001**	**1**	2.9	04
	SS	(mg/L)	**00006**	**1**	3.7	04
	AMMONIA	(mg/L)	**00019**	**1**	9.60	04
	TKN	(mg/L)	**00020**	**1**	10.04	04
	Total P.	(mg/L)	**00033**	**1**	0.32	04
			30 34	35	38	46 48 51
07	DISINFECTION					
12 13	Chlorine Used	(kg as Cl2)	**50100**	**1**		
	Chlorine Dosage	(mg/L as Cl2)	**80410**	**1**		
	Chlorine Resid.	(mg/L as Cl2)	**80420**	**1**		
			30 34	35	38	46 48 51

Operator's Comments:
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Mechanical Plants

R1

Municipality:	Town of Collingwood	Operating Authority:	Town of Collingwood
Project Name:	W.W.T.P.	Address:	Box 157, Collingwood
Address:	3 Birch Street		

File No.	Works Number	Data Month	Period Year		Discharge Type	Update Code
46	**120000550**	Jun	2015	**31**	**2**	**R**
1 2	3 11	16	19	20 21	22	80

CP			PARAMETER CODE	Dec.	Monthly Results	
01	FLOWS					
	Total Flow	(10^3m3)	**50010**	**3**	430.850	
12 13	Avg. Day Flow	(10^3m3/d)	**50015**	**3**	14.362	
	Max. Day Flow	(10^3m3/d)	**50020**	**3**	24.540	
			30 34	35	38	46
26	BYPASS					No. of Occurences
12 13	Plant BypassVol.	(10^3m3)	**50026**	**3**		
	Duration	(hrs)	**80563**	**1**		
	Sec. Bypass Vol.	(10^3m3)	**50040**	**3**		
	Duration	(hrs)	**80565**	**1**		48 51
			30 34	35	38	46
03	RAW SEWAGE			Monthly Average Results		No. of Samples
12 13	BOD	(mg/L)	**00011**	**0**	0	00
	SS	(mg/L)	**00006**	**0**	0	00
	TKN	(mg/L)	**00020**	**0**	0.00	00
	Total P.	(mg/L)	**00033**	**0**	0.0	00
			30 34	35	38	46 48 51
04	FINAL EFFLUENT					
12 13	BOD	(mg/L)	**00001**	**1**	11.7	04
	SS	(mg/L)	**00006**	**1**	20.5	04
	AMMONIA	(mg/L)	**00019**	**1**	9.60	04
	TKN	(mg/L)	**00020**	**1**	10.24	04
	Total P.	(mg/L)	**00033**	**1**	0.75	04
			30 34	35	38	46 48 51
07	DISINFECTION					
12 13	Chlorine Used	(kg as Cl2)	**50100**	**1**		
	Chlorine Dosage	(mg/L as Cl2)	**80410**	**1**		
	Chlorine Resid.	(mg/L as Cl2)	**80420**	**1**		
			30 34	35	38	46 48 51

Operator's Comments:

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Municipal Utility Monitoring Program

Mechanical Plants

R1

Municipality:	Town of Collingwood	Operating Authority:	Town of Collingwood
Project Name:	W.W.T.P.	Address:	Box 157, Collingwood
Address:	3 Birch Street		

File No.	Works Number	Data Month	Period Year		Discharge Type	Update Code
46	**120000550**	Jul	2015	**31**	**2**	**R**
1 2	3 11	16	19	20 21	22	80

CP			PARAMETER CODE	Dec.	Monthly Results	
01	FLOWS					
	Total Flow	(10^3m3)	**50010**	**3**	382.110	
12 13	Avg. Day Flow	(10^3m3/d)	**50015**	**3**	12.326	
	Max. Day Flow	(10^3m3/d)	**50020**	**3**	17.890	
			30 34	35	38	46
26	BYPASS					No. of Occurences
12 13	Plant BypassVol.	(10^3m3)	**50026**	**3**		
	Duration	(hrs)	**80563**	**1**		
	Sec. Bypass Vol.	(10^3m3)	**50040**	**3**		
	Duration	(hrs)	**80565**	**1**		48 51
			30 34	35	38	46
03	RAW SEWAGE			Monthly Average Results		No. of Samples
12 13	BOD	(mg/L)	**00011**	**0**	0	01
	SS	(mg/L)	**00006**	**0**	0	01
	TKN	(mg/L)	**00020**	**0**	0.00	01
	Total P.	(mg/L)	**00033**	**0**	0.0	01
			30 34	35	38	46 48 51
04	FINAL EFFLUENT					
12 13	BOD	(mg/L)	**00001**	**1**	6.3	05
	SS	(mg/L)	**00006**	**1**	16.8	05
	AMMONIA	(mg/L)	**00019**	**1**	13.14	05
	TKN	(mg/L)	**00020**	**1**	13.25	05
	Total P.	(mg/L)	**00033**	**1**	0.45	05
			30 34	35	38	46 48 51
07	DISINFECTION					
12 13	Chlorine Used	(kg as Cl2)	**50100**	**1**		
	Chlorine Dosage	(mg/L as Cl2)	**80410**	**1**		
	Chlorine Resid.	(mg/L as Cl2)	**80420**	**1**		
			30 34	35	38	46 48 51

Operator's Comments:

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Municipal Utility Monitoring Program

Mechanical Plants

R1

Municipality:	Town of Collingwood	Operating Authority:	Town of Collingwood
Project Name:	W.W.T.P.	Address:	Box 157, Collingwood
Address:	3 Birch Street		

File No.	Works Number	Data Month	Period Year		Discharge Type	Update Code
46	**120000550**	Aug	2015	**31**	**2**	**R**
1 2	3 11	16	19	20 21	22	80

CP			PARAMETER CODE	Dec.	Monthly Results	
01	FLOWS					
	Total Flow	(10^3m3)	**50010**	**3**	351.790	
12 13	Avg. Day Flow	(10^3m3/d)	**50015**	**3**	11.348	
	Max. Day Flow	(10^3m3/d)	**50020**	**3**	20.400	
			30 34	35	38	46
26	BYPASS					No. of Occurences
12 13	Plant BypassVol.	(10^3m3)	**50026**	**3**		
	Duration	(hrs)	**80563**	**1**		
	Sec. Bypass Vol.	(10^3m3)	**50040**	**3**		
	Duration	(hrs)	**80565**	**1**		48 51
			30 34	35	38	46
03	RAW SEWAGE			Monthly Average Results		No. of Samples
12 13	BOD	(mg/L)	**00011**	**0**	0	01
	SS	(mg/L)	**00006**	**0**	0	00
	TKN	(mg/L)	**00020**	**0**	0.00	01
	Total P.	(mg/L)	**00033**	**0**	0.0	00
			30 34	35	38	46 48 51
04	FINAL EFFLUENT					
12 13	BOD	(mg/L)	**00001**	**1**	2.1	04
	SS	(mg/L)	**00006**	**1**	4.1	04
	AMMONIA	(mg/L)	**00019**	**1**	15.78	04
	TKN	(mg/L)	**00020**	**1**	15.88	04
	Total P.	(mg/L)	**00033**	**1**	0.46	04
			30 34	35	38	46 48 51
07	DISINFECTION					
12 13	Chlorine Used	(kg as Cl2)	**50100**	**1**		
	Chlorine Dosage	(mg/L as Cl2)	**80410**	**1**		
	Chlorine Resid.	(mg/L as Cl2)	**80420**	**1**		
			30 34	35	38	46 48 51

Operator's Comments:

Glenn Price705-445-1631

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Municipal Utility Monitoring Program

Mechanical Plants

R1

Municipality:	Town of Collingwood	Operating Authority:	Town of Collingwood
Project Name:	W.W.T.P.	Address:	Box 157, Collingwood
Address:	3 Birch Street		

File No.	Works Number	Data Month	Period Year		Discharge Type	Update Code
46	**120000550**	Sep	2015	**31**	**2**	**R**
1 2	3 11	16	19	20 21	22	80

CP			PARAMETER CODE	Dec.	Monthly Results	
01	Total Flow	(10^3m3)	**50010**	**3**	327.160	
12 13	Avg. Day Flow	(10^3m3/d)	**50015**	**3**	10.905	
	Max. Day Flow	(10^3m3/d)	**50020**	**3**	15.600	
			30 34	35	38	46
26	BYPASS					No. of Occurences
12 13	Plant BypassVol.	(10^3m3)	**50026**	**3**		
	Duration	(hrs)	**80563**	**1**		
	Sec. Bypass Vol.	(10^3m3)	**50040**	**3**		
	Duration	(hrs)	**80565**	**1**		48 51
			30 34	35	38	46
03	RAW SEWAGE			Monthly Average Results		No. of Samples
12 13	BOD	(mg/L)	**00011**	**0**	0	00
	SS	(mg/L)	**00006**	**0**	0	00
	TKN	(mg/L)	**00020**	**0**	0.00	00
	Total P.	(mg/L)	**00033**	**0**	0.0	00
			30 34	35	38	46 48 51
04	FINAL EFFLUENT					
12 13	BOD	(mg/L)	**00001**	**1**	2.3	05
	SS	(mg/L)	**00006**	**1**	3.7	05
	AMMONIA	(mg/L)	**00019**	**1**	14.60	05
	TKN	(mg/L)	**00020**	**1**	13.88	05
	Total P.	(mg/L)	**00033**	**1**	0.26	05
			30 34	35	38	46 48 51
07	DISINFECTION					
12 13	Chlorine Used	(kg as Cl2)	**50100**	**1**		
	Chlorine Dosage	(mg/L as Cl2)	**80410**	**1**		
	Chlorine Resid.	(mg/L as Cl2)	**80420**	**1**		
			30 34	35	38	46 48 51

Operator's Comments:

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Municipal Utility Monitoring Program

Mechanical Plants

R1

Municipality:	Town of Collingwood	Operating Authority:	Town of Collingwood
Project Name:	W.W.T.P.	Address:	Box 157, Collingwood
Address:	3 Birch Street		

File No.	Works Number	Data Month	Period Year		Discharge Type	Update Code
46	**120000550**	Oct	2015	**31**	**2**	**R**
1 2	3 11	16	19	20 21	22	80

CP			PARAMETER CODE	Dec.	Monthly Results	
01	FLOWS					
	Total Flow	(10^3m3)	**50010**	**3**	325.710	
12 13	Avg. Day Flow	(10^3m3/d)	**50015**	**3**	10.507	
	Max. Day Flow	(10^3m3/d)	**50020**	**3**	12.880	
			30 34	35	38	46
26	BYPASS					No. of Occurences
12 13	Plant BypassVol.	(10^3m3)	**50026**	**3**		
	Duration	(hrs)	**80563**	**1**		
	Sec. Bypass Vol.	(10^3m3)	**50040**	**3**		
	Duration	(hrs)	**80565**	**1**		48 51
			30 34	35	38	46
03	RAW SEWAGE			Monthly Average Results		No. of Samples
12 13	BOD	(mg/L)	**00011**	**0**	0	02
	SS	(mg/L)	**00006**	**0**	0	02
	TKN	(mg/L)	**00020**	**0**	0.00	02
	Total P.	(mg/L)	**00033**	**0**	0.0	02
			30 34	35	38	46 48 51
04	FINAL EFFLUENT					
12 13	BOD	(mg/L)	**00001**	**1**	2.0	04
	SS	(mg/L)	**00006**	**1**	3.0	04
	AMMONIA	(mg/L)	**00019**	**1**	12.00	04
	TKN	(mg/L)	**00020**	**1**	12.10	04
	Total P.	(mg/L)	**00033**	**1**	0.27	04
			30 34	35	38	46 48 51
07	DISINFECTION					
12 13	Chlorine Used	(kg as Cl2)	**50100**	**1**		
	Chlorine Dosage	(mg/L as Cl2)	**80410**	**1**		
	Chlorine Resid.	(mg/L as Cl2)	**80420**	**1**		
			30 34	35	38	46 48 51

Operator's Comments:

Glenn Price705-445-1631

gprice@collingwood.ca

E-Coli 69

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Ministry of the Environment
54 Cedar Pointe Drive
Unit 1203
Barrie, ON
L4N 5R7

Ontario | Ministry of the Environment

Municipal Utility Monitoring Program

Mechanical Plants

R1

Municipality:	Town of Collingwood	Operating Authority:	Town of Collingwood
Project Name:	W.W.T.P.	Address:	Box 157, Collingwood
Address:	3 Birch Street		

File No.	Works Number	Data Month	Period Year		Discharge Type	Update Code
46	**120000550**	Nov	2015	**31**	**2**	**R**
1 2	3 11	16	19	20 21	22	80

CP			PARAMETER CODE	Dec.	Monthly Results	
01	FLOWS					
	Total Flow	(10^3m3)	**50010**	**3**	359.340	
12 13	Avg. Day Flow	(10^3m3/d)	**50015**	**3**	11.978	
	Max. Day Flow	(10^3m3/d)	**50020**	**3**	14.740	
			30 34	35	38	46
26	BYPASS					No. of Occurences
12 13	Plant BypassVol.	(10^3m3)	**50026**	**3**		
	Duration	(hrs)	**80563**	**1**		
	Sec. Bypass Vol.	(10^3m3)	**50040**	**3**		
	Duration	(hrs)	**80565**	**1**		48 51
			30 34	35	38	46
03	RAW SEWAGE			Monthly Average Results		No. of Samples
12 13	BOD	(mg/L)	**00011**	**0**	0	00
	SS	(mg/L)	**00006**	**0**	0	00
	TKN	(mg/L)	**00020**	**0**	0.00	00
	Total P.	(mg/L)	**00033**	**0**	0.0	00
			30 34	35	38	46 48 51
04	FINAL EFFLUENT					
12 13	BOD	(mg/L)	**00001**	**1**	2.6	05
	SS	(mg/L)	**00006**	**1**	4.9	05
	AMMONIA	(mg/L)	**00019**	**1**	10.61	05
	TKN	(mg/L)	**00020**	**1**	11.26	05
	Total P.	(mg/L)	**00033**	**1**	0.25	05
			30 34	35	38	46 48 51
07	DISINFECTION					
12 13	Chlorine Used	(kg as Cl2)	**50100**	**1**		
	Chlorine Dosage	(mg/L as Cl2)	**80410**	**1**		
	Chlorine Resid.	(mg/L as Cl2)	**80420**	**1**		
			30 34	35	38	46 48 51

Operator's Comments:

Glenn Price705-445-1631

gprice@collingwood.ca

E-Coli 3

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Unit 1203
Barrie, ON
L4N 5R7

Ontario | Ministry of the Environment

Municipal Utility Monitoring Program

Mechanical Plants

R1

Municipality:	Town of Collingwood	Operating Authority:	Town of Collingwood
Project Name:	W.W.T.P.	Address:	Box 157, Collingwood
Address:	3 Birch Street		

File No.	Works Number	Data Month	Period Year		Discharge Type	Update Code
46	**120000550**	Dec	2015	**31**	**2**	**R**
1 2	3 11	16 19		20 21	22	80

CP			PARAMETER CODE	Dec.	Monthly Results	
01	Total Flow	(10^3m3)	**50010**	**3**	418.730	
12 13	Avg. Day Flow	(10^3m3/d)	**50015**	**3**	14.439	
	Max. Day Flow	(10^3m3/d)	**50020**	**3**	18.440	
			30 34	35	38 46	
26	BYPASS					No. of Occurences
12 13	Plant BypassVol.	(10^3m3)	**50026**	**3**		
	Duration	(hrs)	**80563**	**1**		
	Sec. Bypass Vol.	(10^3m3)	**50040**	**3**		
	Duration	(hrs)	**80565**	**1**		48 51
			30 34	35	38 46	
03	RAW SEWAGE			Monthly Average Results		No. of Samples
12 13	BOD	(mg/L)	**00011**	**0**	0	00
	SS	(mg/L)	**00006**	**0**	0	00
	TKN	(mg/L)	**00020**	**0**	0.00	00
	Total P.	(mg/L)	**00033**	**0**	0.0	00
			30 34	35	38 46	48 51
04	FINAL EFFLUENT					
12 13	BOD	(mg/L)	**00001**	**1**	2.2	04
	SS	(mg/L)	**00006**	**1**	5.5	04
	AMMONIA	(mg/L)	**00019**	**1**	7.70	04
	TKN	(mg/L)	**00020**	**1**	8.42	04
	Total P.	(mg/L)	**00033**	**1**	0.14	04
			30 34	35	38 46	48 51
07	DISINFECTION					
12 13	Chlorine Used	(kg as Cl2)	**50100**	**1**		
	Chlorine Dosage	(mg/L as Cl2)	**80410**	**1**		
	Chlorine Resid.	(mg/L as Cl2)	**80420**	**1**		
			30 34	35	38 46	48 51

Operator's Comments:

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Appendix C Sludge Management Overview

Contaminar	Arsenic	Cadmium	Cobalt	Chromium	Copper	Mercury	Molybdenum	Nickel	Lead	Selenium	Zinc	Ammonia	Nitrate	Nitrite	Kjeldahl-N	Phosphorus	Potassium	Total Solids	E-Coli	Volatile Solids
Sampling	**As**	**Cd**	**Co**	**Cr**	**Cu**	**Hg**	**Mo**	**Ni**	**Pb**	**Se**	**Zn**	**NH3**	**NO3**	**NO2**	**TKN**	**TP**	**K**	**TS**		**VS**
Date	**mg / L**	**mg / L**	**mg / L**	**mg / L**	**mg / L**	**mg / L**	**mg / L**	**mg / L**	**mg / L**	**mg / L**	**mg / L**	**mg / L**	**mg / L**	**mg / L**	**mg / L**	**mg / L**	**mg / L**	**%**	**cfu/g**	**%**
8-Jan-15	0.10	0.0195	0.061	0.3	21.3	0.0162	0.148	0.34	1.13	0.074	12.6	1190	2	2	2140	583	160	2.12	32100	61.2
21-Jan-15	0.12	0.0395	0.094	0.6	33.3	0.0197	0.26	0.58	2.23	0.118	22.1	1680	0.4	0.2	2290	743	200	2.95	6670	60.1
4-Feb-15	0.1	0.0191	0.061	0.4	22.3	0.0114	0.153	0.33	0.874	0.079	13.3	2150	0.4	0.2	2970	509	200	1.83	16900	60.3
18-Feb-15	0.1	0.0184	0.056	0.3	1.96	0.0166	0.138	0.29	0.958	0.067	12.2	1830	0.4	0.2	2560	699	200	1.83	6710	60.6
4-Mar-15	0.1	0.0112	0.05	0.2	11.4	0.00284	0.08	0.15	0.422	0.043	6.69	1940	0.4	0.2	2160	466	180	1.48	13500	63.2
18-Mar-15	0.1	0.0219	0.051	0.3	19.6	0.0154	0.138	0.24	0.674	0.064	11.6	1890	0.4	0.2	2620	809	210	1.67	8070	63.1
1-Apr-15	0.1	0.018	0.052	0.3	20.3	0.0129	0.139	0.25	0.666	0.062	11.3	1340	0.4	0.2	2730	690	220	1.7	44100	64
15-Apr-15	0.1	0.0267	0.066	0.5	28.1	0.023	0.182	0.49	0.971	0.084	16.4	1750	0.4	0.2	2760	725	210	2.48	23100	62.6
29-Apr-15	0.1	0.0229	0.064	0.5	26.8	0.0248	0.169	0.36	0.814	0.079	15.5	1370	0.4	0.2	2240	641	230	2.14	8100	62
13-May-15	0.1	0.0211	0.053	0.4	22.1	0.0166	0.137	0.31	1.68	0.058	22.5	1480	0.4	0.2	2530	617	190	1.87	35400	62.7
27-May-15	0.1	0.0237	0.052	0.4	21	0.00992	0.14	0.27	0.704	0.068	15.9	1480	0.4	0.2	2600	567	180	1.65	18400	63
10-Jun-15	0.1	0.0251	0.056	0.4	24.1	0.0391	0.16	0.28	0.796	0.071	38.4	1570	0.4	0.2	2020	544	160	1.88	43700	63.4
24-Jun-15	0.1	0.0301	0.066	0.5	27.9	0.016	0.198	0.35	0.976	0.081	22.3	1100	0.4	0.2	2570	694	150	2.3	89900	58.3
8-Jul-15	0.1	0.0391	0.075	0.5	27.6	0.0382	0.227	0.36	1.23	0.096	25.5	1300	0.4	0.2	2290	637	160	0.28	4260	59.4
22-Jul-15	0.11	0.0421	0.078	0.6	31.4	0.0126	0.271	0.4	1.42	0.113	29.8	1500	0.4	0.2	3310	1050	140	2.6	2100	38.2
5-Aug-15	0.1	0.0298	0.082	0.4	22.8	0.0123	0.25	0.282	1.32	0.091	21.2	719	0.4	0.2	2350	615	150	1.95	18000	38.3
19-Aug-15	0.119	0.0507	0.095	0.6	32.5	0.0147	0.256	0.429	1.78	0.138	28.5	1320	0.4	0.2	2940	906	154	2.5	9580	58.8
2-Sep-15	0.14	0.0543	0.108	0.7	37.3	0.041	0.302	0.491	2.23	0.155	34.7	1250	0.4	0.2	3960	2860	143	3.38	12200	58.8
16-Sep-15	0.132	0.0499	0.105	0.7	34.3	0.0215	0.284	0.497	2.05	0.146	31.6	1170	0.4	0.2	2730	988	165	2.36	23100	61.2
30-Sep-15	0.07	0.023	0.055	0.3	16.5	0.0145	0.129	0.21	1.21	0.0772	14.4	1220	0.4	0.2	1740	427	147	1.68	53500	62.4
15-Oct-15	0.11	0.035	0.164	0.5	29.1	0.0101	0.22	0.396	2.11	0.107	26.8	1240	0.4	0.2	2400	830	175	2.89	33200	35.7
28-Oct-15	0.093	0.0374	0.171	0.4	24	0.02	0.204	0.347	1.74	0.105	22.8	1270	0.4	0.2	2340	674	173	1.86	132000	64.6
12-Nov-15	0.1	0.023	0.116	0.3	18.4	0.0104	0.173	0.242	1.22	0.0716	17.8	1140	0.4	0.2	1540	416	145	1.63	15600	64.9
25-Nov-15	0.067	0.0235	0.088	0.3	21.6	0.0091	0.177	0.253	2.69	0.0618	15.9	943	0.4	0.2	1240	290	116	1.44	122000	64.1
9-Dec-15	0.075	0.0266	0.095	0.5	20.4	0.0129	0.235	0.448	2.72	0.0747	18.6	1010	0.4	0.2	2630	787	118	1.89	29800	67.8
21-Dec-15	0.074	0.0259	0.09	0.4	19.4	0.0053	0.218	0.339	2.43	0.0699	19.9	1230	0.4	0.2	2530	688	148	1.63	16900	66.4

Town of Collingwood Waste Water Treatment Plant

Biosolids Spreading Report by Field

Site	Field	Year	Month	Day	Vol [m³]	NH₃[mg/L]	NH₃[kg]	TP [mg/L]	TP [kg]	Origin
20100 NAS	F2	2015	May	01	808.0					NLSTFC2
			Summary for F2 - May, 2015 (1 detail record)							
			Sum		808.0					
		Summary for F2 - 2015 (1 detail record)								
		Sum			808.0					
	Summary for F2 - F2 (1 detail record)									
	Sum				808.0					
Summary for 20100 NASMF2 - (1 detail record)										
Sum					808.0					
21400NAS	F2	2015	August	21	685.2					NLSTF
				22	854.0					NLSTF
				24	1,017.8					NLSTF
				25	1,338.4					NLSTF
				26	834.4					NLSTF
			Summary for F2 - August, 2015 (5 detail records)							
			Sum		4,729.8					
		Summary for F2 - 2015 (5 detail records)								
		Sum			4,729.8					
	Summary for F2 - F2 (5 detail records)									
	Sum				4,729.8					
21400NAS	MF4	2015	April	28	1,080.0					NLSTFC2
			Summary for MF4 - April, 2015 (1 detail record)							
			Sum		1,080.0					
		Summary for MF4 - 2015 (1 detail record)								
		Sum			1,080.0					
	Summary for MF4 - MF4 (1 detail record)									
	Sum				1,080.0					
Summary for 21400nasmMF4 - (6 detail records)										
Sum					5,809.8					
21710NAS	MF1	2015	April	29	1,024.4					NLSTFC2
				30	1,390.0					NLSTFC2
			Summary for MF1 - April, 2015 (2 detail records)							
			Sum		2,414.4					
21710NAS	MF1	2015	May	01	100.0					NLSTFC2
			Summary for MF1 - May, 2015 (1 detail record)							
			Sum		100.0					
		Summary for MF1 - 2015 (3 detail records)								
		Sum			2,514.4					

Biosolids Spreading Report by Field

Site	Field	Year	Month	Day	Vol [m³]	NH₃[mg/L]	NH₃[kg]	TP [mg/L]	TP [kg]	Origin
	Summary for MF1 - MF1 (3 detail records)									
	Sum				2,514.4					
Summary for 21710NASMMF1 - (3 detail records)										
Sum					2,514.4					
L1	PLT	2015	September	24	36.4					HSLP
	Summary for PLT - September, 2015 (1 detail record)									
	Sum				36.4					
	Summary for PLT - 2015 (1 detail record)									
	Sum				36.4					
	Summary for PLT - PLT (1 detail record)									
	Sum				36.4					
Summary for L1PLT - (1 detail record)										
Sum					36.4					
NASM 214	F1	2015	August	04	695.4					NLSTFC2
				05	996.8					NLSTFC2
				10	817.0					NLSTFC2
				11	1,283.4					NLSTFC2
				12	1,460.0					NLSTFC2
				13	865.8					NLSTFC2
				14	1,472.2					NLSTFC2
				17	1,249.2					NLSTFC2
	Summary for F1 - August, 2015 (8 detail records)									
	Sum				8,839.8					
	Summary for F1 - 2015 (8 detail records)									
	Sum				8,839.8					
	Summary for F1 - F1 (8 detail records)									
	Sum				8,839.8					
Summary for NASM 21400F1 - (8 detail records)										
Sum					8,839.8					
NASM2140	MF1	2015	April	28	470.0					NLSTFC2
	Summary for MF1 - April, 2015 (1 detail record)									
	Sum				470.0					
	Summary for MF1 - 2015 (1 detail record)									
	Sum				470.0					
	Summary for MF1 - MF1 (1 detail record)									
	Sum				470.0					
NASM2140	MF4	2015	April	29	904.0					NLSTFC2
	Summary for MF4 - April, 2015 (1 detail record)									
	Sum				904.0					
	Summary for MF4 - 2015 (1 detail record)									
	Sum				904.0					

Biosolids Spreading Report by Field

Site	Field	Year	Month	Day	Vol [m³]	NH₃[mg/L]	NH₃[kg]	TP [mg/L]	TP [kg]	Origin
	Summary for MF4 - MF4 (1 detail record)									
	Sum				904.0					
Summary for NASM21400MF4 - (2 detail records)										
Sum					1,374.0					
NASM2155	MF1	2015	October	30	1,053.0					NLSTF
			Summary for MF1 - October, 2015 (1 detail record)							
			Sum		1,053.0					
NASM2155	MF1	2015	November	02	1,092.0					NLSTF
			Summary for MF1 - November, 2015 (1 detail record)							
			Sum		1,092.0					
		Summary for MF1 - 2015 (2 detail records)								
		Sum			2,145.0					
	Summary for MF1 - MF1 (2 detail records)									
	Sum				2,145.0					
Summary for NASM21551MF1 - (2 detail records)										
Sum					2,145.0					
NLSTF-C1	PLT	2015	January	19	57.4	1,080.5	62.0	652.5	37.5	HSLP
				20	21.0	1,080.5	22.7	652.5	13.7	HSLP
				21	57.4	1,277.5	73.3	663.0	38.1	HSLP
				22	141.4	1,277.5	180.6	663.0	93.7	HSLP
				23	135.8	1,277.5	173.5	663.0	90.0	HSLP
				26	114.8	1,277.5	146.7	663.0	76.1	HSLP
				27	78.4	1,277.5	100.2	663.0	52.0	HSLP
				28	177.8	1,277.5	227.1	663.0	117.9	HSLP
				29	151.2	1,277.5	193.2	663.0	100.2	HSLP
				30	78.4	1,277.5	100.2	663.0	52.0	HSLP
			Summary for PLT - January, 2015 (10 detail records)							
			Sum		1,013.6		1,279.4		671.2	
NLSTF-C1	PLT	2015	February	02	156.8	1,277.5	200.3	663.0	104.0	HSLP
				03	93.8	1,277.5	119.8	663.0	62.2	HSLP
				04	99.4	1,595.0	158.5	626.0	62.2	HSLP
				05	36.4	1,595.0	58.1	626.0	22.8	HSLP
				09	78.4	1,595.0	125.0	626.0	49.1	HSLP
				10	36.4	1,595.0	58.1	626.0	22.8	HSLP
				11	57.4	1,595.0	91.6	626.0	35.9	HSLP
				12	57.4	1,595.0	91.6	626.0	35.9	HSLP
				13	84.0	1,595.0	134.0	626.0	52.6	HSLP
				17	21.0	1,595.0	33.5	626.0	13.1	HSLP
				18	78.4	1,712.5	134.3	604.0	47.4	HSLP
				19	42.0	1,712.5	71.9	604.0	25.4	HSLP
				20	168.0	1,712.5	287.7	604.0	101.5	HSLP
				23	99.4	1,712.5	170.2	604.0	60.0	HSLP

Biosolids Spreading Report by Field

Site	Field	Year	Month	Day	Vol [m³]	NH₃[mg/L]	NH₃[kg]	TP [mg/L]	TP [kg]	Origin
NLSTF-C1	PLT	2015	February	24	120.4	1,712.5	206.2	604.0	72.7	HSLP
				25	141.4	1,712.5	242.1	604.0	85.4	HSLP
				26	99.4	1,712.5	170.2	604.0	60.0	HSLP
				27	114.8	1,712.5	196.6	604.0	69.3	HSLP
			Summary for PLT - February, 2015 (18 detail records)							
			Sum		1,584.8		2,549.7		982.4	
NLSTF-C1	PLT	2015	March	02	135.8	1,712.5	232.6	604.0	82.0	HSLP
				03	162.4	1,712.5	278.1	604.0	98.1	HSLP
				04	93.8	1,900.0	178.2	582.5	54.6	HSLP
				05	42.0	1,900.0	79.8	582.5	24.5	HSLP
				06	21.0	1,900.0	39.9	582.5	12.2	HSLP
				09	57.4	1,900.0	109.1	582.5	33.4	HSLP
				10	72.8	1,900.0	138.3	582.5	42.4	HSLP
				11	57.4	1,900.0	109.1	582.5	33.4	HSLP
				12	93.8	1,900.0	178.2	582.5	54.6	HSLP
				13	99.4	1,900.0	188.9	582.5	57.9	HSLP
				16	135.8	1,900.0	258.0	582.5	79.1	HSLP
				17	72.8	1,900.0	138.3	582.5	42.4	HSLP
				18	42.0	1,952.5	82.0	637.5	26.8	HSLP
				19	21.0	1,952.5	41.0	637.5	13.4	HSLP
				20	78.4	1,952.5	153.1	637.5	50.0	HSLP
				23	114.8	1,952.5	224.1	637.5	73.2	HSLP
				24	78.4	1,952.5	153.1	637.5	50.0	HSLP
				26	57.4	1,952.5	112.1	637.5	36.6	HSLP
				27	135.8	1,952.5	265.1	637.5	86.6	HSLP
				30	93.8	1,952.5	183.1	637.5	59.8	HSLP
				31	114.8	1,952.5	224.1	637.5	73.2	HSLP
			Summary for PLT - March, 2015 (21 detail records)							
			Sum		1,780.8		3,366.3		1,084.2	
NLSTF-C1	PLT	2015	April	01	114.8	1,750.0	200.9	749.5	86.0	HSLP
				02	42.0	1,750.0	73.5	749.5	31.5	HSLP
				06	42.0	1,750.0	73.5	749.5	31.5	HSLP
				07	162.4	1,750.0	284.2	749.5	121.7	HSLP
				08	162.4	1,750.0	284.2	749.5	121.7	HSLP
				09	141.4	1,750.0	247.5	749.5	106.0	HSLP
				10	93.8	1,750.0	164.2	749.5	70.3	HSLP
				13	114.8	1,750.0	200.9	749.5	86.0	HSLP
				14	114.8					HSLP
				15	114.8					HSLP
				16	57.4					HSLP
				17	99.4					HSLP
				20	151.2					HSLP
				21	151.2					HSLP

Biosolids Spreading Report by Field

Site	Field	Year	Month	Day	Vol [m³]	NH₃[mg/L]	NH₃[kg]	TP [mg/L]	TP [kg]	Origin
NLSTF-C1	PLT	2015	April	22	72.8					HSLP
				23	93.8					HSLP
				24	229.6					HSLP
				27	214.2					HSLP
			Summary for PLT - April, 2015 (18 detail records)							
			Sum		2,172.8		1,528.8		654.8	
NLSTF-C1	PLT	2015	August	18	261.8					HSLP
				19	198.8					HSLP
				20	141.4					HSLP
				21	104.8					HSLP
				24	120.4					HSLP
				25	36.4					HSLP
				26	151.2					HSLP
				27	63.0					HSLP
				28	36.4					HSLP
				31	53.0					HSLP
			Summary for PLT - August, 2015 (10 detail records)							
			Sum		1,167.2					
NLSTF-C1	PLT	2015	September	01	168.0					HSLP
				02	36.4					HSLP
				03	21.0					HSLP
				04	57.4					HSLP
				08	57.4					HSLP
				09	99.4					HSLP
				10	114.8					HSLP
				11	36.4					HSLP
				14	99.4					HSLP
				15	42.0					HSLP
				16	204.4					HSLP
				17	99.4					HSLP
				18	36.4					HSLP
				25	36.4					HSLP
				28	21.0					HSLP
				29	57.4					HSLP
				30	36.4					HSLP
			Summary for PLT - September, 2015 (17 detail records)							
			Sum		1,223.6					
NLSTF-C1	PLT	2015	October	01	42.0					HSLP
				02	72.8					HSLP
				05	78.4					HSLP
				06	57.4					HSLP
				07	93.8					HSLP
				08	93.8					HSLP

Biosolids Spreading Report by Field

Site	Field	Year	Month	Day	Vol [m³]	NH₃[mg/L]	NH₃[kg]	TP [mg/L]	TP [kg]	Origin
NLSTF-C1	PLT	2015	October	09	36.4					HSLP
				13	57.4					HSLP
				14	114.8					HSLP
				15	114.8					HSLP
				16	130.2					HSLP
				19	193.2					HSLP
				20	72.8					HSLP
				21	57.4					HSLP
				26	72.8					HSLP
				28	57.4					HSLP
				29	36.4					HSLP
				30	57.4					HSLP
			Summary for PLT - October, 2015 (18 detail records)							
			Sum		1,439.2					
NLSTF-C1	PLT	2015	November	02	57.4					HSLP
				03	21.0					HSLP
				04	78.4					HSLP
				05	36.4					HSLP
				06	93.8					HSLP
				09	78.4					HSLP
				10	57.4					HSLP
				11	36.4					HSLP
				12	156.8					HSLP
				13	72.8					HSLP
				16	36.4					HSLP
				17	57.4					HSLP
				18	57.4					HSLP
				19	57.4					HSLP
				20	36.4					HSLP
				23	151.2					HSLP
				24	105.0					HSLP
				25	135.8					HSLP
				26	147.0					HSLP
				27	204.4					HSLP
				30	141.4					HSLP
			Summary for PLT - November, 2015 (21 detail records)							
			Sum		1,818.6					
NLSTF-C1	PLT	2015	December	01	225.4					HSLP
				02	225.4					HSLP
				03	267.4					HSLP
				04	240.8					HSLP
				07	141.4					HSLP
				08	235.2					HSLP

Biosolids Spreading Report by Field

Site	Field	Year	Month	Day	Vol [m³]	NH3[mg/L]	NH3[kg]	TP [mg/L]	TP [kg]	Origin
NLSTF-C1	PLT	2015	December	09	141.4					HSLP
				10	63.0					HSLP
				14	78.4					HSLP
				15	120.4					HSLP
				16	72.8					HSLP
				17	78.4					HSLP
				18	21.0					HSLP
				21	36.4					HSLP
				22	114.8					HSLP
				23	131.4					HSLP
				24	53.0					HSLP
				29	95.0					HSLP
				30	225.4					HSLP
				31	105.0					HSLP
			Summary for PLT - December, 2015 (20 detail records)							
			Sum		2,672.0					
		Summary for PLT - 2015 (153 detail records)								
		Sum			14,872.6		8,724.2		3,392.5	
	Summary for PLT - PLT (153 detail records)									
	Sum				14,872.6		8,724.2		3,392.5	
Summary for NLSTF-C1PLT - (153 detail records)										
Sum					14,872.6		8,724.2		3,392.5	
NLSTF-C2	PLT	2015	January	02	105.0	1,033.0	108.5	771.5	81.0	HSLP
				05	120.4	1,033.0	124.4	771.5	92.9	HSLP
				06	177.8	1,033.0	183.7	771.5	137.2	HSLP
				07	156.8	1,033.0	162.0	771.5	121.0	HSLP
				08	84.0	1,080.5	90.8	652.5	54.8	HSLP
				09	57.4	1,080.5	62.0	652.5	37.5	HSLP
				12	78.4	1,080.5	84.7	652.5	51.2	HSLP
				13	120.4	1,080.5	130.1	652.5	78.6	HSLP
				14	156.8	1,080.5	169.4	652.5	102.3	HSLP
				15	57.4	1,080.5	62.0	652.5	37.5	HSLP
				16	135.8	1,080.5	146.7	652.5	88.6	HSLP
			Summary for PLT - January, 2015 (11 detail records)							
			Sum		1,250.2		1,324.2		882.4	
NLSTF-C2	PLT	2015	April	28	99.4					HSLP
				29	42.0					HSLP
				30	42.0					HSLP
			Summary for PLT - April, 2015 (3 detail records)							
			Sum		183.4					
NLSTF-C2	PLT	2015	May	01	42.0					HSLP
				04	78.4					HSLP

Biosolids Spreading Report by Field

Site	Field	Year	Month	Day	Vol [m³]	NH₃[mg/L]	NH₃[kg]	TP [mg/L]	TP [kg]	Origin
NLSTF-C2	PLT	2015	May	05	183.4					HSLP
				06	183.4					HSLP
				07	63.0					HSLP
				08	120.4					HSLP
				11	99.4					HSLP
				12	162.4					HSLP
				13	78.4					HSLP
				14	114.8					HSLP
				15	114.8					HSLP
				19	120.4					HSLP
				20	120.4					HSLP
				21	114.8					HSLP
				22	93.8					HSLP
				25	224.0					HSLP
				26	151.2					HSLP
				27	114.8					HSLP
				28	78.4					HSLP
				29	57.4					HSLP
				30	36.4					HSLP
			Summary for PLT - May, 2015 (21 detail records)							
			Sum		2,352.0					
NLSTF-C2	PLT	2015	June	01	57.4					HSLP
				02	105.0					HSLP
				03	193.2					HSLP
				04	189.0					HSLP
				05	177.8					HSLP
				08	172.2					HSLP
				09	177.8					HSLP
				11	246.4					HSLP
				12	193.2					HSLP
				15	225.4					HSLP
				16	235.2					HSLP
				17	141.4					HSLP
				18	93.8					HSLP
				19	78.4					HSLP
				22	189.0					HSLP
				23	93.8					HSLP
				24	109.2					HSLP
				25	99.4					HSLP
				26	78.4					HSLP
				29	99.4					HSLP
				30	135.8					HSLP

Biosolids Spreading Report by Field

Site	Field	Year	Month	Day	Vol [m³]	NH₃[mg/L]	NH₃[kg]	TP [mg/L]	TP [kg]	Origin
			Summary for PLT - June, 2015 (21 detail records)							
			Sum		3,091.2					
NLSTF-C2	PLT	2015	July	02	109.2					HSLP
				03	36.4					HSLP
				06	21.0					HSLP
				07	72.8					HSLP
				08	72.8					HSLP
				09	72.8					HSLP
				10	93.8					HSLP
				13	42.0					HSLP
				14	21.0					HSLP
				30	151.2					HSLP
				31	36.4					HSLP
			Summary for PLT - July, 2015 (11 detail records)							
			Sum		729.4					
NLSTF-C2	PLT	2015	August	04	135.8					HSLP
				05	72.8					HSLP
				06	284.0					HSLP
				07	168.0					HSLP
				08	125.8					HSLP
				11	42.0					HSLP
				12	126.0					HSLP
				13	99.4					HSLP
				14	57.4					HSLP
				17	72.8					HSLP
			Summary for PLT - August, 2015 (10 detail records)							
			Sum		1,184.0					
			Summary for PLT - 2015 (77 detail records)							
			Sum		8,790.2		1,324.2		882.4	
			Summary for PLT - PLT (77 detail records)							
			Sum		8,790.2		1,324.2		882.4	
NLSTF-C2	ROHES	2015	June	10	267.4					HSLP
			Summary for ROHES - June, 2015 (1 detail record)							
			Sum		267.4					
			Summary for ROHES - 2015 (1 detail record)							
			Sum		267.4					
			Summary for ROHES - ROHES (1 detail record)							
			Sum		267.4					
			Summary for NLSTF-C2ROHES - (78 detail records)							
			Sum		9,057.6		1,324.2		882.4	
S2520-223	PLT	2015	September	18	135.8					HSLP
				21	141.4					HSLP

Biosolids Spreading Report by Field

Site	Field	Year	Month	Day	Vol [m³]	NH₃[mg/L]	NH₃[kg]	TP [mg/L]	TP [kg]	Origin
S2520-223	PLT	2015	September	22	93.8					HSLP
				23	130.2					HSLP
			Summary for PLT - September, 2015 (4 detail records)							
			Sum		501.2					
		Summary for PLT - 2015 (4 detail records)								
		Sum			501.2					
	Summary for PLT - PLT (4 detail records)									
	Sum				501.2					
S2520-223	ROHES	2015	September	18	714.4					NLSTF
				21	1,130.0					NLSTF
				22	1,074.4					NLSTF
				23	1,146.0					NLSTF
				24	382.8					NLSTF
			Summary for ROHES - September, 2015 (5 detail records)							
			Sum		4,447.6					
		Summary for ROHES - 2015 (5 detail records)								
		Sum			4,447.6					
	Summary for ROHES - ROHES (5 detail records)									
	Sum				4,447.6					
Summary for S2520-223ROHES - (9 detail records)										
Sum					4,948.8					
TOT	PLT	2015	December	30	225.4					HSLP
			Summary for PLT - December, 2015 (1 detail record)							
			Sum		225.4					
		Summary for PLT - 2015 (1 detail record)								
		Sum			225.4					
	Summary for PLT - PLT (1 detail record)									
	Sum				225.4					
Summary for TOTPLT - (1 detail record)										
Sum					225.4					
Grand Total (all fields)					50,631.8		10,048.4		4,274.9	

Appendix D Plant Certificate of Approval

Ontario

Ministry of the Environment | Ministère de l'Environnement

APPROVALS BRANCH
Tel. (416) 440-3571
Fax (416) 440-6973

250 Davisville Avenue
Toronto, Ontario
M4S 1H2

250, avenue Davisville
Toronto (Ontario)
M4S 1H2

January 6, 1998

Mr. K. Astill
Town of Collingwood
97 Hurontario Street
P.O. Box 157
Collingwood, Ontario
L9Y 3Z5

RECEIVED
JAN 13 1998
ENGINEERING DEPT.

TOWN OF COLLINGWOOD
JAN 1 2 1998

Dear Mr. Astill:

RE: CERTIFICATE OF APPROVAL(AIR) NO. 8-1252-97-986
STANDBY DIESEL GENERATOR LOCATED AT
3 BIRCH STREET, COLLINGWOOD, ONTARIO

Please find enclosed the above noted Certificate of Approval (Air).

The Certificate is issued for your emergency diesel generator set with a general requirement for compliance with noise limits set out in the Ministry Publication NPC-205. Please note that in order to achieve compliance, it is necessary to have appropriate silencing equipment and materials installed. We recommend that you install the following:

- Acoustical treatment of all ventilation openings facing the receptor in the mechanical room housing the diesel generator set, to have a noise reduction in 1/1 octave frequency bands:

Centre Frequency (Hertz)	125	250	500	1000	2000	4000
Noise reduction (decibels)	5	7	9	10	10	10

and;

- Engine combustion exhaust muffler for the diesel generator set combustion exhaust, capable of providing the following values of insertion-loss in 1/1 octave frequency bands:

Centre Frequency (Hertz)	125	250	500	1000	2000	4000
Muffler Insertion-Loss (decibels)	14	26	27	20	17	16

.../2

If you have any questions regarding the above, please contact your vendor or technical consultant. If you need a copy of Publication NPC-205, please call the Ministry's Public Information Centre at (416) 323-4321 or toll free at 1-800-565-4923 or the Information Officer, Approvals Branch at (416) 440-3718.

Yours truly,

P. DeAngelis, P.Eng.,
Director,
Section 9,
Environmental Protection Act.

AK/st
Encl.

cc: District Manager, MOE Barrie District Office
Mr. P. Dagenais, P.Eng., Ainley & Associates Limited

Ontario

Ministry of the Environment | Ministère de l'Environnement

CERTIFICATE OF APPROVAL
AIR
NUMBER 8-1252-97-986

Town of Collingwood
97 Hurontario Street
P.O. Box 157
Collingwood, Ontario
L9Y 3Z5

Located at: 3 Birch Street, Collingwood, Ontario

You have applied in accordance with Section 9 of the Environmental Protection Act for approval of:

- one (1) diesel engine, serving a standby electrical generator rated at 750 kilowatts, exhausting into the atmosphere through a stack, having an exit diameter of 0.3 metre, extending 4.9 metres above the roof and 9.7 metres above grade;

all in accordance with the application for a Certificate of Approval (Air), submitted by Town of Collingwood, signed by K. Astill, dated October 17, 1997 and the other supporting information prepared by Ainley & Associates Limited.

You are hereby notified that this approval is issued to you subject to the terms and conditions outlined below:

TERMS AND CONDITIONS

DEFINITIONS

1. For the purposes of this Certificate of Approval:

   (1) "Act" means the *Environmental Protection Act*;

   (2) "Certificate" means this Certificate of Approval, issued in accordance with Section 9 of the Act;

   (3) "Company" means Town of Collingwood;

   (4) "Equipment" means the diesel generator described in the Company's application, this Certificate and in the supporting documentation referred herein, to the extent approved by this Certificate;

   (5) "Ministry" means the Ontario Ministry of the Environment; and

   (6) "Publication NPC-205" means Publication NPC-205, Sound Level Limits for Stationary Sources in Class 1 &2 Areas (Urban), October 1995.

2. The Company shall ensure that the noise emissions from the Equipment comply with the limits set in Publication NPC-205.

3. The Company shall restrict the periodic testing of the Equipment to the day-time hours from 7:00 a.m. to 7:00 p.m.

The reasons for the imposition of these terms and conditions are as follows:

1. Condition No. 1 is used to define the special terms that are used throughout the Certificate.

2. Condition No. 2 is included to provide the minimum performance requirements considered necessary to prevent an adverse effect resulting from the operation of the Equipment.

3. Condition No. 3 is included to ensure that the proposed operation is not extended beyond specific day-time hours.

In accordance with Section 139 of the Environmental Protection Act, R.S.O. 1990, Chapter E-19, as amended, you may by written notice served upon me and the Environmental Appeal Board within 15 days after receipt of this Notice, require a hearing by the Board. Section 142 of the Environmental Protection Act, provides that the Notice requiring the hearing shall state:

1. The portions of the approval or each term or condition in the approval in respect of which the hearing is required, and;
2. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

The Notice should also include:

3. The name of the appellant;
4. The address of the appellant;
5. The Certificate of Approval number;
6. The date of the Certificate of Approval;
7. The name of the Director;
8. The municipality within which the works are located;

And the Notice should be signed and dated by the appellant.

This Notice must be served upon:

The Secretary,
Environmental Appeal Board,
2300 Yonge Street, 12th Floor,
P.O. Box 2382,
Toronto, Ontario.
M4P 1E4

AND

The Director,
Section 9, *Environmental Protection Act*,
Ministry of the Environment,
250 Davisville Avenue, 3rd Floor,
Toronto, Ontario.
M4S 1H2

The above noted works are approved under Section 9 of the Environmental Protection Act.

DATED AT TORONTO this 6th *day of* January, 1998.

P. DeAngelis, P.Eng.,
Director,
Section 9,
Environmental Protection Act.

AK/st

cc: District Manager, MOE Barrie District Office
Mr. P. Dagenais, P.Eng., Ainley & Associates Limited

Ministry of the Environment / Ministère de l'Environnement

Ontario

AMENDED CERTIFICATE OF APPROVAL
MUNICIPAL AND PRIVATE SEWAGE WORKS
NUMBER 2639-5TLQB2

The Corporation of the Town of Collingwood
PO Box 157 Stn Main
Collingwood, Ontario
L9Y 3Z5

Site Location: Collingwood Water Pollution Control Plant
3 Birch Street
Collingwood Town, County of Simcoe
L9Y 2T9

You have applied in accordance with Section 53 of the Ontario Water Resources Act for approval of:

Alterations to the existing municipal sewage treatment works at the Collingwood Water Pollution Control Plant for the treatment and disposal of domestic sewage, having a *Rated Capacity* of 24,548 m^3/d and consisting of the following:

PROPOSED WORKS

Sludge Digestion

- replacement of roof, installation of two (2) mechanical draft tube mixers and replacement of waste gas piping in Primary Digester No. 1;
- installation of waste gas flowmeter in existing utility tunnel;
- all other controls, electrical equipment, instrumentation, piping, valves and appurtenances essential for the proper operation of the aforementioned sewage works;

all in accordance with the following submitted supporting documents:

1. Application for Approval of Municipal and Private Sewage Works submitted by Chris Hunter of Conestoga-Rovers & Associates dated October 27, 2003, including final plans and specifications;

These proposed works are to be operated with the following previous works in order to provide a Rated Capacity of 24,548 m^3/d and a Peak Flow Rate of 60,900 m^3/d:

PREVIOUS WORKS

Headworks Building

- one (1) mechanical bar screen in the main screen channel and one (1) manual bar screen in the bypass channel, each with a *Peak Flow Rate* of 60,900 m^3/d, together with one (1) screenings screw conveyor with screenings dewatering capability;
- three (3) raw sewage pumps (one standby), each having a rated capacity of approximately 392 L/s at 11 m T.D.H.;
- two (2) free vortex grit separators, each with a hydraulic capacity of 30, 450 m^3/d, together with one (1) grit classifier and dewatering device;
- one (1) air scrubbing unit for odour control;

Primary Clarifiers

- three (3) primary clarifiers, each having an approximate capacity of 629 m^3 and an approximate surface area of 177 m^2;
- one (1) 3.8 L/s capacity scum pump and discharge piping to the primary digesters;
- a raw sludge pumping station equipped with three (3) raw sludge pumps, one 3.8 L/s capacity at 15.2 m T.D.H. and two 3.8 L/s capacity at 21.3 m T.D.H. and discharge piping to the primary digesters;

Aeration Tanks

- two (2) aeration tanks each with three 14.6 m x 14.6 m x 4.6 m SWD compartments, each compartment approximately 978 m^3 in capacity and equipped with a fine-bubble air diffusion system including air supply pipes, headers, distributors and membrane diffusers;
- three (3) centrifugal air blowers (one standby) each having a capacity of 850 L/s at 480 kPa discharge pressure;

Secondary Clarifiers

- two (2) 61 m x 12.2 m x 3.7 m SWD secondary clarifiers, each having an approximate capacity of 2,718 m^3 and an approximate surface area of 743 m^2, complete with travelling scrapers and effluent launders;
- one (1) 3.8 L/s capacity scum pump and discharge piping to the primary digesters;
- an activated sludge pumping station equipped with two (2) 1,100 mm diameter screw pumps each having a capacity of 106 L/s and discharge piping for return activated sludge to the aeration tanks and waste activated sludge to the sludge thickener;

Effluent Disinfection and Outfall System

- an open channel equipped with an ultra-violet disinfection system for a *Peak Flow Rate* of 67,795 m^3/d;
- a 900 mm diameter final effluent sewer and outfall to Nottawasaga Bay;

Phosphorus Removal System

- two (2) 25,000 L capacity chemical storage tanks and one (1) 100 L/h capacity duty chemical feed pump and one (1) 90 L/h capacity standby pump with feed lines to the dosing point at the end of the aeration tanks;

Sludge Thickening

- a waste activated sludge dissolved air flotation thickener including feed pump, recirculation pump, reaeration pump, supernatant pump, thickened sludge pump and air compressor;
- a polymer system including two (2) 1,900 L capacity tanks equipped with 1 hp motor mixers and one (1) polymer feed pump;

Sludge Digestion and Storage

- two (2) 15.2 m diameter x 6.7 m SWD primary digesters each approximate 1,217 m^2 capacity;
- one (1) 15.2 m diameter x 6.7 m SWD secondary digester approximate 1,217 m^2 capacity;
- one (1) 13.8 m diameter x 6.7 m SWD digester sludge storage tank approximate 990 m^2 capacity;
- two (2) sludge recirculation and two (2) sludge transfer/loading pumps for the primary digesters;
- one (1) sludge pump, one (1) sludge loading pump and one (1) sludge recirculation/transfer pump for the secondary digester and digested sludge storage tank;
- a digester gas system and a waste gas burner;

Effluent Water Pumping

- two (2) effluent water pumps each with a capacity of 7.6 L/s;

Diesel Generator Building

- one (1) 725 kW continuous rating diesel generator set together with one (1) 8,000 L capacity fuel tank and ancillary equipment;

- all other controls, electrical equipment, instrumentation, piping, pumps, valves and appurtenances essential for the proper operation of the aforementioned sewage works;

all in accordance with the design briefs, plans and specifications prepared by Ainley & Associates Limited, Gore & Storrie Limited and CH2M Hill Engineering Ltd.

For the purpose of this Certificate of Approval and the terms and conditions specified below, the following definitions apply:

"*Act*" means the Ontario Water Resources Act, R.S.O. 1990, Chapter 0.40, as amended;

"*Annual Average Concentration*" means the arithmetic mean of the *Monthly Average Concentrations* of a contaminant in the effluent calculated for any particular calendar year;

"*Annual Average Loading*" means the value obtained by multiplying the *Annual Average Concentration* of a contaminant by the *Average Daily Flow* over the same calendar year;

"*Average Daily Flow*" means the cumulative total sewage flow to the sewage works during a calendar year divided by the number of days during which sewage was flowing to the sewage works that year;

"*By-pass*" means any discharge from the *Works* that does not undergo any treatment or only receives partial treatment before it is discharged to the environment.

"*CBOD5*" means five day carbonaceous (nitrification inhibited) biochemical oxygen demand measured in an unfiltered sample;

"*Certificate*" means this entire certificate of approval document, issued in accordance with Section 53 of the *Act*, and includes any schedules;

"*Daily Concentration*" means the concentration of a contaminant in the effluent discharged over any single day, as measured by a composite or grab sample, whichever is required;

"*Director*" means any *Ministry* employee appointed by the Minister pursuant to section 5 of the *Act*;

"*District Manager*" means the District Manager of the Barrie District Office of the Ministry;

"*E. Coli*" refers to the thermally tolerant forms of Escherichia that can survive at 44.5 degrees Celsius;

"*Geometric Mean Density*" is the nth root of the product of multiplication of the results of n number of samples over the period specified;

"*Ministry*" means the Ontario Ministry of the Environment;

"*Monthly Average Concentration*" means the arithmetic mean of all *Daily Concentrations* of a contaminant in the effluent sampled or measured, or both, during a calendar month;

"*Monthly Average Daily Flow*" means the cumulative total sewage flow to the sewage works during a calendar month divided by the number of days during which sewage was flowing to the sewage works that month;

"*Monthly Average Loading*" means the value obtained by multiplying the *Monthly Average Concentration* of a contaminant by the *Monthly Average Daily Flow* over the same calendar month:

"*Owner*" means the Corporation of the Town of Collingwood and includes its successors and assignees;

"*Peak Flow Rate*" means the maximum rate of sewage flow for which the plant or process unit was designed;

"*Previous Works*" means those portions of the sewage works previously constructed and approved under a certificate of approval;

"*Proposed Works*" means the sewage works described in the *Owner*'s application, this *Certificate* and in the supporting documentation referred to herein, to the extent approved by this *Certificate*;

"*Rated Capacity*" means the *Average Daily Flow* for which the *Works* are approved to handle;

"*Regional Director*" means the Regional Director of the Southwestern Region of the Ministry;

"Substantial Completion" has the same meaning as *"substantial performance"* in the Construction Lien Act; and

"Works" means the sewage works described in the *Owner*'s application, this *Certificate* and in the supporting documentation referred to herein, to the extent approved by this *Certificate* and includes both *Previous Works* and *Proposed Works*.

You are hereby notified that this approval is issued to you subject to the terms and conditions outlined below:

TERMS AND CONDITIONS

1. GENERAL PROVISIONS

(1) The *Owner* shall ensure that any person authorized to carry out work on or operate any aspect of the *Works* is notified of this *Certificate* and the conditions herein and shall take all reasonable measures to ensure any such person complies with the same.

(2) Except as otherwise provided by these Conditions, the *Owner* shall design, build, install, operate and maintain the *Works* in accordance with the description given in this *Certificate*, the application for approval of the works and the submitted supporting documents and plans and specifications as listed in this *Certificate*.

(3) Where there is a conflict between a provision of any submitted document referred to in this *Certificate* and the Conditions of this *Certificate*, the Conditions in this *Certificate* shall take precedence, and where there is a conflict between the listed submitted documents, the document bearing the most recent date shall prevail.

(4) Where there is a conflict between the listed submitted documents, and the application, the application shall take precedence unless it is clear that the purpose of the document was to amend the application.

(5) The requirements of this *Certificate* are severable. If any requirement of this *Certificate*, or the application of any requirement of this *Certificate* to any circumstance, is held invalid or unenforceable, the application of such requirement to other circumstances and the remainder of this certificate shall not be affected thereby.

2. EXPIRY OF APPROVAL

The approval issued by this *Certificate* will cease to apply to those parts of the *Works* which have not been constructed within five (5) years of the date of this *Certificate*.

3. CHANGE OF OWNER

(1) The *Owner* shall notify the *District Manager* and the *Director*, in writing, of any of the following changes within 30 days of the change occurring:

(a) change of *Owner*;

(b) change of address of the *Owner*;

(c) change of partners where the *Owner* is or at any time becomes a partnership, and a copy of the most recent declaration filed under the Business Names Act, R.S.O. 1990, c.B17 shall be included in the notification to the *District Manager*;

(d) change of name of the corporation where the *Owner* is or at any time becomes a corporation, and a copy of the most current information filed under the Corporations Informations Act, R.S.O. 1990, c. C39 shall be included in the notification to the *District Manager*;

(2) In the event of any change in ownership of the *Works*, other than a change to a successor municipality, the *Owner* shall notify in writing the succeeding owner of the existence of this *Certificate*, and a copy of such notice shall be forwarded to the *District Manager* and the *Director*.

4. UPON THE SUBSTANTIAL COMPLETION OF THE WORKS

(1) Upon the *Substantial Completion* of the *Proposed Works*, the Owner shall prepare a statement, certified by a Professional Engineer, that the works are constructed in accordance with this *Certificate*, and upon request, shall make the written statement available for inspection by Ministry personnel.

(2) Within six months of the *Substantial Completion* of the *proposed works*, a set of as-built drawings showing the works "as constructed" shall be prepared. These drawings shall be kept up to date through revisions undertaken from time to time and a copy shall be retained at the *Works* for the operational life of the *Works*.

5. BY-PASSES

(1) Any *By-pass* of sewage from any portion of the *Works* is prohibited, except where:

(a) it is necessary to avoid loss of life, personal injury, danger to public health or severe property damage;

(b) the *District Manager* agrees that it is necessary for the purpose of carrying out essential maintenance and the *District Manager* has given prior written acknowledgment of the *by-pass*; or

(c) the *Regional Director* has given prior written acknowledgment of the *By-pass*.

(2) The *Owner* shall collect at least one (1) grab sample of the *By-pass* and have it analyzed for the parameters outlined in Condition 7 using the protocols in Condition 9.

(3) The *Owner* shall maintain a logbook of all *By-pass* events which shall include, at a minimum, the time, location, duration, quantity of *By-pass*, the authority for *By-pass* pursuant to subsection (1), and the reasons for the occurrence.

(4) The *Owner* shall, in the event of a *By-pass* event pursuant to subsection (1), disinfect the by-passed effluent prior to it reaching the receiver such that the receiver is not negatively impacted.

6. EFFLUENT OBJECTIVES

(1) The *Owner* shall use best efforts to design, construct and operate the *Works* with the objective that the concentrations of the materials named below as effluent parameters are not exceeded in the effluent from the *Works*.

Table 1 - Effluent Objectives	
Effluent Parameter	**Concentration Objective** (milligrams per litre unless otherwise indicated)
CBOD5	15.0
Total Suspended Solids	15.0
Total Phosphorus	0.8
E. Coli	100 organisms per 100 mL Monthly *Geometric Mean Density*

(2) The *Owner* shall use best efforts to:

(a) maintain the pH of the effluent from the *Works* within the range of 6.5 to 9.0, inclusive, at all times;

(b) operate the works within the *Rated Capacity* of the *Works*;

(c) ensure that the effluent from the *Works* is essentially free of floating and settleable solids and does not contain oil or any other substance in amounts sufficient to create a visible film or sheen or foam or discolouration on the receiving waters.

(3) The *Owner* shall include in all reports submitted in accordance with Conditions 9 and 10 a summary of the efforts made and results achieved under this Condition.

7. EFFLUENT LIMITS

(1) The *Owner* shall operate and maintain the *Works* such that the concentrations and waste loadings of

the materials named below as effluent parameters are not exceeded in the effluent from the *Works*.

Table 2 - Effluent Limits		
Effluent Parameter	**Average Concentration** (milligrams per litre unless otherwise indicated)	**Average Waste Loading** (kilograms per day unless otherwise indicated)
Column 1	Column 2	Column 3
CBOD5	25.0	613.7
Total Suspended Solids	25.0	613.7
Total Phosphorus	1.0	24.5
pH of the effluent maintained between 6.0 to 9.5, inclusive, at all times		

(2) For the purposes of determining compliance with and enforcing subsection (1):

(a) The *Annual Average Concentration* of *CBOD5* and Total Suspended Solids named in Column 1 of subsection (1) shall not exceed the corresponding maximum concentration set out in Column 2 of subsection (1).

(b) The *Monthly Average Concentration* of Total Phosphorus named in Column 1 of subsection (1) shall not exceed the corresponding maximum concentration set out in Column 2 of subsection (1).

(c) The *Annual Average Loading* of a parameter named in Column 1 of subsection (1) shall not exceed the corresponding maximum waste loading set out in Column 3 of subsection (1).

(d) The pH of the effluent shall be maintained within the limits outlined in subsection (1), at all times.

(3) Notwithstanding subsection (1), the *Owner* shall operate and maintain the *Works* such that the effluent is continuously disinfected so that the monthly *Geometric Mean Density* of *E. Coli* does not exceed 200 organisms per 100 millilitres of effluent discharged from the *works*.

(4) Paragraph (a), (b), (c), and (d) of subsection (2) shall apply upon the issuance of this certificate.

(5) The effluent limit set out in subsection (3) shall apply upon the issuance of this certificate.

(6) Only those monitoring results collected during the corresponding time period shall be used in calculating the *Annual Average Concentration/Monthly Average Concentration/Annual Average Loading* for this *Certificate*.

8. OPERATION AND MAINTENANCE

(1) The *Owner* shall exercise due diligence in ensuring that, at all times, the *Works* and the related equipment and appurtenances used to achieve compliance with this *Certificate* are properly operated and

maintained. Proper operation and maintenance shall include effective performance, adequate funding, adequate operator staffing and training, including training in all procedures and other requirements of this *Certificate* and the *Act* and regulations, adequate laboratory facilities, process controls and alarms and the use of process chemicals and other substances used in the *Works*.

(2) The *Owner* shall maintain an operations manual, that includes, but not necessarily limited to, the following information:

(a) operating procedures for routine operation of the *Works*;

(b) inspection programs, including frequency of inspection, for the *Works* and the methods or tests employed to detect when maintenance is necessary;

(c) repair and maintenance programs, including the frequency of repair and maintenance for the *Works*;

(d) procedures for the inspection and calibration of monitoring equipment;

(e) a spill prevention control and countermeasures plan, consisting of contingency plans and procedures for dealing with equipment breakdowns, potential spills and any other abnormal situations, including notification of the *District Manager*; and

(f) procedures for receiving, responding and recording public complaints, including recording any followup actions taken.

(3) The *Owner* shall maintain the operations manual current and retain a copy at the location of the *Works* for the operational life of the *Works*. Upon request, the *Owner* shall make the manual available to *Ministry* staff.

(4) The *Owner* shall provide for the overall operation of the *Works* with an operator who holds a licence that is applicable to that type of facility and that is of the same class as or higher than the class of the facility in accordance with Ontario Regulation 435/93.

9. EFFLUENT MONITORING AND RECORDING

The *Owner* shall, upon commencement of operation of the *Works*, carry out the following monitoring program:

(1) All samples and measurements taken for the purposes of this *Certificate* are to be taken at a time and in a location characteristic of the quality and quantity of the effluent stream over the time period being monitored.

(2) For the purposes of this condition, the following definitions apply:

(a) Weekly means once each week;
(b) Monthly means once every month;
(c) Quarterly means once every three months;

(3) Samples shall be collected at the following sampling points, at the frequency specified, by means of the specified sample type and analyzed for each parameter listed and all results recorded:

Table 3 - Raw Sewage Monitoring	
Frequency	Quarterly
Sample Type	Composite
Parameters	*CBOD5*, Total Suspended Solids, Total Phosphorus, Total Kjeldahl Nitrogen

Table 4 - Effluent Monitoring		
Parameters	Sample Type	Frequency
CBOD5	Composite	Monthly
Total Suspended Solids	Composite	Monthly
Total Phosphorus	Composite	Weekly
Total Ammonia Nitrogen	Composite	Weekly
E. Coli	Grab	Weekly
pH	Grab	Three times each week
Temperature	Grab	Three times each week

(4) The methods and protocols for sampling, analysis and recording shall conform, in order of precedence, to the methods and protocols specified in the following:

(a) the Ministry's Procedure F-10-1, "Procedures for Sampling and Analysis Requirements for Municipal and Private Sewage Treatment Works (Liquid Waste Streams Only), as amended from time to time by more recently published editions;

(b) the Ministry's publication "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater" (January 1999), ISBN 0-7778-1880-9, as amended from time to time by more recently published editions;

(c) the publication "Standard Methods for the Examination of Water and Wastewater" (20th edition), as amended from time to time by more recently published editions;

(5) The temperature and pH of the effluent from the *Works* shall be determined in the field at the time of sampling for Total Ammonia Nitrogen. The concentration of un-ionized ammonia shall be calculated using the total ammonia concentration, pH and temperature using the methodology stipulated in "Ontario's Provincial Water Quality Objectives" dated July 1994, as amended, for ammonia (un-ionized).

(6) The measurement frequencies specified in subsection (2) in respect to any parameter are minimum requirements which may, after 12 months of monitoring in accordance with this Condition, be modified by the *District Manager* in writing from time to time.

(7) The *Owner* shall install and maintain (a) continuous flow measuring device(s), to measure the flowrate of the effluent from the *Works* with an accuracy to within plus or minus 15 per cent (+/- 15%) of the actual flowrate for the entire design range of the flow measuring device, and record the flowrate at a daily frequency.

10. REPORTING

(1) Ten (10) days prior to the date of a planned *By-pass* being conducted pursuant to Condition 5 and as soon as possible for an unplanned *By-pass*, the *Owner* shall notify the *District Manager* (in writing) of the pending start date, in addition to an assessment of the potential adverse effects on the environment and the duration of the *By-pass*.

(3) The *Owner* shall report to the *District Manager* or designate, any exceedence of any parameter specified in Condition 7 orally, as soon as reasonably possible, and in writing within seven (7) days of the exceedence.

(4) In addition to the obligations under Part X of the Environmental Protection Act, the *Owner* shall, within 10 working days of the occurrence of any reportable spill as defined in Ontario Regulation 675/98, bypass or loss of any product, by-product, intermediate product, oil, solvent, waste material or any other polluting substance into the environment, submit a full written report of the occurrence to the *District Manager* describing the cause and discovery of the spill or loss, clean-up and recovery measures taken, preventative measures to be taken and schedule of implementation.

(5) The *Owner* shall, upon request, make all manuals, plans, records, data, procedures and supporting documentation available to *Ministry* staff.

(6) The *Owner* shall prepare, and submit to the *District Manager*, a performance report, on an annual basis, within ninety (90) days following the end of the period being reported upon. The first such report shall cover the first annual period following the commencement of operation of the *Works* and subsequent reports shall be submitted to cover successive annual periods following thereafter. The reports shall contain, but shall not be limited to, the following information:

(a) a summary and interpretation of all monitoring data and a comparison to the effluent limits outlined in Condition 7, including an overview of the success and adequacy of the *Works*;

(b) a description of any operating problems encountered and corrective actions taken;

(c) a summary of all maintenance carried out on any major structure, equipment, apparatus, mechanism or thing forming part of the *Works*;

(d) a summary of any effluent quality assurance or control measures undertaken in the reporting period;

(e) a summary of the calibration and maintenance carried out on all effluent monitoring equipment; and

(f) a description of efforts made and results achieved in meeting the Effluent Objectives of Condition 6.

(g) a tabulation of the volume of sludge generated in the reporting period, an outline of anticipated volumes to be generated in the next reporting period and a summary of the locations to where the sludge was disposed;

(h) a summary of any complaints received during the reporting period and any steps taken to address the complaints;

(i) a summary of all *By-pass*, spill or abnormal discharge events; and

(j) any other information the *District Manager* requires from time to time.

The reasons for the imposition of these terms and conditions are as follows:

1. Condition 1 is imposed to ensure that the *Works* are built and operated in the manner in which they were described for review and upon which approval was granted. This condition is also included to emphasize the precedence of Conditions in the *Certificate* and the practice that the Approval is based on the most current document, if several conflicting documents are submitted for review. The condition also advises the Owners their responsibility to notify any person they authorized to carry out work pursuant to this *Certificate* the existence of this *Certificate*.

2. Condition 2 is included to ensure that, when the *Works* are constructed, the *Works* will meet the standards that apply at the time of construction to ensure the ongoing protection of the environment.

3. Condition 3 is included to ensure that the *Ministry* records are kept accurate and current with respect to the approved works and to ensure that subsequent owners of the *Works* are made aware of the *Certificate* and continue to operate the *Works* in compliance with it.

4. Condition 4 is included to ensure that the *Works* are constructed in accordance with the approval and that record drawings of the *Works* "as constructed" are maintained for future references.

5. Condition 5 is included to indicate that by-passes of untreated sewage to the receiving watercourse is prohibited, save in certain limited circumstances where the failure to *By-pass* could result in greater injury to the public interest than the *By-pass* itself where a *By-pass* will not violate the approved effluent requirements, or where the *By-pass* can be limited or otherwise mitigated by handling it in accordance with an approved contingency plan. The notification and documentation requirements allow

the *Ministry* to take action in an informed manner and will ensure the *Owner* is aware of the extent and frequency of *By-pass* events.

6. Condition 6 is imposed to establish non-enforceable effluent quality objectives which the *Owner* is obligated to use best efforts to strive towards on an ongoing basis. These objectives are to be used as a mechanism to trigger corrective action proactively and voluntarily before environmental impairment occurs and before the compliance limits of Condition 6 are exceeded.

7. Condition 7 is imposed to ensure that the effluent discharged from the *Works* to Nottawasaga Bay meets the *Ministry*'s effluent quality requirements thus minimizing environmental impact on the receiver and to protect water quality, fish and other aquatic life in the receiving water body.

8. Condition 8 is included to require that the *Works* be properly operated, maintained, funded, staffed and equipped such that the environment is protected and deterioration, loss, injury or damage to any person or property is prevented. As well, the inclusion of a comprehensive operations manual governing all significant areas of operation, maintenance and repair is prepared, implemented and kept up-to-date by the owner and made available to the *Ministry*. Such a manual is an integral part of the operation of the *Works*. Its compilation and use should assist the *Owner* in staff training, in proper plant operation and in identifying and planning for contingencies during possible abnormal conditions. The manual will also act as a benchmark for *Ministry* staff when reviewing the *Owner*'s operation of the work.

9. Condition 9 is included to enable the *Owner* to evaluate and demonstrate the performance of the *Works*, on a continual basis, so that the *Works* are properly operated and maintained at a level which is consistent with the design objectives and effluent limits specified in the *Certificate* and that the *Works* does not cause any impairment to the receiving watercourse.

10. Condition 10 is included to provide a performance record for future references, to ensure that the *Ministry* is made aware of problems as they arise, and to provide a compliance record for all the terms and conditions outlined in this *Certificate*, so that the *Ministry* can work with the *Owner* in resolving any problems in a timely manner.

This Certificate of Approval revokes and replaces Certificate(s) of Approval No. 3-1300-79-806, 3-1921-90-006 issued on March 10, 1980, October 16, 1990.

In accordance with Section 100 of the Ontario Water Resources Act, R.S.O. 1990, Chapter 0.40, as amended, you may by written notice served upon me and the Environmental Review Tribunal within 15 days after receipt of this Notice, require a hearing by the Tribunal. Section 101 of the Ontario Water Resources Act, R.S.O. 1990, Chapter 0.40, provides that the Notice requiring the hearing shall state:

1. The portions of the approval or each term or condition in the approval in respect of which the hearing is required, and;
2. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

The Notice should also include:

3. The name of the appellant;
4. The address of the appellant;

5. The Certificate of Approval number;
6. The date of the Certificate of Approval;
7. The name of the Director;
8. The municipality within which the works are located;

And the Notice should be signed and dated by the appellant.

This Notice must be served upon:

The Secretary*
Environmental Review Tribunal
2300 Yonge St., 12th Floor
P.O. Box 2382
Toronto, Ontario
M4P 1E4

AND

The Director
Section 53, *Ontario Water Resources Act*
Ministry of the Environment
2 St. Clair Avenue West, Floor 12A
Toronto, Ontario
M4V 1L5

* Further information on the Environmental Review Tribunal's requirements for an appeal can be obtained directly from the Tribunal at: Tel: (416) 314-4600, Fax: (416) 314-4506 or www.ert.gov.on.ca

The above noted sewage works are approved under Section 53 of the Ontario Water Resources Act.

DATED AT TORONTO this 17th day of December, 2003

Mohamed Dhalla, P.Eng.
Director
Section 53, *Ontario Water Resources Act*

FL/

c: District Manager, MOE Barrie
George Godin, P.Eng., Conestoga-Rovers & Associates Ltd.
Drinking Water and Wastewater Section, MOE Standards Development Branch

Appendix E Calibration Reports

Influent INF-FIT1_FIT-3

V.Nowik Instrumentation & Controls	**Calibration Report for Collingwood WPCP 2015**	51 Fourth St. Angus, ON L0M 1B3 Tel: (705) 440-7331

Location	**Collingwood WPCP**	**Manufacturer**	ENDRESS & HAUSER
Process	Influent SP3/SP1	**Model:**	93WA2-AA2A2ORC82A2
Calibration Date:	June 5 2015	**Serial #**	4S 12A791000
Technician	V.Nowik	**Tag:**	INF-FIT-1/INF-FIT-3

Input			**Output**	**(Signal)**	**(Process)**
Type:	SIMULATOR	L/S	**Type or EGU:**	mA	L/S
Min:	0.00	0.00	**Min:**	4.00	0.00
Max:	100.00	450.00	**Max:**	20.00	450.00
Meter Size (mm)	415				
Range Unit	L/S				
Cal. Factor	0.9521				

			Before Calibration		**After Calibration**	
Cal. Input (%)	**Input %**	**Calc. O/P (mA)**	**Output (mA)**	**%Error**	**Output (mA)**	**%Error**
0.00	0.00%	4.00	4.00	0.00%	4.00	0.00%
25.00	25.00%	8.00	8.00	0.00%	8.00	0.00%
50.00	50.00%	12.00	12.00	0.00%	12.00	0.00%
75.00	75.00%	16.00	16.01	-0.06%	16.01	-0.06%
100.00	100.00%	20.00	20.00	0.00%	20.00	0.00%

Calibration Equipment			
Type:	HART INTERFACE	DMM	**Calibration performed as per manufacturers recommended procedure.**
Manufacturer:	ENDRESS & HAUSER	Fluke	
Model:		87-V	
Serial No.:		10580412	
Last Cal. Date:		Jan. 2013	

Comments:

V.Nowik Instrumentation & Controls	**Calibration Report for Collingwood WPCP 2015**	51 Fourth St. Angus, ON L0M 1B3 Tel: (705) 440-7331

Location	**Collingwood WPCP**	**Manufacturer**	ENDRESS & HAUSER
Process	Influent SP2	**Model:**	PROMAG 30FH4H-MD1ED1F31B
Calibration Date:	May 26 2015	**Serial #**	4S F94337
Technician	V.Nowik	**Tag:**	INF-FIT-2

Input			**Output**	**(Signal)**	**(Process)**
Type:	SIMULATOR	L/S	**Type or EGU:**	mA	L/S
Min:	0.00	0.00	**Min:**	4.00	0.00
Max:	100.00	450.00	**Max:**	20.00	450.00
Meter Size (mm)	400				
Range Unit	L/S				
Cal. Factor	1.0776				

			Before Calibration		**After Calibration**	
Cal. Input (%)	**Input %**	**Calc. O/P (mA)**	**Output (mA)**	**%Error**	**Output (mA)**	**%Error**
0.00	0.00%	4.00	4.07	-0.44%	4.07	-0.44%
25.00	25.00%	8.00	7.95	0.31%	7.95	0.31%
50.00	50.00%	12.00	11.83	1.06%	11.83	1.06%
75.00	75.00%	16.00	15.70	1.88%	15.70	1.88%
100.00	100.00%	20.00	19.60	2.50%	19.60	2.50%

Calibration Equipment			
Type:	E&H FLOWJACK SIMULATOR	DMM	**Calibration performed as per manufacturers recommended procedure.**
Manufacturer:	ENDRESS & HAUSER	Fluke	
Model:	ZX6000	87-V	
Serial No.:	402007	10580412	
Last Cal. Date:		Jan. 2013	

Comments:

V.Nowik Instrumentation & Controls	**Calibration Report for Collingwood WPCP 2015**	51 Fourth St. Angus, ON L0M 1B3 Tel: (705) 440-7331

Location	**Collingwood WPCP**	**Manufacturer**	ENDRESS & HAUSER
Process	Raw Sludge Flow	**Model:**	PROMAG 33-FD4XF21A
Calibration Date:	May 28 2015	**Serial #**	4K583918
Technician	V.Nowik	**Tag:**	RSL-FIT-1

Input			**Output**	**(Signal)**	**(Process)**	
Type:	SIMULATOR	L/M	**Type or EGU:**	mA	L/M	CM/D
Min:	0.00	0.00	**Min:**	4.00	0.00	0.00
Max:	100.00	700.00	**Max:**	20.00	700.00	1008.00
Meter Size (mm)	100					
Range Unit	L/S					
Cal. Factor	0.956					

			Before Calibration		**After Calibration**	
Cal. Input (%)	**Input %**	**Calc. O/P (mA)**	**Output (mA)**	**%Error**	**Output (mA)**	**%Error**
0.00	0.00%	4.00	4.01	-0.06%	4.01	-0.06%
25.00	25.00%	8.00	8.02	-0.12%	8.02	-0.12%
50.00	50.00%	12.00	12.02	-0.12%	12.02	-0.12%
75.00	75.00%	16.00	16.01	-0.06%	16.01	-0.06%
100.00	100.00%	20.00	20.00	0.00%	20.00	0.00%

Calibration Equipment			
Type:	E&H FLOWJACK SIMULATOR	DMM	**Calibration performed as per manufacturers recommended procedure.**
Manufacturer:	ENDRESS & HAUSER	Fluke	
Model:	ZX6000	87-V	
Serial No.:	402007	10580412	
Last Cal. Date:		Jan. 2013	

Comments:

V.Nowik Instrumentation & Controls	**Calibration Report for Collingwood WPCP 2015**	51 Fourth St. Angus, ON L0M 1B3 Tel: (705) 440-7331

Location	**Collingwood WPCP**	**Manufacturer**	ENDRESS & HAUSER
Process	Sludge Loading	**Model:**	Disco Mag-VarioMag
Calibration Date:	May 28 2015	**Serial #**	20558G
Technician	V.Nowik	**Tag:**	Sludge Loading

Input			**Output**	**(Signal)**	**(Process)**		
Type:	SIMULATOR	L/M	**Type or EGU:**	mA	L/sec	L/M	CM/D
Min:	0.00	0.00	**Min:**	4.00	0.00	0.00	0.00
Max:	100.00	1040.0	**Max:**	20.00	17.33	1040.0	1498.0
Meter Size (mm)	100						
Range Unit	L/S						
Cal. Factor	1.017						

			Before Calibration		**After Calibration**	
Cal. Input (%)	**Input %**	**Calc. O/P (mA)**	**Output (mA)**	**%Error**	**Output (mA)**	**%Error**
0.00	0.00%	4.00	4.01	-0.06%	4.01	-0.06%
25.00	25.00%	8.00	7.98	0.12%	7.98	0.12%
50.00	50.00%	12.00	11.97	0.19%	11.97	0.19%
75.00	75.00%	16.00	15.94	0.38%	15.94	0.38%
100.00	100.00%	20.00	19.89	0.69%	19.89	0.69%

Calibration Equipment			
Type:	E&H FLOWJACK SIMULATOR	DMM	**Calibration performed as per manufacturers recommended procedure.**
Manufacturer:	ENDRESS & HAUSER	Fluke	
Model:	ZX6000	87-V	
Serial No.:	402007	10580412	
Last Cal. Date:		Jan. 2013	

Comments:

V.Nowik Instrumentation & Controls	**Calibration Report for Collingwood WPCP 2015**	51 Fourth St. Angus, ON L0M 1B3 Tel: (705) 440-7331

Location	**Collingwood WPCP**	**Manufacturer**	Endress & Hauser
Process	TWAS	**Model:**	50W1H-VLOB1RC1B2AA
Calibration Date:	May 26 2015	**Serial #**	AC013A16000
Technician	V.Nowik	**Tag:**	TWAS-FIT-1

See Following pages for E&H Fieldcheck Verificator Report

Calibration Equipment				
Type:	FieldCheck	Simubox		**Calibration performed as per manufacturers recommended procedure.**
Manufacturer:	Endress&Hauser	Endress&Hauser		
Model:	73991	8737370		
Serial No.:	V2.02.00	1.00.01		
Last Cal. Date:	June-01-14	June-01-14		

Comments:

V.Nowik Instrumentation & Controls	**Calibration Report for Collingwood WPCP 2015**	51 Fourth St. Angus, ON L0M 1B3 Tel: (705) 440-7331

Location	**Collingwood WPCP**	**Manufacturer**	ENDRESS & HAUSER
Process	Alum Flow	**Model:**	PROMAG 30AT08AD1ED11F21B
Calibration Date:	May 28 2015	**Serial #**	G50 5007402
Technician	V.Nowik	**Tag:**	ALUM-FIT-1

Input			**Output**	**(Signal)**	**(Process)**	
Type:	SIMULATOR	L/M	**Type or EGU:**	mA	L/M	CM/HR
Min:	0.00	0.00	**Min:**	4.00	0.00	0.00
Max:	100.00	8.33	**Max:**	20.00	8.33	0.50
Meter Size (mm)	8					
Range Unit	L/M					
Cal. Factor	0.94715					

			Before Calibration		**After Calibration**	
Cal. Input (%)	**Input %**	**Calc. O/P (mA)**	**Output (mA)**	**%Error**	**Output (mA)**	**%Error**
0.00	0.00%	4.00	4.07	-0.44%	4.07	-0.44%
25.00	25.00%	8.00	8.01	-0.06%	8.01	-0.06%
50.00	50.00%	12.00	11.96	0.25%	11.96	0.25%
75.00	75.00%	16.00	15.94	0.38%	15.94	0.38%
100.00	100.00%	20.00	19.91	0.56%	19.91	0.56%

Calibration Equipment			
Type:	E&H FLOWJACK SIMULATOR	DMM	Calibration performed as per manufacturers recommended procedure.
Manufacturer:	ENDRESS & HAUSER	Fluke	
Model:	ZX6000	87-V	
Serial No.:	402007	10580412	
Last Cal. Date:		Jan. 2013	

Comments:

V.Nowik Instrumentation & Controls	**Calibration Report for Collingwood WPCP 2015**	51 Fourth St. Angus, ON L0M 1B3 Tel: (705) 440-7331

Location	**Collingwood WPCP**	**Manufacturer**	Milltronics
Process	Final Effluent	**Model:**	OCM III
Calibration Date:	May 28 2015	**Serial #**	PBD/B4111061
Technician	V.Nowik	**Tag:**	FEFF-FIT-1

Input			**Output**	**(Signal)**	**(Process)**	
Type:	Head (m)		**Type or EGU:**	mA	L/Sec	
Min:	0.0000		**Min:**	4.00	0.00	
Max: (P7)	0.326		**Max:**	20.00	1041.64	
exponent (U0)	1.5					
E.D (P46)	1.13851		**Before Calibration**		**After Calibration**	
Input (m)	**Calc flow (L/Sec)**	**Calc. O/P (mA)**	**Output (mA)**	**%Error**	**Output (mA)**	**%Error**
0.00000	0.000	4.00	3.94	-0.38%	3.94	-0.38%
0.08000	126.90	5.95	5.93	-0.13%	5.93	-0.13%
0.16200	365.68	9.62	9.58	-0.25%	9.58	-0.25%
0.24400	675.95	14.38	14.36	-0.13%	14.36	-0.13%
0.32553	1041.64	20.00	20.00	0.00%	20.00	0.00%

Calibration Equipment			
Type:	Emulation Mode F1 and P28	DMM	**Calibration performed as per manufacturers recommended procedure.**
Manufacturer:	Miltronics	Fluke	
Model:		87-V	
Serial No.:		10580412	
Last Cal. Date:		Jan. 2013	

Comments:

V.Nowik Instrumentation & Controls	Calibration Report for Collingwood WPCP 2015	51 Fourth St. Angus, ON L9M 1B3 Tel: (705) 445-7321

Location:	Collingwood WPCP	Manufacturer:	Milltronics
Process:	Final Effluent	Model:	OCM III 7ML1002-0AA05
Calibration Date:	May 28 2015	Serial #	PBD/B4111061
Technician	V.Nowik	Tag:	FEFF-FIT-1

Parameter	As Found	As Left	Parameter	As Found	As Left
P1 Dimensional Units			P12 Relay High Setpoint		
0=centimeters	3	3	P17 Relay Low Setpoint		
P2 Temperature Units			P20 Relay Low Setpoint		
0=Celcius	0	0	P23 Relay Low Setpoint		
P3 Primary Element			P24 mA Assignment		
0=exponential	0	0	0=flow rate	0	0
P4 Method of Calculation			P25 If Custom mA, 20 mA=?	0	0
1=Ratiometric	0	0	P26 mA Span		
P5 Flow Rate Units			0= 4-20 mA	0	0
0=Litres/Sec	0	0	P27 mA Damping	10	10
P6 Flow at Max Head	1041.643	1041.643	P28 mA options		
P7 Height of Max Head	0.32553	0.32553	0=don't track emulator	1	0
P8 Volts in at Zero Velocity			P29 Fail Safe Timer (sec)	60	60
P9 Velocity at 5 Volts In			P30 Fail Safe Analog		
			0=hold last value	0	0
P10 Velocity at Max. Flow			P31 Fail Safe mA		
P13 Display Damping			P32 Totalizer Multiplier		
0=off	3	3	3= x 1	3	3
P14 Display Lighting			P33 Flow Rate Display		
0=on	0	0	0= 0 decimal places	0	0
P15 relay Assignment			P36 Measurement Interval		
35=(pulse) Totalizer	35	35	0=1 second	0	0
P18 relay Assignment			P42 Head Determination		
0=not in service	0	0	0=OCMIII	0	0
P21 relay Assignment			P45 Low Flow Cut-off Head	0	0
0=not in service	0	0	P46 Range at Zero Head	1.13851	1.13851
			P47 Blanking Distance	0.610169	0.610169
			U0	1.5	1.5
			U1 K Factor	5606.32	5606.32

Type:	DMM
Manufacturer:	Fluke
Model:	87-V
Serial No.:	10580412
Last Cal. Date:	Jan. 2013

Calibration performed as per Manufacturers Recommended Procedures.

Comments:

Appendix F Bypass and Spills Report

The report below outlines any bypasses in 2015. The original document is held at the Collingwood WWTP and is available for review upon request.

Pumping Station And Plant Bypass Monthly Summary						
Month	Primary Bypass			Secondary Bypass		
	No. of days	Duration (hrs)	Volume (1,000 m^3)	No. of days	Duration (hrs)	Volume (1,000 m^3)
Jan	0			1	24	13.8
Feb	0			0		
Mar	0			0		
Apr	0			0		
May	0			0		
Jun	0			0		
Jul	0			0		
Aug	0			0		
Sep	0			0		
Oct	0			0		
Nov	0			0		
Dec	0			0		
Total	0			0		
Volume of Bypass as a % of the average daily flow						0.27%

Appendix G Out of Compliance – Letter from MOECC

10-Jul-15

Ministry of Environment
Barrie District Office
Unit 1203
54 Cedar Pointe Drive
Barrie, Ontario
L4N 5R7

ATTENTION: Brian H. Stuhlemmer, Inspector, Provincial Officer

Incident date: June 2015 Ecoli monthly parameter non compliant (monthly mean density - 285)

Further to our telephone conversation regarding the Town of Collingwood WWTP being out of compliance for the Final Effluent parameter of E-coli for the month of June 2015 we provide the following:

Background
After receivig all the E-coli results and determining that we would not be in compliance we have been trying to determine the cause of the increased E-coli results as up until this month we have had no problems even meeting our E-coli objective.

Steps taken
We have spoken to the lab to have them check for any unusual spikes etc in there control sampling and to check to ensure that the samples actually arrived at the lab within the prescribed time.
We have also re-visited our sample collection procedures at the plant to ensure that our technique in the way we collect the sample and prepare it for shipping is not lacking.
We have also recently changed all the lamps in our UV system and as a precaution are running both banks.
By running all the lamps we should be eliminating the lamps as a potential source of ineffective disinfection.
We are also chlorinating in the final effluent channel before the UV system with pucks in our perforated feed bucket.
We have done several microscope checks:

- June 25th showed very few bugs
- June 25th received one load (13 cubes) of seed ML from Town of Blue Mountains
- June 26th received 2 more loads (13 cubes ea) from Town of Blue, Mic. looks better
- June 29th received 2 more loads from town of Blue, Mic. looking good
- June 30th some thing hit plant again, Load from hauler turned primary clarifiers bright green, we assume it was Anti-freeze from a tank that had winter problems with freezing (some investigation to hopefully find and educate source to eliminate ant further incidents
- July 1st no bugs found in sample
- July 2nd received 4 loads ML (13 cubes ea) from Town of Blue
- July 3rd very few bugs Received 1 load (34 cubes) of what turned out to be digester sludge from TOB
- July 3rd Received 1 load (34 cubes) of aerated digester sludge from Creemore WWTP, showed lots of bugs
- July 5th microscope showed lots of bugs, 27 stalk and some free swimming ciliates
- July 6th Settling in high 60% range, plant looking better, active and feeding stalk ciliates in ML sample
- July 9th Received July 2nd Lab results - e-coli 190, effluent looking much better with lots of bacterial activity

Regards
Glenn Price
Manager, Wastewater Operations, Town of Collingwood

All the information supply within this document is correct and complete to the best of the authors knowledge. If further information is required please do not hesitate to contact the author:
Mr. Glenn Price, Manager of Wastewater Treatment