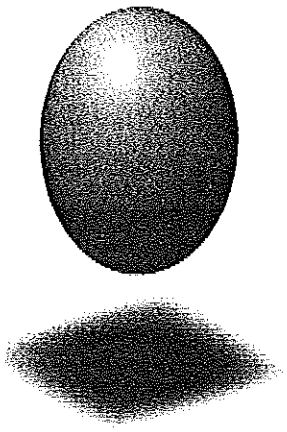
Town of Petrolia
Water Pollution Control Plant



CH2MHILL
OMI

Managed, Operated, and Maintained by

CH2M HILL OMI

2008 Annual Report of Operations

March 2009

CH2MHILL
OMI

Petrolia WPCP
546 Maude Street
P.O. Box 329
Petrolia, Ontario
N0N 1R0
Tel. 519.882.3137
Fax 519.882.2253
Dale.Wright@ch2m.com

March 26, 2009.

Chris Hutt, Environmental Officer - Sarnia Office

Ontario Ministry of the Environment
1094 London Road,
Sarnia, Ontario.
N7S 1P1

Dear Mr. Hutt,

On behalf of the Corporation of the Town of Petrolia, in Lambton County, CH2M HILL OMI is pleased to submit to you the annual operating report for the Town of Petrolia Water Pollution Control Plant. Please feel free to contact the undersigned if you have any questions regarding this report.

Respectfully submitted,

CH2M HILL OMI

Dale E. Wright

Operator in Charge

cc: Terry Blackmore, C.E.T., Operations Manager, Town of Petrolia
Terry J. Rands, CH2M HILL OMI Project Manager

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REPORT

Introduction

The Town of Petrolia Water Pollution Control Plant (WPCP) was constructed in 1975 to replace the existing Lagoon treatment system. Upgrades to the treatment plant have included UV disinfection in 1995, VFD on the pumps at the main lift station in 1996, replacement of the manual bar screen with an automatic step screen in 1999, and replacement of the media in the sand filter in 2000. The plant has a design capacity of 3800 m^3/day and is currently treating on average, 3247 m^3/day, which is 306 m^3 /day more than last year. The WPCP is a tertiary extended aeration plant with two large lagoons, one used to store digested sludge, and the other to use as a backup system in the event the plant requires maintenance. The plant consists of grit removal, mechanical aeration, jet aeration, clarification, sand filtration, and ultraviolet disinfection. Disinfection is operated seasonally. The collection system consists of 11 pumping stations. An amendment to the C of A was applied for in 2002 and approved by the MOE Approvals Branch to have the plant re-rated from 3180m^3 to 3800m^3 based on the installation of two 30hp Jet Aspirators in the aeration tanks. Another amendment to the C of A was applied for in 2008 and approved by the MOE to clarify lagoon discharge criteria.

Monitory and Compliance Reports

Reports submitted to the regional environmental officer are the R1and R2 Municipal Utility Monitoring Program reports for mechanical plants. These reports are submitted quarterly to the Sarnia office of the Ontario Ministry of the Environment, (MOE) with copies sent to Toronto. The sewage treatment program has been running exceptionally well for the 2008 calendar year. The plant is capable of removing 99.4% of BOD_5, 99.6% TSS, 92.2% TP, and 96.8% TKN. The plant also has capacity to handle 17 % more flow than it is currently treating based on 2008 flows.

Monitoring Data Interpretation

The following summarizes the operation and effectiveness of the treatment process. As can be seen from the analytical data, the plant was in compliance with all regulated parameters for the year 2008. Average monthly flows ranged from 2,593 m^3/day in dry weather conditions, to 3,909 m^3/day during wet weather conditions. Effluent TSS monthly average did not exceed 3.0 mg/L in 2008. The BOD_5 monthly average did not exceed 2.0 mg/L. The highest monthly average for TP reported was 0.62 mg/L with a yearly average of 0.45 mg/L. Ammonia Nitrogen highest monthly average during freezing period, was 0.12 mg/L the highest monthly average during non-freezing period, was 0.12 mg/L. The yearly average for Ammonia Nitrogen was 0.09 mg/L. Noncompliance for these parameters is 10 mg/L (38.0kg/d) BOD_5, 10 mg/L (38.0kg/d) TSS, 1 mg/L (3.8kg/d) TP, and 3.0 mg/L (11.4kg/d), non-freezing period, 7.0mg/L (26.6kg/d),during freezing period for Ammonia Nitrogen .

Maintenance

OMI uses a computerized maintenance management system (CMMS) to track all preventive and corrective maintenance activities. Preventive maintenance activities are carried out on a regularly scheduled basis to ensure optimal performance and readiness of all critical plant equipment. All electrical work done at the plant and pump stations was inspected by the ESA (Electrical Safety Authority). The hour meter on the filter train was replaced. A new impellar was installed on RAS pump # 2. Repairs were made to the step screen blades. A flow meter to the lagoon was installed. A 12" plug was installed in the line leading from the post clarifier chamber to the line to the lagoon. Steel was installed on the roof at Barrett's Lane. The fire extinguishers had their annual inspection. The sand filter head was cleaned out on several occasions. Crystallized alum was removed from the alum lines. Larco did the annual inspection of the hoists. The timer on the wasting valve was replaced. The pressure switch on the radiant gas heater in the filter building was repaired. The surge tank was cleaned out. The filter building and office were sprayed for spiders.

Operational Problems

Despite the increase in flows in 2008, the plant effluent quality remained excellent throughout the year. It is anticipated the sand in the filter bed will need to be replaced in 2009 as well as grit removed from the aeration tanks.

Sludge Handling

Waste activated sludge (WAS) is stored in aerobic digesters and digested for up to 7 days before being transferred to the sludge storage lagoon. No sludge has ever been removed from the lagoons. The plant produces on average 29.97 m^3/day of sludge at 0.5 % solids. It is estimated that 10,810 m^3 of sludge was sent to the lagoons in 2008, at 0.5 % solids. For the year 2009, it is anticipated that the volume of sludge produced will not increase significantly. A copy of the sludge analysis is included with this report.

Monitoring Equipment Calibration and Maintenance

All monitoring equipment is calibrated according the manufacturer's specification at least yearly to ensure proper operation and reliability. A Greyline ultrasonic flow meter is positioned in front of a Parshall Flume on the raw influent to record level through the flume, and converts to a flow at the control room. A Doppler flow meter is installed on the return activated sludge (RAS) line, to monitor the flow of RAS to the aeration. No flow meter is installed on the WAS, so wasting is achieved through measurement in the digester of sludge level. A Pulsar Ultra 3 ultrasonic level controller is installed in the line going to the lagoons and records flows to the lagoons. Copies of the calibration reports are included in this report.

Modifications

The flow meter to the lagoon was commissioned on April 7 2008. An amended Certificate of Approval was approved on August 29 2008, Number 5819-7EZNY7.

Pumping Stations

Pump Stations are checked on a weekly basis, and have alarm monitoring 24 hours per day. One pump station has a backup generator on standby. All other pump stations are equipped with a terminal plug and transfer switch in the event they require a portable generator. The Main Lift station can be bypassed directly to the Plant's on site Lagoons. A new pump station at Vanderwal Drive was commissioned in 2008. The generator at Barrett's Lane was serviced. The Main Lift, First Ave and Garfield pumps were unplugged on numerous occasions. The seals on the west pump at First Ave were replaced. The alarm circuit to Ella pump station was repaired and a new circuit line to Barrett's Lane was installed. The main breaker at Barrett's Lane was replaced due to water damage caused by water coming down the line from the transformer to the breaker. Fuses were replaced in the control panel at Waterville. The transformer at the control panel at Garden Crescent was replaced. Replaced the chains on both pumps at Garden Crescent. The main breaker at Progress was lowered per the ESA. Benko cleaned out wet wells at the Main Lift, Barrett's, Garden Crescent, Ella, Garfield and First Ave. pump stations. Grit was removed from behind the check valve on pump 3 at the Main Lift.

MOE DATA

Ontario Ministry of the Environment

Municipal Utility Monitoring Program — Mechanical Plants **R1**

Municipality:	**Corporation of the Town of Petrolia**	Operating Authority:	**OMI Canada Inc.**
Project Name:	**Petrolia WPCP**		
Mailing Address:	**411 Greenfield St. Box 1270 Petrolia ON N0N 1R0**	Mailing Address:	**546 Maude St Box 329 Petrolia ON N0N 1R0**

File No. (1–2): 4 6

Works Number (3–11): 1 1 0 0 0 0 5 7 9

Data Period (18–19): Month 0 1 | Year 0 8

Days (20–21): 3 1

Discharge Type (22): 2

Update Code (80): R

C.P. (12–13): 0 1

FLOWS

		Parameter Code (30–34)	Dec. (35)	Monthly Results (36–38)
Total Flow	($10^3 m^3$)	5 0 0 1 0	3	9 9 . 5 5 0
Average Daily Flow	($10^3 m^3/d$)	5 0 0 1 5	3	3 . 2 1 1
Maximum Daily Flow	($10^3 m^3/d$)	5 0 0 2 0	3	6 . 5 7 9

BYPASS (12–13: 2 6)

		Parameter Code (30–34)	Dec. (35)	Monthly Results (36–38)	# of Occurrences
Plant Bypass Volume	($10^3 m^3$)	5 0 0 2 6	3	.	
Duration	(hours)	8 0 5 6 3	1	.	
Secondary Bypass Volume	($10^3 m^3$)	5 0 0 4 0	3	.	
Duration	(hours)	8 0 5 6 5	1	.	

RAW SEWAGE (12–13: 0 3)

		Parameter Code (30–34)	Dec. (35)	Monthly Results (36–38)	# of Samples
BOD_5	(mg/L)	0 0 0 0 1	0	1 7 2 .	0 5
Suspended Solids	(mg/L)	0 0 0 0 6	0	1 4 4 .	0 5
TKN	(mg/L)	0 0 0 2 0	2	3 2 . 0 0	0 5
Total Phosphorus	(mg/L)	0 0 0 3 3	1	5 . 1	0 5

FINAL EFFLUENT (12–13: 0 4)

		Parameter Code (30–34)	Dec. (35)	Monthly Results (36–38)	# of Samples
BOD_5	(mg/L)	0 0 0 0 1	1	1 . 0	0 5
Suspended Solids	(mg/L)	0 0 0 0 6	1	0 . 3	0 5
Ammonia + Ammonium	(mg/L)	0 0 0 1 9	2	0 . 0 8	0 5
TKN	(mg/L)	0 0 0 2 0	2	1 . 4 0	0 5
Total Phosphorus	(mg/L)	0 0 0 3 3	2	0 . 4 8	0 5

DISINFECTION (12–13: 0 7)

	Parameter Code (30–34)	Dec. (35)	Monthly Results (36–38)
Chlorine Used - (kg as Cl2)	5 0 1 0 0	1	.
Chlorine Dosage - (mg/L as Cl2)	8 0 4 1 0	1	.
Chlorine Residual - (mg/L as Cl2)	8 0 4 2 0	1	.

Operator's Comments and Contact Person's Phone number & e-mail address: Dale Wright 519 882 3137 Dale.Wright@ch2m.com

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Municipal Utility Monitoring Program
Mechanical Plants **R2**

Municipality:	**Corporation of the Town of Petrolia**	Operating Authority:	**OMI Canada Inc.**
Project Name:	**Petrolia WPCP**		
Mailing Address:	**411 Greenfield St Box 1270 Petrolia ON N0N 1R0**	Mailing Address:	**546 Maude St Box 329 Petrolia ON N0N 1R0**

File No. (1–2): **46**

Works Number (3–11): **11000057 9**

Data Period (16–19): Month **01** Year **08**

Days (20–21): **31**

Discharge Type (22): **2**

Update Code (80): **R**

C.P. (12–13): **03** **RAW SEWAGE**

	Parameter Code	Dec.	Monthly Average Results	# of Samples
Alkalinity CaCO3 mg/l	00051	2	225.00	05

C.P. (12–13): **04** **FINAL EFFLUENT**

	Parameter Code	Dec.	Monthly Average Results	# of samples
Alkalinity CaCO3 mg/l	00051	2	109.00	05
Nitrite mg/l	00021	2	0.03	05
Nitrate mg/l	00022	2	11.50	05
pH	80770	2	7.48	05
Ecoli per 100 ml	83052	0		00

Operator's Comments and Contact Person's Phone number & e-mail address: Dale Wright 519 882 3137 Dale.Wright@ch2m.com
Seasonal disinfection

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Municipal Utility Monitoring Program — Mechanical Plants R1

Municipality:	Corporation of the Town of Petrolia	Operating Authority:	OMI Canada Inc.
Project Name:	Petrolia WPCP		
Mailing Address:	411 Greenfield St. Box 1270 Petrolia ON N0N 1R0	Mailing Address:	546 Maude St Box 329 Petrolia ON N0N 1R0

File No. (1–2): 4 6

Works Number (3–11): 1 1 0 0 0 0 5 7 9

Data Period (16–19): Month 0 2 | Year 0 2 0 8

Days (20–21): 3 1

Discharge Type (22): 2

Update Code (80): R

C.P. (12–13): 0 1

FLOWS

		Parameter Code (30–34)	Dec. (35)	Monthly Results (36–38)
Total Flow	($10^3 m^3$)	5 0 0 1 0	3	1 0 9 . 2 6 3
Average Daily Flow	($10^3 m^3/d$)	5 0 0 1 5	3	3 . 7 6 8
Maximum Daily Flow	($10^3 m^3/d$)	5 0 0 2 0	3	8 . 0 1 5

BYPASS (2 6)

		Parameter Code (30–34)	Dec. (35)	Monthly Results (36–38)	# of Occurrences
Plant Bypass Volume	($10^3 m^3$)	5 0 0 2 6	3	.	
Duration	(hours)	8 0 5 6 3	1	.	
Secondary Bypass Volume	($10^3 m^3$)	5 0 0 4 0	3	.	
Duration	(hours)	8 0 5 6 5	1	.	

RAW SEWAGE (0 3)

		Parameter Code (30–34)	Dec. (35)	Monthly Results (36–38)	# of Samples
BOD_5	(mg/L)	0 0 0 0 1	0	2 2 8 .	0 4
Suspended Solids	(mg/L)	0 0 0 0 6	0	2 0 4 .	0 4
TKN	(mg/L)	0 0 0 2 0	2	3 4 . 9 0	0 4
Total Phosphorus	(mg/L)	0 0 0 3 3	1	5 . 5	0 4

FINAL EFFLUENT (0 4)

		Parameter Code (30–34)	Dec. (35)	Monthly Results (36–38)	
BOD_5	(mg/L)	0 0 0 0 1	1	1 . 1	0 4
Suspended Solids	(mg/L)	0 0 0 0 6	1	0 . 3	0 4
Ammonia + Ammonium	(mg/L)	0 0 0 1 9	2	0 . 0 8	0 4
TKN	(mg/L)	0 0 0 2 0	2	1 . 3 0	0 4
Total Phosphorus	(mg/L)	0 0 0 3 3	2	0 . 5 0	0 4

DISINFECTION (0 7)

		Parameter Code (30–34)	Dec. (35)	Monthly Results (36–38)	
Chlorine Used -	(kg as Cl2)	5 0 1 0 0	1	.	
Chlorine Dosage -	(mg/L as Cl2)	8 0 4 1 0	1	.	
Chlorine Residual -	(mg/L as Cl2)	8 0 4 2 0	1	.	

Operator's Comments and Contact Person's Phone number & e-mail address: Dale Wright 519 882 3137 Dale.Wright@ch2m.com

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Municipal Utility Monitoring Program
Mechanical Plants **R2**

Municipality:	**Corporation of the Town of Petrolia**	Operating Authority:	**OMI Canada Inc.**
Project Name:	**Petrolia WPCP**		
Mailing Address:	**411 Greenfield St Box 1270 Petrolia ON N0N 1R0**	Mailing Address:	**546 Maude St Box 329 Petrolia ON N0N 1R0**

File No.	Works Number	Data Period Month	Data Period Year	Days	Discharge Type	Update Code
46	11000057 9	02	08	31	2	R
1 2	3 11	18 19		20 21	22	80

C.P. 03 **RAW SEWAGE**

Parameter	Parameter Code	Dec.	Monthly Average Results	# of Samples
Alkalinity CaCO3 mg/l	00051	2	226.00	04

C.P. 04 **FINAL EFFLUENT**

Parameter	Parameter Code	Dec.	Monthly Average Results	# of samples
Alkalinity CaCO3 mg/l	00051	2	86.00	04
Nitrite mg/l	00021	2	<0.01	04
Nitrate mg/l	00022	2	11.50	04
pH	80770	2	7.30	04
Ecoli per 100 ml	83052	0		00

Operator's Comments and Contact Person's Phone number & e-mail address: Dale Wright 519 882 3137 Dale.Wright@ch2m.com
Seasonal disinfection

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Municipal Utility Monitoring Program — Mechanical Plants R1

Municipality:	Corporation of the Town of Petrolia	Operating Authority:	OMI Canada Inc.
Project Name:	Petrolia WPCP		
Mailing Address:	411 Greenfield St. Box 1270 Petrolia ON N0N 1R0	Mailing Address:	546 Maude St Box 329 Petrolia ON N0N 1R0

File No. (1–2)	Works Number (3–11)	Data Period Month (16–17)	Data Period Year (18–19)	Days (20–21)	Discharge Type (22)	Update Code (60)
46	110005579	03	08	31	2	R

C.P. 01

FLOWS

		Parameter Code (30–34)	Dec. (35)	Monthly Results (36–38)
Total Flow	($10^3 m^3$)	50010	3	121.176
Average Daily Flow	($10^3 m^3/d$)	50015	3	3.909
Maximum Daily Flow	($10^3 m^3/d$)	50020	3	6.656

BYPASS

		Parameter Code (30–34)	Dec. (35)	Monthly Results (36–38)	# of Occurrences
Plant Bypass Volume	($10^3 m^3$)	50026	3	.	
Duration	(hours)	80563	1	.	
Secondary Bypass Volume	($10^3 m^3$)	50040	3	.	
Duration	(hours)	80565	1	.	

RAW SEWAGE

		Parameter Code (30–34)	Dec. (35)	Monthly Results (36–38)	# of Samples
BOD_5	(mg/L)	00001	0	167.	04
Suspended Solids	(mg/L)	00006	0	130.	04
TKN	(mg/L)	00020	2	30.10	04
Total Phosphorus	(mg/L)	00033	1	3.0	04

FINAL EFFLUENT

		Parameter Code (30–34)	Dec. (35)	Monthly Results (36–38)	# of Samples
BOD_5	(mg/L)	00001	1	1.1	04
Suspended Solids	(mg/L)	00006	1	3.0	04
Ammonia + Ammonium	(mg/L)	00019	2	0.12	04
TKN	(mg/L)	00020	2	1.30	04
Total Phosphorus	(mg/L)	00033	2	0.61	04

DISINFECTION

		Parameter Code (30–34)	Dec. (35)	Monthly Results (36–38)	
Chlorine Used -	(kg as Cl2)	50100	1	.	
Chlorine Dosage -	(mg/L as Cl2)	80410	1	.	
Chlorine Residual -	(mg/L as Cl2)	80420	1	.	

Operator's Comments and Contact Person's Phone number & e-mail address: Dale Wright 519 882 3137 Dale.Wright@ch2m.com

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Municipal Utility Monitoring Program
Mechanical Plants **R2**

Municipality:	**Corporation of the Town of Petrolia**	Operating Authority:	**OMI Canada Inc.**
Project Name:	**Petrolia WPCP**		
Mailing Address:	**411 Greenfield St Box 1270 Petrolia ON N0N 1R0**	Mailing Address:	**546 Maude St Box 329 Petrolia ON N0N 1R0**

File No. (1–2): **4 6**

Works Number (3–11): **1 1 0 0 0 0 5 7 9**

Data Period (16–19): Month **0 3** Year **0 8**

Days (20–21): **3 1**

Discharge Type (22): **2**

Update Code (80): **R**

C.P. (12–13): **0 3** RAW SEWAGE

Parameter	Parameter Code	Dec.	Monthly Average Results	# of Samples
Alkalinity CaCO3 mg/l	0 0 0 5 1	2	2 1 1 . 0 0	0 4

C.P. (12–13): **0 4** FINAL EFFLUENT

Parameter	Parameter Code	Dec.	Monthly Average Results	# of samples
Alkalinity CaCO3 mg/l	0 0 0 5 1	2	9 9 . 0 0	0 4
Nitrite mg/l	0 0 0 2 1	2	< 0 . 0 1	0 4
Nitrate mg/l	0 0 0 2 2	2	1 0 . 7 0	0 4
pH	8 0 7 7 0	2	7 . 3 1	0 4
Ecoli per 100 ml	8 3 0 5 2	0		0 0

Operator's Comments and Contact Person's Phone number & e-mail address: Dale Wright 519 882 3137 Dale.Wright@ch2m.com
Seasonal disinfection

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Municipal Utility Monitoring Program Mechanical Plants R1

Municipality:	Corporation of the Town of Petrolia	Operating Authority:	OMI Canada Inc.
Project Name:	Petrolia WPCP		
Mailing Address:	411 Greenfield St. Box 1270 Petrolia ON N0N 1R0	Mailing Address:	546 Maude St Box 329 Petrolia ON N0N 1R0

File No.	Works Number	Data Period Month	Data Period Year	Days	Discharge Type	Update Code
46	11000057	04	08	30	2	R

C.P. 01 **FLOWS**

		Parameter Code	Dec.	Monthly Results
Total Flow	($10^3 m^3$)	50010	3	109.607
Average Daily Flow	($10^3 m^3/d$)	50015	3	3.654
Maximum Daily Flow	($10^3 m^3/d$)	50020	3	7.079

26 **BYPASS**

		Parameter Code	Dec.	Monthly Results	# of Occurrences
Plant Bypass Volume	($10^3 m^3$)	50026	3	.	
Duration	(hours)	80563	1	.	
Secondary Bypass Volume	($10^3 m^3$)	50040	3	.	
Duration	(hours)	80565	1	.	

03 **RAW SEWAGE**

		Parameter Code	Dec.	Monthly Results	# of Samples
BOD_5	(mg/L)	00001	0	219.	05
Suspended Solids	(mg/L)	00006	0	184.	05
TKN	(mg/L)	00020	2	37.10	05
Total Phosphorus	(mg/L)	00033	1	5.8	05

04 **FINAL EFFLUENT**

		Parameter Code	Dec.	Monthly Results	
BOD_5	(mg/L)	00001	1	1.0	05
Suspended Solids	(mg/L)	00006	1	0.5	05
Ammonia + Ammonium	(mg/L)	00019	2	0.09	05
TKN	(mg/L)	00020	2	1.20	05
Total Phosphorus	(mg/L)	00033	2	0.38	05

07 **DISINFECTION**

		Parameter Code	Dec.	Monthly Results	
Chlorine Used -	(kg as Cl2)	50100	1	.	
Chlorine Dosage -	(mg/L as Cl2)	80410	1	.	
Chlorine Residual -	(mg/L as Cl2)	80420	1	.	

Operator's Comments and Contact Person's Phone number & e-mail address: Dale Wright 519 882 3137 Dale.Wright@ch2m.com

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Municipal Utility Monitoring Program
Mechanical Plants **R2**

Municipality:	**Corporation of the Town of Petrolia**	Operating Authority:	**OMI Canada Inc.**
Project Name:	**Petrolia WPCP**		
Mailing Address:	**411 Greenfield St Box 1270 Petrolia ON N0N 1R0**	Mailing Address:	**546 Maude St Box 329 Petrolia ON N0N 1R0**

File No. (1–2): **4 6**

Works Number (3–11): **1 1 0 0 0 0 5 7 9**

Data Period (18–19): Month **0 4** Year **0 8**

Days (20–21): **3 0**

Discharge Type (22): **2**

Update Code (80): **R**

C.P. (12–13): **0 3**

RAW SEWAGE

Parameter	Parameter Code (30–34)	Dec. (35)	Monthly Average Results (38)	# of Samples
Alkalinity CaCO3 mg/l	0 0 0 5 1	2	1 6 1 . 0 0	0 5

C.P. (12–13): **0 4**

FINAL EFFLUENT

Parameter	Parameter Code (30–34)	Dec. (35)	Monthly Average Results (38)	# of samples
Alkalinity CaCO3 mg/l	0 0 0 5 1	2	5 6 . 0 0	0 5
Nitrite mg/l	0 0 0 2 1	2	< 0 . 0 1	0 5
Nitrate mg/l	0 0 0 2 2	2	1 2 . 1 0	0 5
pH	8 0 7 7 0	2	7 . 1 7	0 5
Ecoli per 100 ml	8 3 0 5 2	0	< 2	0 5

Operator's Comments and Contact Person's Phone number & e-mail address: Dale Wright 519 882 3137 Dale.Wright@ch2m.com

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Ontario Ministry of the Environment

Municipal Utility Monitoring Program — Mechanical Plants R1

Municipality:	Corporation of the Town of Petrolia	Operating Authority:	OMI Canada Inc.
Project Name:	Petrolia WPCP		
Mailing Address:	411 Greenfield St. Box 1270 Petrolia ON N0N 1R0	Mailing Address:	546 Maude St Box 329 Petrolia ON N0N 1R0

File No.	Works Number	Data Period Month	Data Period Year	Days	Discharge Type	Update Code
46	11000057 9	05	08	31	2	R

C.P. 01

FLOWS

	Parameter Code	Dec.	Monthly Results
Total Flow ($10^3 m^3$)	50010	3	95.347
Average Daily Flow ($10^3 m^3/d$)	50015	3	3.076
Maximum Daily Flow ($10^3 m^3/d$)	50020	3	4.442

BYPASS

	Parameter Code	Dec.	Monthly Results	# of Occurrences
Plant Bypass Volume ($10^3 m^3$)	50026	3	.	
Duration (hours)	80563	1	.	
Secondary Bypass Volume ($10^3 m^3$)	50040	3	.	
Duration (hours)	80565	1	.	

RAW SEWAGE

	Parameter Code	Dec.	Monthly Results	# of Samples
BOD_5 (mg/L)	00001	0	208.	04
Suspended Solids (mg/L)	00006	0	166.	04
TKN (mg/L)	00020	2	45.40	04
Total Phosphorus (mg/L)	00033	1	6.8	04

FINAL EFFLUENT

	Parameter Code	Dec.	Monthly Results	# of Samples
BOD_5 (mg/L)	00001	1	1.9	07
Suspended Solids (mg/L)	00006	1	4.2	07
Ammonia + Ammonium (mg/L)	00019	2	0.67	07
TKN (mg/L)	00020	2	1.70	07
Total Phosphorus (mg/L)	00033	2	0.46	08

DISINFECTION

	Parameter Code	Dec.	Monthly Results	
Chlorine Used - (kg as Cl2)	50100	1	.	
Chlorine Dosage - (mg/L as Cl2)	80417	1	.	
Chlorine Residual - (mg/L as Cl2)	80420	1	.	

Operator's Comments and Contact Person's Phone number & e-mail address: Dale Wright 519 882 3137 Dale.Wright@ch2m.com
Discharged west lagoon from May 23 to May 26, 70 hours, 15817 m3.
Above effluent numbers include lagoon and plant discharge averages.

Return completed blue form to:

Ontario Ministry of the Environment

Municipal Utility Monitoring Program
Mechanical Plants **R2**

Municipality:	Corporation of the Town of Petrolia	Operating Authority:	OMI Canada Inc.
Project Name:	Petrolia WPCP		
Mailing Address:	411 Greenfield St Box 1270 Petrolia ON N0N 1R0	Mailing Address:	546 Maude St Box 329 Petrolia ON N0N 1R0

File No.	Works Number	Data Period Month	Data Period Year	Days	Discharge Type	Update Code
4 6	1 1 0 0 0 0 5 7 9	0 5	0 8	3 1	2	R
1 2	3 11	16	19	20 21	22	80

C.P. 0 3 (12 13) **RAW SEWAGE**

	Parameter Code	Dec.	Monthly Average Results	# of Samples
Alkalinity CaCO3 mg/l	0 0 0 5 1	2	8 8 . 0 0	0 4
	30 34	35	38	

0 4 (12 13) **FINAL EFFLUENT**

	Parameter Code	Dec.	Monthly Average Results	# of samples
Alkalinity CaCO3 mg/l	0 0 0 5 1	2	1 8 . 0 0	0 7
Nitrite mg/l	0 0 0 2 1	2	< 0 . 0 2	0 7
Nitrate mg/l	0 0 0 2 2	2	8 . 8 0	0 7
pH	8 0 7 7 0	2	7 . 2 1	0 7
Ecoli per 100 ml	8 3 0 5 2	0	3	0 7
	30 34	35	38	

Operator's Comments and Contact Person's Phone number & e-mail address: Dale Wright 519 882 3137 Dale.Wright@ch2m.com
Discharged west lagoon from May 23 to May 26, 70 hours, 15817 m3.
Above effluent numbers include lagoon and plant discharge averages.

Return completed blue form to:

Ontario Ministry of the Environment

Municipal Utility Monitoring Program — Mechanical Plants R1

Municipality:	Corporation of the Town of Petrolia	Operating Authority:	OMI Canada Inc.
Project Name:	Petrolia WPCP		
Mailing Address:	411 Greenfield St. Box 1270 Petrolia ON N0N 1R0	Mailing Address:	546 Maude St Box 329 Petrolia ON N0N 1R0

File No.: 46 (1–2)

Works Number: 110005579 (3–11)

Data Period: Month 06 (16–17), Year 08 (18–19)

Days: 30 (20–21)

Discharge Type: 2 (22)

Update Code: R (80)

C.P. 01 (12–13)

01 FLOWS

		Parameter Code (30–34)	Dec. (35)	Monthly Results (36–38)
Total Flow	($10^3 m^3$)	50010	3	95.463
Average Daily Flow	($10^3 m^3/d$)	50015	3	3.182
Maximum Daily Flow	($10^3 m^3/d$)	50020	3	4.737

26 BYPASS

		Parameter Code (30–34)	Dec. (35)	Monthly Results (36–38)	# of Occurrences
Plant Bypass Volume	($10^3 m^3$)	50026	3	.	
Duration	(hours)	80563	1	.	
Secondary Bypass Volume	($10^3 m^3$)	50040	3	.	
Duration	(hours)	80565	1	.	

03 RAW SEWAGE

		Parameter Code (30–34)	Dec. (35)	Monthly Results (36–38)	# of Samples
BOD_5	(mg/L)	00001	0	210.	0004
Suspended Solids	(mg/L)	00006	0	187.	0004
TKN	(mg/L)	00020	2	40.50	0004
Total Phosphorus	(mg/L)	00033	1	5.7	0004

04 FINAL EFFLUENT

		Parameter Code (30–34)	Dec. (35)	Monthly Results (36–38)	# of Samples
BOD_5	(mg/L)	00001	1	1.0	0004
Suspended Solids	(mg/L)	00006	1	0.5	0004
Ammonia + Ammonium	(mg/L)	00019	2	0.12	0004
TKN	(mg/L)	00020	2	1.50	0004
Total Phosphorus	(mg/L)	00033	2	0.46	0004

07 DISINFECTION

		Parameter Code (30–34)	Dec. (35)	Monthly Results (36–38)	# of Samples
Chlorine Used -	(kg as Cl2)	50100	1	.	
Chlorine Dosage -	(mg/L as Cl2)	80410	1	.	
Chlorine Residual -	(mg/L as Cl2)	80420	1	.	

Operator's Comments and Contact Person's Phone number & e-mail address: Dale Wright 519 882 3137 Dale.Wright@ch2m.com

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Ontario Ministry of the Environment

Municipal Utility Monitoring Program
Mechanical Plants **R2**

Municipality:	**Corporation of the Town of Petrolia**	Operating Authority:	**OMI Canada Inc.**
Project Name:	**Petrolia WPCP**		
Mailing Address:	**411 Greenfield St Box 1270 Petrolia ON N0N 1R0**	Mailing Address:	**546 Maude St Box 329 Petrolia ON N0N 1R0**

File No.	Works Number	Data Period Month	Data Period Year	Days	Discharge Type	Update Code
4 6	1 1 0 0 0 0 5 7 9	0 6	0 8	3 0	2	R
1 2	3 11	16	19	20 21	22	60

C.P. 0 3 (12 13)

RAW SEWAGE

	Parameter Code	Dec.	Monthly Average Results	# of Samples
Alkalinity CaCO3 mg/l	0 0 0 5 1	2	8 5 . 0 0	0 4

(30 34 / 35 / 38)

FINAL EFFLUENT (0 4; 12 13)

	Parameter Code	Dec.	Monthly Average Results	# of samples
Alkalinity CaCO3 mg/l	0 0 0 5 1	2	1 5 . 0 0	0 4
Nitrite mg/l	0 0 0 2 1	2	< 0 . 0 2	0 4
Nitrate mg/l	0 0 0 2 2	2	1 1 . 3 0	0 4
pH	8 0 7 7 0	2	7 . 1 9	0 4
Ecoli per 100 ml	8 3 0 5 2	0	3	0 4

(30 34 / 35 / 38)

Operator's Comments and Contact Person's Phone number & e-mail address: Dale Wright 519 882 3137 Dale.Wright@ch2m.com

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Ontario Ministry of the Environment

Municipal Utility Monitoring Program Mechanical Plants R1

Municipality:	Corporation of the Town of Petrolia	Operating Authority:	OMI Canada Inc.
Project Name:	Petrolia WPCP		
Mailing Address:	411 Greenfield St. Box 1270 Petrolia ON N0N 1R0	Mailing Address:	546 Maude St Box 329 Petrolia ON N0N 1R0

File No. (1-2)	Works Number (3-11)	Data Period Month (16-17)	Data Period Year (18-19)	Days (20-21)	Discharge Type (22)	Update Code (80)
4 6	1 1 0 0 0 0 5 7 9	0 7	0 8	3 1	2	R

C.P. 01 FLOWS (12-13)

		Parameter Code (30-34)	Dec. (35)	Monthly Results (36)
Total Flow	($10^3 m^3$)	5 0 0 1 0	3	9 3 . 3 2 3
Average Daily Flow	($10^3 m^3/d$)	5 0 0 1 5	3	3 . 0 1 0
Maximum Daily Flow	($10^3 m^3/d$)	5 0 0 2 0	3	4 . 5 7 8

26 BYPASS (12-13)

		Parameter Code (30-34)	Dec. (35)	Monthly Results (36)	# of Occurrences
Plant Bypass Volume	($10^3 m^3$)	5 0 0 2 6	3	.	
Duration	(hours)	8 0 5 6 3	1	.	
Secondary Bypass Volume	($10^3 m^3$)	5 0 0 4 0	3	.	
Duration	(hours)	8 0 5 6 5	1	.	

03 RAW SEWAGE (12-13)

		Parameter Code (30-34)	Dec. (35)	Monthly Results (36)	# of Samples
BOD_5	(mg/L)	0 0 0 0 1	0	2 1 3 .	0 5
Suspended Solids	(mg/L)	0 0 0 0 6	0	2 0 4 .	0 5
TKN	(mg/L)	0 0 0 2 0	2	3 6 . 6 0	0 5
Total Phosphorus	(mg/L)	0 0 0 3 3	1	6 . 0	0 5

04 FINAL EFFLUENT (12-13)

		Parameter Code (30-34)	Dec. (35)	Monthly Results (36)	# of Samples
BOD_5	(mg/L)	0 0 0 0 1	1	1 . 3	0 5
Suspended Solids	(mg/L)	0 0 0 0 6	1	0 . 8	0 5
Ammonia + Ammonium	(mg/L)	0 0 0 1 9	2	0 . 0 7	0 5
TKN	(mg/L)	0 0 0 2 0	2	1 . 2 0	0 5
Total Phosphorus	(mg/L)	0 0 0 3 3	2	0 . 5 6	0 5

07 DISINFECTION (12-13)

	Parameter Code (30-34)	Dec. (35)	Monthly Results (36)	
Chlorine Used - (kg as Cl2)	5 0 1 0 0	1	.	
Chlorine Dosage - (mg/L as Cl2)	8 0 4 1 0	1	.	
Chlorine Residual - (mg/L as Cl2)	8 0 4 2 0	1	.	

Operator's Comments and Contact Person's Phone number & e-mail address: Dale Wright 519 882 3137 Dale.Wright@ch2m.com

Return completed blue form to:

Ontario Ministry of the Environment

Municipal Utility Monitoring Program
Mechanical Plants **R2**

Municipality:	**Corporation of the Town of Petrolia**	Operating Authority:	**OMI Canada Inc.**
Project Name:	**Petrolia WPCP**		
Mailing Address:	**411 Greenfield St Box 1270 Petrolia ON N0N 1R0**	Mailing Address:	**546 Maude St Box 329 Petrolia ON N0N 1R0**

File No.	Works Number	Data Period Month	Data Period Year	Days	Discharge Type	Update Code
4 6	1 1 0 0 0 0 5 7 9	0 7	0 8	3 1	2	R
1 2	3 11	18	19	20 21	22	80

C.P. 0 3 (12 13) **RAW SEWAGE**

	Parameter Code	Dec.	Monthly Average Results	# of Samples
Alkalinity CaCO3 mg/l	0 0 0 5 1	2	6 8 . 0 0	0 5
	30 34	35	38	

0 4 (12 13) **FINAL EFFLUENT**

	Parameter Code	Dec.	Monthly Average Results	# of samples
Alkalinity CaCO3 mg/l	0 0 0 5 1	2	1 5 . 0 0	0 5
Nitrite mg/l	0 0 0 2 1	2	< 0 . 0 1	0 5
Nitrate mg/l	0 0 0 2 2	2	1 4 . 6 0	0 5
pH	8 0 7 7 0	2	7 . 1 1	0 5
Ecoli per 100 ml	8 3 0 5 2	0	2	0 5
	30 34	35	38	

Operator's Comments and Contact Person's Phone number & e-mail address: Dale Wright 519 882 3137 Dale.Wright@ch2m.com

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Municipal Utility Monitoring Program Mechanical Plants R1

Municipality:	Corporation of the Town of Petrolia	Operating Authority:	OMI Canada Inc.
Project Name:	Petrolia WPCP		
Mailing Address:	411 Greenfield St. Box 1270 Petrolia ON N0N 1R0	Mailing Address:	546 Maude St Box 329 Petrolia ON N0N 1R0

File No. (1-2)	Works Number (3-11)	Data Period Month (18-19)	Data Period Year (18-19)	Days (20-21)	Discharge Type (22)	Update Code (80)
46	110000579	08	08	31	2	R

C.P. (12-13)

01 FLOWS

		Parameter Code (30-34)	Dec. (35)	Monthly Results (36-38)
Total Flow	($10^3 m^3$)	50010	3	82.146
Average Daily Flow	($10^3 m^3/d$)	50015	3	2.650
Maximum Daily Flow	($10^3 m^3/d$)	50020	3	3.804

26 BYPASS

		Parameter Code (30-34)	Dec. (35)	Monthly Results (36-38)	# of Occurrences
Plant Bypass Volume	($10^3 m^3$)	50026	3	.	
Duration	(hours)	80563	1	.	
Secondary Bypass Volume	($10^3 m^3$)	50040	3	.	
Duration	(hours)	80565	1	.	

03 RAW SEWAGE

		Parameter Code (30-34)	Dec. (35)	Monthly Results (36-38)	# of Samples
BOD_5	(mg/L)	00001	0	143.	04
Suspended Solids	(mg/L)	00006	0	125.	04
TKN	(mg/L)	00020	2	31.50	04
Total Phosphorus	(mg/L)	00033	1	5.4	04

04 FINAL EFFLUENT

		Parameter Code (30-34)	Dec. (35)	Monthly Results (36-38)	# of Samples
BOD_5	(mg/L)	00001	1	2.0	04
Suspended Solids	(mg/L)	00006	1	0.4	04
Ammonia + Ammonium	(mg/L)	00019	2	0.09	04
TKN	(mg/L)	00020	2	0.80	04
Total Phosphorus	(mg/L)	00033	2	0.24	04

07 DISINFECTION

		Parameter Code (30-34)	Dec. (35)	Monthly Results (36-38)
Chlorine Used -	(kg as Cl2)	50100	1	.
Chlorine Dosage -	(mg/L as Cl2)	80410	1	.
Chlorine Residual -	(mg/L as Cl2)	80420	1	.

Operator's Comments and Contact Person's Phone number & e-mail address: Dale Wright 519 882 3137 Dale.Wright@ch2m.com

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Ontario Ministry of the Environment

Municipal Utility Monitoring Program Mechanical Plants R2

Municipality:	Corporation of the Town of Petrolia	Operating Authority:	OMI Canada Inc.
Project Name:	Petrolia WPCP		
Mailing Address:	411 Greenfield St Box 1270 Petrolia ON N0N 1R0	Mailing Address:	546 Maude St Box 329 Petrolia ON N0N 1R0

File No.	Works Number	Data Period Month	Data Period Year	Days	Discharge Type	Update Code
46	1100005579	08	08	31	2	R

C.P. 03 **RAW SEWAGE**

Parameter Code	Dec.	Monthly Average Results	# of Samples
Alkalinity CaCO3 mg/l 00051	2	69.00	0004

C.P. 04 **FINAL EFFLUENT**

Parameter Code	Dec.	Monthly Average Results	# of samples
Alkalinity CaCO3 mg/l 00051	2	18.00	0004
Nitrite mg/l 00210	2	< 0.01	0004
Nitrate mg/l 00220	2	9.00	0004
pH 80705	2	7.19	0004
Ecoli per 100 ml 83052	0	2	0004

Operator's Comments and Contact Person's Phone number & e-mail address: Dale Wright 519 882 3137 Dale.Wright@ch2m.com

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Municipal Utility Monitoring Program — Mechanical Plants R1

Municipality:	Corporation of the Town of Petrolia	Operating Authority:	OMI Canada Inc.
Project Name:	Petrolia WPCP		
Mailing Address:	411 Greenfield St. Box 1270 Petrolia ON N0N 1R0	Mailing Address:	546 Maude St Box 329 Petrolia ON N0N 1R0

File No.	Works Number	Data Period Month	Data Period Year	Days	Discharge Type	Update Code
46	11000057 9	09	08	30	2	R

C.P. 01

FLOWS

		Parameter Code	Dec.	Monthly Results
Total Flow	($10^3 m^3$)	50010	3	88.245
Average Daily Flow	($10^3 m^3/d$)	50015	3	2.942
Maximum Daily Flow	($10^3 m^3/d$)	50020	3	6.203

BYPASS

		Parameter Code	Dec.	Monthly Results	# of Occurrences
Plant Bypass Volume	($10^3 m^3$)	50026	3	.	
Duration	(hours)	80563	1	.	
Secondary Bypass Volume	($10^3 m^3$)	50040	3	.	
Duration	(hours)	80565	1	.	

RAW SEWAGE

		Parameter Code	Dec.	Monthly Results	# of Samples
BOD_5	(mg/L)	00001	0	262.	04
Suspended Solids	(mg/L)	00006	0	206.	04
TKN	(mg/L)	00020	2	41.10	04
Total Phosphorus	(mg/L)	00033	1	6.7	04

FINAL EFFLUENT

		Parameter Code	Dec.	Monthly Results	# of Samples
BOD_5	(mg/L)	00001	1	1.3	04
Suspended Solids	(mg/L)	00006	1	0.4	04
Ammonia + Ammonium	(mg/L)	00019	2	0.08	04
TKN	(mg/L)	00020	2	1.20	04
Total Phosphorus	(mg/L)	00033	2	0.35	04

DISINFECTION

		Parameter Code	Dec.	Monthly Results
Chlorine Used -	(kg as Cl2)	50100	1	.
Chlorine Dosage -	(mg/L as Cl2)	80410	1	.
Chlorine Residual -	(mg/L as Cl2)	80420	1	.

Operator's Comments and Contact Person's Phone number & e-mail address: Dale Wright 519 882 3137 Dale.Wright@ch2m.com

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Ontario Ministry of the Environment

Municipal Utility Monitoring Program
Mechanical Plants **R2**

Municipality:	**Corporation of the Town of Petrolia**	Operating Authority:	**OMI Canada Inc.**
Project Name:	**Petrolia WPCP**		
Mailing Address:	**411 Greenfield St Box 1270 Petrolia ON N0N 1R0**	Mailing Address:	**546 Maude St Box 329 Petrolia ON N0N 1R0**

File No. **46** (1–2)

Works Number **1100005579** (3–11)

Data Period: Month **09** Year **08** (16–19)

Days **30** (20–21)

Discharge Type **2** (22)

Update Code **R** (80)

C.P. **03**

RAW SEWAGE

	Parameter Code	Dec.	Monthly Average Results	# of Samples
Alkalinity CaCO3 mg/l	00051	2	74.00	0004

(30–34, 35, 38)

C.P. **04**

FINAL EFFLUENT

	Parameter Code	Dec.	Monthly Average Results	# of samples
Alkalinity CaCO3 mg/l	00051	2	21.00	0004
Nitrite mg/l	00021	2	< 0.01	0004
Nitrate mg/l	00022	2	9.00	0004
pH	80770	2	7.07	0004
Ecoli per 100 ml	83052	0	2	0004

(30–34, 35, 38)

Operator's Comments and Contact Person's Phone number & e-mail address: Dale Wright 519 882 3137 Dale.Wright@ch2m.com

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Municipal Utility Monitoring Program — Mechanical Plants R1

Municipality:	Corporation of the Town of Petrolia	Operating Authority:	OMI Canada Inc.
Project Name:	Petrolia WPCP		
Mailing Address:	411 Greenfield St. Box 1270 Petrolia ON N0N 1R0	Mailing Address:	546 Maude St Box 329 Petrolia ON N0N 1R0

File No.	Works Number	Data Period Month	Data Period Year	Days	Discharge Type	Update Code
46	11000057	10	08	31	2	R

C.P. 01 — **FLOWS**

		Parameter Code	Dec.	Monthly Results
Total Flow	($10^3 m^3$)	50010	3	80.373
Average Daily Flow	($10^3 m^3/d$)	50015	3	2.593
Maximum Daily Flow	($10^3 m^3/d$)	50020	3	3.253

C.P. 26 — **BYPASS**

		Parameter Code	Dec.	Monthly Results	# of Occurrences
Plant Bypass Volume	($10^3 m^3$)	50026	3	.	
Duration	(hours)	80563	1	.	
Secondary Bypass Volume	($10^3 m^3$)	50040	3	.	
Duration	(hours)	80565	1	.	

C.P. 03 — **RAW SEWAGE**

		Parameter Code	Dec.	Monthly Results	# of Samples
BOD_5	(mg/L)	00001	0	291.	05
Suspended Solids	(mg/L)	00006	0	269.	05
TKN	(mg/L)	00020	2	41.70	05
Total Phosphorus	(mg/L)	00033	1	7.0	05

C.P. 04 — **FINAL EFFLUENT**

		Parameter Code	Dec.	Monthly Results	
BOD_5	(mg/L)	00001	1	1.0	05
Suspended Solids	(mg/L)	00006	1	0.3	05
Ammonia + Ammonium	(mg/L)	00019	2	0.09	05
TKN	(mg/L)	00020	2	0.70	05
Total Phosphorus	(mg/L)	00033	2	0.41	05

C.P. 07 — **DISINFECTION**

		Parameter Code	Dec.	Monthly Results	
Chlorine Used -	(kg as Cl2)	50100	1	.	
Chlorine Dosage -	(mg/L as Cl2)	80420	1	.	
Chlorine Residual -	(mg/L as Cl2)	80420	1	.	

Operator's Comments and Contact Person's Phone number & e-mail address: Dale Wright 519 882 3137 Dale.Wright@ch2m.com

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Ontario Ministry of the Environment

Municipal Utility Monitoring Program
Mechanical Plants **R2**

Municipality:	**Corporation of the Town of Petrolia**	Operating Authority:	**OMI Canada Inc.**
Project Name:	**Petrolia WPCP**		
Mailing Address:	**411 Greenfield St Box 1270 Petrolia ON N0N 1R0**	Mailing Address:	**546 Maude St Box 329 Petrolia ON N0N 1R0**

File No.	Works Number	Data Period Month	Data Period Year	Days	Discharge Type	Update Code
4 6	1 1 0 0 0 0 5 7 9	1 0	0 8	3 1	2	R
1 2	3 11	18	19	20 21	22	80

C.P. 0 3 (12 13) **RAW SEWAGE**

	Parameter Code	Dec.	Monthly Average Results	# of Samples
Alkalinity CaCO3 mg/l	0 0 0 5 1	2	7 4 . 0 0	0 5

(30 34 / 35 / 38)

0 4 (12 13) **FINAL EFFLUENT**

	Parameter Code	Dec.	Monthly Average Results	# of samples
Alkalinity CaCO3 mg/l	0 0 0 5 1	2	1 3 . 0 0	0 5
Nitrite mg/l	0 0 0 2 1	2	< 0 . 0 2	0 5
Nitrate mg/l	0 0 0 2 2	2	1 0 . 8 0	0 5
pH	8 0 7 7 0	2	7 . 0 8	0 5
Ecoli per 100 ml	8 3 0 5 2	0	2	0 5

(30 34 / 35 / 38)

Operator's Comments and Contact Person's Phone number & e-mail address: Dale Wright 519 882 3137 Dale.Wright@ch2m.com

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Municipal Utility Monitoring Program Mechanical Plants R1

Municipality:	Corporation of the Town of Petrolia	Operating Authority:	OMI Canada Inc.
Project Name:	Petrolia WPCP		
Mailing Address:	411 Greenfield St. Box 1270 Petrolia ON N0N 1R0	Mailing Address:	546 Maude St Box 329 Petrolia ON N0N 1R0

File No. (1-2)	Works Number (3-11)	Data Period Month (16-17)	Data Period Year (18-19)	Days (20-21)	Discharge Type (22)	Update Code (80)
46	110000579	11	08	30	2	R

C.P. (12-13)		Parameter Code (30-34)	Dec. (35)	Monthly Results (38)	# of Occurrences
FLOWS					
	Total Flow ($10^3 m^3$)	50010	3	100.689	
	Average Daily Flow ($10^3 m^3/d$)	50015	3	3.356	
	Maximum Daily Flow ($10^3 m^3/d$)	50020	3	7.283	
BYPASS					
	Plant Bypass Volume ($10^3 m^3$)	50026	3	.	
	Duration (hours)	80563	1	.	
	Secondary Bypass Volume ($10^3 m^3$)	50040	3	.	
	Duration (hours)	80565	1	.	
RAW SEWAGE					# of Samples
	BOD_5 (mg/L)	00001	0	256.	0004
	Suspended Solids (mg/L)	00006	0	215.	0004
	TKN (mg/L)	00020	2	40.50	0004
	Total Phosphorus (mg/L)	00033	1	6.6	0004
FINAL EFFLUENT					
	BOD_5 (mg/L)	00001	1	1.0	0004
	Suspended Solids (mg/L)	00006	1	0.3	0004
	Ammonia + Ammonium (mg/L)	00019	2	0.08	0004
	TKN (mg/L)	00020	2	0.70	0004
	Total Phosphorus (mg/L)	00033	2	0.39	0004
DISINFECTION					
	Chlorine Used - (kg as Cl2)	50100	1	.	
	Chlorine Dosage - (mg/L as Cl2)	80410	1	.	
	Chlorine Residual - (mg/L as Cl2)	80420	1	.	

Operator's Comments and Contact Person's Phone number & e-mail address: Dale Wright 519 882 3137 Dale.Wright@ch2m.com

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Municipal Utility Monitoring Program
Mechanical Plants **R2**

Municipality:	Corporation of the Town of Petrolia	Operating Authority:	OMI Canada Inc.
Project Name:	Petrolia WPCP		
Mailing Address:	411 Greenfield St Box 1270 Petrolia ON N0N 1R0	Mailing Address:	546 Maude St Box 329 Petrolia ON N0N 1R0

File No. (1–2): 4 6

Works Number (3–11): 1 1 0 0 0 0 5 7 9

Data Period (16–19): Month 1 1 | Year 0 8

Days (20–21): 3 0

Discharge Type (22): 2

Update Code (60): R

C.P. (12–13): 0 3 **RAW SEWAGE**

Parameter	Parameter Code (30–34)	Dec. (35)	Monthly Average Results (38)	# of Samples
Alkalinity CaCO3 mg/l	0 0 0 5 1	2	8 1 . 0 0	0 4

C.P. (12–13): 0 4 **FINAL EFFLUENT**

Parameter	Parameter Code (30–34)	Dec. (35)	Monthly Average Results (38)	# of samples
Alkalinity CaCO3 mg/l	0 0 0 5 1	2	2 8 . 0 0	0 4
Nitrite mg/l	0 0 0 2 1	2	< 0 . 0 1	0 4
Nitrate mg/l	0 0 0 2 2	2	9 . 0 0	0 4
pH	8 0 7 7 0	2	7 . 0 6	0 4
Ecoli per 100 ml	8 3 0 5 2	0	2	0 4

Operator's Comments and Contact Person's Phone number & e-mail address: Dale Wright 519 882 3137 Dale.Wright@ch2m.com

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Municipal Utility Monitoring Program Mechanical Plants R1

Municipality:	Corporation of the Town of Petrolia	Operating Authority:	OMI Canada Inc.
Project Name:	Petrolia WPCP		
Mailing Address:	411 Greenfield St. Box 1270 Petrolia ON N0N 1R0	Mailing Address:	546 Maude St Box 329 Petrolia ON N0N 1R0

File No. (1-2)	Works Number (3-11)	Data Period Month (18-19)	Data Period Year	Days (20-21)	Discharge Type (22)	Update Code (80)
4 6	1 1 0 0 0 0 5 7 9	1 2	0 8	3 0	2	R

C.P. (12-13)		Parameter Code (30-34)		Dec. (35)	Monthly Results (36)	# of Occurrences
0 1	**FLOWS**					
	Total Flow	($10^3 m^3$)	5 0 0 1 0	3	1 1 2 . 0 7 4	
	Average Daily Flow	($10^3 m^3/d$)	5 0 0 1 5	3	3 . 6 1 5	
	Maximum Daily Flow	($10^3 m^3/d$)	5 0 0 2 0	3	8 . 1 2 6	
2 6	**BYPASS**					
	Plant Bypass Volume	($10^3 m^3$)	5 0 0 2 6	3	.	
	Duration	(hours)	8 0 5 6 3	1	.	
	Secondary Bypass Volume	($10^3 m^3$)	5 0 0 4 0	3	.	
	Duration	(hours)	8 0 5 6 5	1	.	
0 3	**RAW SEWAGE**					# of Samples
	BOD_5	(mg/L)	0 0 0 0 1	0	2 1 2 .	0 5
	Suspended Solids	(mg/L)	0 0 0 0 6	0	1 6 2 .	0 5
	TKN	(mg/L)	0 0 0 2 0	2	3 0 . 0 0	0 5
	Total Phosphorus	(mg/L)	0 0 0 3 3	1	4 . 8	0 5
0 4	**FINAL EFFLUENT**					
	BOD_5	(mg/L)	0 0 0 0 1	1	2 . 0	0 5
	Suspended Solids	(mg/L)	0 0 0 0 6	1	0 . 8	0 5
	Ammonia + Ammonium	(mg/L)	0 0 0 1 9	2	0 . 1 2	0 5
	TKN	(mg/L)	0 0 0 2 0	2	1 . 5 0	0 5
	Total Phosphorus	(mg/L)	0 0 0 3 3	2	0 . 3 6	0 5
0 7	**DISINFECTION**					
	Chlorine Used -	(kg as Cl2)	5 0 1 0 0	1	.	
	Chlorine Dosage -	(mg/L as Cl2)	8 0 4 1 0	1	.	
	Chlorine Residual -	(mg/L as Cl2)	8 0 4 2 0	1	.	

Operator's Comments and Contact Person's Phone number & e-mail address: Dale Wright 519 882 3137 Dale.Wright@ch2m.com
Seasonal disinfection

Return completed blue form to:

Ontario Ministry of the Environment

Municipal Utility Monitoring Program
Mechanical Plants **R2**

Municipality:	**Corporation of the Town of Petrolia**	Operating Authority:	**OMI Canada Inc.**
Project Name:	**Petrolia WPCP**		
Mailing Address:	**411 Greenfield St Box 1270 Petrolia ON N0N 1R0**	Mailing Address:	**546 Maude St Box 329 Petrolia ON N0N 1R0**

File No. (1–2): **4 6**

Works Number (3–11): **1 1 0 0 0 0 5 7 9**

Data Period (16–19): Month **1 2** Year **0 8**

Days (20–21): **3 0**

Discharge Type (22): **2**

Update Code (60): **R**

C.P. (12–13): **0 3** **RAW SEWAGE**

Parameter	Parameter Code (30–34)	Dec. (35)	Monthly Average Results (38)	# of Samples
Alkalinity CaCO3 mg/l	0 0 0 5 1	2	7 3 . 0 0	0 5

C.P. (12–13): **0 4** **FINAL EFFLUENT**

Parameter	Parameter Code (30–34)	Dec. (35)	Monthly Average Results (38)	# of samples
Alkalinity CaCO3 mg/l	0 0 0 5 1	2	2 1 . 0 0	0 5
Nitrite mg/l	0 0 0 2 1	2	< 0 . 0 2	0 5
Nitrate mg/l	0 0 0 2 2	2	1 0 . 1 0	0 5
pH	8 0 7 7 0	2	7 . 4 5	0 5

Operator's Comments and Contact Person's Phone number & e-mail address: Dale Wright 519 882 3137 Dale.Wright@ch2m.com
Seasonal disinfection

Return completed blue form to:

OMI DATA

PETROLIA WPCP EFFLUENT LOADINGS 2008

PARAMETER	AVERAGE MONTHLY LOADING (Kg/d)				AVG FLOW	AVERAGE MONTHLY CONCENTRATION (mg/L)			
	SUSPENDED SOLIDS	BOD	TOTAL "P"	AMMONIA		SUSPENDED SOLIDS	BOD	TOTAL "P"	AMMONIA
MONTH									
JAN.	0.96	3.21	1.54	0.26	3211	0.3	1.0	0.48	0.08
FEB.	1.13	4.14	1.88	0.30	3768	0.3	1.1	0.50	0.08
MARCH	11.73	4.30	2.38	0.47	3909	3.0	1.1	0.61	0.12
APRIL	1.83	3.65	1.39	0.33	3654	0.5	1.0	0.38	0.09
MAY	1.85	3.69	1.91	0.31	3076	0.6	1.2	0.62	0.10
JUNE	1.59	3.18	1.46	0.38	3182	0.5	1.0	0.46	0.12
JULY	2.41	3.91	1.69	0.21	3010	0.8	1.3	0.56	0.07
AUGUST	1.06	5.30	0.64	0.24	2650	0.4	2.0	0.24	0.09
SEPT.	1.18	3.82	1.03	0.24	2942	0.4	1.3	0.35	0.08
OCT.	0.78	2.59	1.06	0.23	2593	0.3	1.0	0.41	0.09
NOV.	1.01	3.36	1.31	0.27	3356	0.3	1.0	0.39	0.08
DEC.	2.89	7.23	1.30	0.43	3615	0.8	2.0	0.36	0.12

Average monthly concentration X average monthly flow / 1000 = Average monthly loading

2008 AVERAGE MONTHLY ANALYTICAL RESULTS

Petrolia W.P.C.P.
Operations Number: 110000579
Operating Authority: O.M.I. Canada Inc.
Municipality: Town of Petrolia

Month	FLOWS		RAW INFLUENT Monthly Average					FINAL EFFLUENT Monthly Average								Geomean Avg
	Total Flow m3	Avg. Flows m3/Day	BOD5 mg/L	S. S. mg/L	TKN mg/L	Total P mg/L	Alkalinity CaCO3 mg/L	BOD5 mg/L	S. S. mg/L	TKN mg/L	Total P mg/L	Alkalinity CaCO3 mg/L	Nitrite NO2 mg/L	Nitrate NO3 mg/L	Ammonia NH3 mg/L	E-Coli Per 100ml
January	99550	3211	172	144	32.0	5.1	225	1.0	0.3	1.4	0.48	109	0.030	11.5	0.08	N/A
February	109263	3768	228	204	34.9	5.5	226	1.1	0.3	1.3	0.50	86	0.003	11.5	0.08	N/A
March	121176	3909	167	130	30.1	3.0	211	1.1	3.0	1.3	0.61	99	0.008	10.7	0.12	N/A
April	109607	3654	219	184	37.1	5.8	161	1.0	0.5	1.2	0.38	56	0.009	12.1	0.09	2
May	95347	3076	208	166	45.4	6.8	88	1.2	0.6	1.0	0.62	17	0.015	14.3	0.10	2
June	95463	3182	210	187	40.5	5.7	85	1.0	0.5	1.5	0.46	15	0.016	11.3	0.12	3
July	93323	3010	213	204	36.6	6.0	68	1.3	0.8	1.2	0.56	15	0.005	14.6	0.07	2
August	82146	2650	143	125	31.5	5.4	69	2.0	0.4	0.8	0.24	18	0.005	9.0	0.09	2
September	88245	2942	262	206	41.1	6.7	74	1.3	0.4	1.2	0.35	21	0.004	9.0	0.08	2
October	80373	2593	291	269	41.7	7.0	74	1.0	0.3	0.7	0.41	13	0.014	10.8	0.09	2
November	100689	3356	256	215	40.5	6.6	81	1.0	0.3	0.7	0.39	28	0.004	9.0	0.08	2
December	112074	3615	212	162	30.0	4.8	73	2.0	0.8	1.5	0.36	21	0.014	10.1	0.12	N/A
Total Flow / 08	1187256															
Annual Average:			215	183	36.8	5.7	120	1.3	0.7	1.2	0.45	42	0.011	11.2	0.09	2

2008 WEEKLY ANALYTICAL and MONTHLY AVERAGE RESULTS

Petrolia W.P.C.P.
Operations Number 110000579
Operating Authority: O.M.I. Canada Inc.
Municipality: Town of Petrolia

MONTH: January

YEAR: 2008

Analyst : Dale Wright

	Aeration	RAW INFLUENT						FINAL EFFLUENT										
Test # Date	MLSS mg/L	Flows m³	BOD5 mg/L	S. S. mg/L	TKN mg/L	Total P mg/L	Alkalinity CaCO3 mg/L	BOD5 mg/L	S. S. mg/L	TKN mg/L	Total P mg/L	Alkalinity CaCO3 mg/L	Nitrite NO2 mg/L	Nitrate NO3 mg/L	Ammonia NH3 mg/L	E-Coli Per 100ml	Reactive P mg/L	pH
1 02-Jan	4688	3273	187	140	29.3	5.6	210	1.0	0.3	0.7	0.45	120	0.003	11.3	0.12	N/A	0.33	7.26
2 09-Jan	3660	6579	167	145	21.4	3.8	222	1.0	0.3	1.6	0.64	124	0.130	8.4	0.09	N/A	0.56	7.66
3 16-Jan	4824	3002	211	106	32.1	4.8	240	1.0	0.3	1.5	0.30	136	0.005	13.6	0.06	N/A	0.25	7.77
4 23-Jan	4992	3073	184	236	44.6	7.0	252	1.0	0.5	0.9	0.48	82	0.003	13.0	0.03	N/A	0.41	7.38
5 30-Jan	5042	3803	111	94	32.4	4.3	202	1.0	0.3	2.3	0.53	82	0.008	11.4	0.08	N/A	0.47	7.33
6 /																		
Number of Tests			5	5	5	5	5	5	5	5	5	5	5	5	5	0	5	5
Monthly Average:			172	144	32.0	5.1	225	1.0	0.3	1.4	0.48	109	0.030	11.5	0.08	N/A	0.40	7.48

Comments: Seasonal disinfection.

2008 WEEKLY ANALYTICAL and MONTHLY AVERAGE RESULTS

Petrolia W.P.C.P.
Operations Number: 110000579
Operating Authority: O.M.I. Canada Inc.
Municipality: Town of Petrolia

MONTH: February

YEAR: 2008

Analyst : Dale Wright

	Aeration	RAW INFLUENT						FINAL EFFLUENT										
Test # Date	MLSS mg/L	Flows m³	BOD5 mg/L	S. S. mg/L	TKN mg/L	Total P mg/L	Alkalinity CaCO3 mg/L	BOD5 mg/L	S. S. mg/L	TKN mg/L	Total P mg/L	Alkalinity CaCO3 mg/L	Nitrite NO2 mg/L	Nitrate NO3 mg/L	Ammonia NH3 mg/L	E-Coli Per 100ml	Reactive P mg/L	pH
1 06-Feb	3882	6462	223	134	18.3	4.3	154	1.0	0.3	1.2	0.65	96	0.004	10.2	0.08	N/A	0.57	7.40
2 13-Feb	4682	3061	213	212	44.3	6.6	270	1.0	0.3	1.0	0.38	62	0.002	14.2	0.07	N/A	0.30	7.33
3 20-Feb	4358	3727	231	266	37.3	5.7	240	1.0	0.3	1.8	0.46	102	0.002	9.5	0.07	N/A	0.39	7.33
4 27-Feb	4384	3572	245	204	39.6	5.5	238	1.5	0.3	1.3	0.50	82	0.004	12.1	0.08	N/A	0.41	7.15
5 /																		
6 /																		
Number of Tests			4	4	4	4	4	4	4	4	4	4	4	4	4	0	4	4
Monthly Average:			228	204	34.9	5.5	226	1.1	0.3	1.3	0.50	86	0.003	11.5	0.08	N/A	0.42	7.30

Comments: Seasonal disinfection

2008 WEEKL_ ANALYTICAL and MONTHLY AVERAGE RES_LTS

Petrolia W.P.C.P.
Operations Number: 110000579
Operating Authority: O.M.I. Canada Inc.
Municipality: Town of Petrolia

MONTH: March

YEAR: 2008

Analyst : Dale Wright

	Aeraton	RAW INFLUENT						FINAL EFFLUENT										
Test # Date	MLSS mg/L	Flows m³	BOD5 mg/L	S. S. mg/L	TKN mg/L	Total P mg/L	Alkalinity CaCO3 mg/L	BOD5 mg/L	S. S. mg/L	TKN mg/L	Total P mg/L	Alkalinity CaCO3 mg/L	Nitrite NO2 mg/L	Nitrate NO3 mg/L	Ammon NH3 mg/L	E-Coli Per 100ml	Reactive P mg/L	pH
1 05-Mar	4200	3993	172	136	41.9	4.0	232	1.3	2.8	1.3	0.62	90	0.005	11.0	0.12	N/A	0.56	7.25
2 12-Mar	4102	2950	141	102	25.5	1.0	220	1.0	5.3	1.4	0.64	64	0.004	11.0	0.07	N/A	0.58	7.29
3 19-Mar	3866	6656	200	132	18.2	3.2	172	1.0	1.3	1.8	0.36	112	0.004	10.5	0.14	N/A	0.32	7.36
4 26-Mar	4146	4416	156	148	34.6	3.9	220	1.0	2.5	0.5	0.82	128	0.020	10.1	0.13	N/A	0.74	7.35
5																		
6 /																		
Number of Tests			4	4	4	4	4	4	4	4	4	4	4	4	4	0	4	4
Monthly Ave.:			167	130	30.1	3.0	211	1.1	3.0	1.3	0.61	99	0.008	10.7	0.12	N/A	0.55	7.31

Comments: Seasonal disinfection

2008 WEEKLY ANALYTICAL and MONTHLY AVERAGE RESULTS

Petrolia W.P.C.P.
Operations Number: 110000579
Operating Authority: O.M.I. Canada Inc.
Municipality: Town of Petrolia

MONTH: April

YEAR: 2008

Analyst : Dale Wright

	Aeration	RAW INFLUENT						FINAL EFFLUENT										
Test # Date	MLSS mg/L	Flows m³	BOD5 mg/L	S. S. mg/L	TKN mg/L	Total P mg/L	Alkalinity CaCO3 mg/L	BOD5 mg/L	S. S. mg/L	TKN mg/L	Total P mg/L	Alkalinity CaCO3 mg/L	Nitrite NO2 mg/L	Nitrate NO3 mg/L	Ammonia NH3 mg/L	E-Coli Per 100ml	Reactive P mg/L	pH
1 02-Apr	3522	3823	154	100	30.6	4.1	220	1.0	0.5	1.8	0.44	120	0.018	7.7	0.10	2	0.35	7.47
2 09-Apr	4362	3429	219	242	39.7	3.8	290	1.0	0.8	2.0	0.29	90	0.007	13.5	0.10	2	0.21	7.33
3 16-Apr	4238	3402	255	208	39.2	7.0	130	1.0	0.5	0.5	0.25	24	0.007	13.8	0.04	2	0.19	6.89
4 23-Apr	4206	3472	219	226	41.6	7.4	84	1.0	0.3	1.4	0.44	16	0.003	11.3	0.10	2	0.39	7.20
5 30-Apr	4004	2858	248	144	34.3	6.5	80	1.2	0.5	0.5	0.48	30	0.010	14.3	0.11	2	0.31	6.95
6 /																		
Number of Tests			5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Monthly Average:			219	184	37.1	5.8	161	1.0	0.5	1.2	0.38	56	0.009	12.1	0.09	2	0.29	7.17

Comments:

2008 WEEKLY ANALYTICAL and MONTHLY AVERAGE RESULTS

MONTH: May

Petrolia W.P.C.P.
Operations Number: 110000579
Operating Authority: O.M.I. Canada Inc.
Municipality: Town of Petrolia

YEAR: 2008

Analyst : Dale Wright

	Aeration	RAW INFLUENT						FINAL EFFLUENT										
Test # Date	MLSS mg/L	Flows m³	BOD5 mg/L	S. S. mg/L	TKN mg/L	Total P mg/L	Alkalinity CaCO3 mg/L	BOD5 mg/L	S. S. mg/L	TKN mg/L	Total P mg/L	Alkalinity CaCO3 mg/L	Nitrite NO2 mg/L	Nitrate NO3 mg/L	Ammonia NH3 mg/L	E-Coli Per 100ml	Reactive P mg/L	pH
1 07-May	3936	3421	229	94	48.8	7.5	90	1.0	1.3	1.6	0.50	16	0.002	15.4	0.13	2	0.43	7.00
2 14-May	4374	3121	164	152	42.0	6.5	88	1.0	0.5	0.8	0.46	24	0.008	12.3	0.05	2	0.38	7.24
3 21-May	4598	3181	150	154	41.0	5.7	84	1.0	0.3	1.1	1.20	20	0.048	14.9	0.11	2	0.85	7.09
4 28-May	4674	2816	290	262	49.6	7.4	88	1.9	0.3	0.5	0.41	8	0.002	14.4	0.11	2	0.35	7.37
5 22-May											0.52						0.45	
6 /																		
Number of Tests			4	4	4	4	4	4	4	4	5	4	4	4	4	4	5	4
Monthly Average:			208	166	45.4	6.8	88	1.2	0.6	1.0	0.62	17	0.015	14.3	0.10	2	0.49	7.18

Comments:

2008 WEEKLY ANALYTICAL and MONTHLY AVERAGE RESULTS

MONTH: June

Petrolia W.P.C.P.
Operations Number: 110000579
Operating Authority: O.M.I. Canada Inc.
Municipality: Town of Petrolia

YEAR: 2008

Analyst : Dale Wright

	Aeration	RAW INFLUENT						FINAL EFFLUENT										
Test # Date	MLSS mg/L	Flows m³	BOD5 mg/L	S. S. mg/L	TKN mg/L	Total P mg/L	Alkalinity CaCO3 mg/L	BOD5 mg/L	S. S. mg/L	TKN mg/L	Total P mg/L	Alkalinity CaCO3 mg/L	Nitrite NO2 mg/L	Nitrate NO3 mg/L	Ammonia NH3 mg/L	E-Coli Per 100ml	Reactive P mg/L	pH
1 04-Jun	4724	3293	243	180	42.6	5.5	82	1.0	0.3	1.3	0.67	20	0.016	10.4	0.14	8	0.56	7.22
2 11-Jun	4776	3342	260	144	38.4	5.1	88	1.0	0.3	2.2	0.30	20	0.011	9.7	0.13	2	0.26	7.36
3 18-Jun	4998	3076	249	278	43.0	6.5	84	1.0	1.0	0.8	0.46	10	0.003	12.4	0.06	2	0.43	7.12
4 25-Jun	3656	3145	88	144	37.9	5.7	84	1.0	0.3	1.7	0.40	10	0.035	12.5	0.14	4	0.33	7.07
5																		
6 /																		
Number of Tests			4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Monthly Average:			210	187	40.5	5.7	85	1.0	0.5	1.5	0.46	15	0.016	11.3	0.12	3	0.40	7.19

Comments:

2008 WEEKLY ANALYTICAL and MONTHLY AVERAGE RESULTS

Petrolia W.P.C.P.
Operations Number: 110000579
Operating Authority: O.M.I. Canada Inc.
Municipality: Town of Petrolia

MONTH: July

YEAR: 2008

Analyst : Dale Wright

	Aeration	RAW INFLUENT						FINAL EFFLUENT										
Test # Date	MLSS mg/L	Flows m³	BOD5 mg/L	S. S. mg/L	TKN mg/L	Total P mg/L	Alkalinity CaCO3 mg/L	BOD5 mg/L	S. S. mg/L	TKN mg/L	Total P mg/L	Alkalinity CaCO3 mg/L	Nitrite NO2 mg/L	Nitrate NO3 mg/L	Ammonia NH3 mg/L	E-Coli Per 100ml	Reactive P mg/L	pH
1 02-Jul	4208	3220	277	206	32.7	5.7	68	0.7	1.0	1.8	0.57	20	0.004	14.1	0.11	2	0.50	7.16
2 09-Jul	4146	3271	209	102	30.8	4.6	70	1.0	0.5	0.5	0.72	20	0.006	15.9	0.01	2	0.66	7.18
3 16-Jul	4214	2848	248	232	43.8	6.7	66	1.0	0.5	0.9	0.64	12	0.002	15.0	0.09	2	0.58	7.20
4 23-Jul	4356	3931	149	196	38.0	6.0	62	1.0	1.0	1.1	0.60	10	0.006	14.5	0.08	2	0.56	7.09
5 30-Jul	4138	2901	180	284	37.8	6.8	72	3.0	1.0	1.6	0.28	14	0.008	13.7	0.06	2	0.24	6.92
6 /																		
Number of Tests			5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Monthly Average:			213	204	36.6	6.0	68	1.3	0.8	1.2	0.56	15	0.005	14.6	0.07	2	0.51	7.11

Comments:

2008 WEEKL ANALYTICAL and MONTHLY AVERAGE RE LTS

MONTH: August

Petrolia W.P.C.P.
Operations Number: 110000579
Operating Authority: O.M.I. Canada Inc.
Municipality: Town of Petrolia

YEAR: 2008

Analyst : Dale Wright

	Aeration	RAW INFLUENT						FINAL EFFLUENT										
Test # Date	MLSS mg/L	Flows m³	BOD5 mg/L	S. S. mg/L	TKN mg/L	Total P mg/L	Alkalinity CaCO3 mg/L	BOD5 mg/L	S. S. mg/L	TKN mg/L	Total P mg/L	Alkalinity CaCO3 mg/L	Nitrite NO2 mg/L	Nitrate NO3 mg/L	Ammonia NH3 mg/L	E-Coli Per 100ml	Reactive P mg/L	pH
1 06-Aug	4142	2764	48	84	28.8	4.4	80	3.0	0.3	1.8	0.29	20	0.003	6.3	0.10	1	0.24	6.92
2 13-Aug	5042	3403	184	152	32.8	5.6	72	1.0	0.5	0.5	0.23	20	0.010	9.2	0.08	2	0.19	7.14
3 20-Aug	4716	2718	150	74	34.1	5.3	62	2.0	0.3	0.5	0.22	20	0.004	9.3	0.09	2	0.16	7.22
4 27-Aug	4962	2344	190	188	30.2	6.2	60	2.0	0.3	0.5	0.23	10	0.004	11.1	0.08	2	0.17	7.49
5																		
6																		
Number of Tests			4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Monthly Average:			143	125	31.5	5.4	69	2.0	0.4	0.8	0.24	18	0.005	9.0	0.09	2	0.19	7.19

Comments:

2008 WEEKL ANALYTICAL and MONTHLY AVERAGE RE: LTS

MONTH: September

Petrolia W.P.C.P.
Operations Number: 110000579
Operating Authority: O.M.I. Canada Inc.
Municipality: Town of Petrolia

YEAR: 2008

Analyst : Dale Wright

	Aeration	RAW INFLUENT						FINAL EFFLUENT										
Test # Date	MLSS mg/L	Flows m³	BOD5 mg/L	S. S. mg/L	TKN mg/L	Total P mg/L	Alkalinity CaCO3 mg/L	BOD5 mg/L	S. S. mg/L	TKN mg/L	Total P mg/L	Alkalinity CaCO3 mg/L	Nitrite NO2 mg/L	Nitrate NO3 mg/L	Ammonia NH3 mg/L	E-Coli Per 100ml	Reactive P mg/L	pH
1 03-Sep	5232	2636	197	202	38.7	7.2	76	2.0	0.8	1.5	0.30	12	0.004	9.8	0.07	2	0.20	7.39
2 10-Sep	5012	2894	277	198	42.1	6.0	70	1.0	0.3	1.0	0.41	20	0.003	6.2	0.08	2	0.38	6.75
3 17-Sep	4528	3140	318	164	39.2	6.0	82	1.0	0.3	1.4	0.32	40	0.003	6.6	0.08	2	0.28	7.08
4 24-Sep	4252	2594	255	258	44.4	7.5	66	1.0	0.3	1.0	0.36	10	0.004	13.3	0.07	2	0.34	7.06
Number of Tests			4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Monthly Average:			262	206	41.1	6.7	74	1.3	0.4	1.2	0.35	21	0.004	9.0	0.08	2	0.30	7.07

Comments:

2008 WEEKL[illegible]NALYTICAL and MONTHLY AVERAGE RESUL[illegible]

Petrolia W.P.C.P.
Operations Number: 110000579
Operating Authority: O.M.I. Canada Inc.
Municipality: Town of Petrolia

MONTH: October

YEAR: 2008

Analyst : Dale Wright

	Aeration	RAW INFLUENT						FINAL EFFLUENT										
Test # Date	MLSS mg/L	Flows m³	BOD5 mg/L	S. S. mg/L	TKN mg/L	Total P mg/L	Alkalinity CaCO3 mg/L	BOD5 mg/L	S. S. mg/L	TKN mg/L	Total P mg/L	Alkalinity CaCO3 mg/L	Nitrite NO2 mg/L	Nitrate NO3 mg/L	Ammonia NH3 mg/L	E-Coli Per 100ml	Reactive P mg/L	pH
1 01-Oct	4598	2580	236	260	45.3	6.6	80	1.0	0.3	0.5	0.42	16	0.004	11.7	0.11	2	0.35	7.10
2 08-Oct	4616	2600	237	278	45.9	7.1	70	1.0	0.3	0.9	0.33	16	0.003	13.4	0.12	2	0.27	7.05
3 15-Oct	4860	2637	325	282	45.5	7.6	68	1.0	0.3	0.5	0.53	12	0.052	10.6	0.09	2	0.50	7.06
4 22-Oct	4670	2472	338	296	28.3	7.1	78	1.0	0.3	0.9	0.40	10	0.009	9.3	0.08	2	0.35	7.10
5 29-Oct	4854	2723	320	230	43.7	6.8	72	1.0	0.3	0.5	0.36	10	0.003	9.1	0.07	2	0.30	7.11
6 /																		
Number of Tests			5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Monthly Average:			291	269	41.7	7.0	74	1.0	0.3	0.7	0.41	13	0.014	10.8	0.09	2	0.35	7.08

Comments:

2008 WEEKLY ANALYTICAL and MONTHLY AVERAGE RESULTS

Petrolia W.P.C.P.
Operations Number: 110000579
Operating Authority: O.M.I. Canada Inc.
Municipality: Town of Petrolia

MONTH: November

YEAR: 2008

Analyst : Dale Wright

	Aeration	RAW INFLUENT						FINAL EFFLUENT										
Test # Date	MLSS mg/L	Flows m³	BOD5 mg/L	S. S. mg/L	TKN mg/L	Total P mg/L	Alkalinity CaCO3 mg/L	BOD5 mg/L	S. S. mg/L	TKN mg/L	Total P mg/L	Alkalinity CaCO3 mg/L	Nitrite NO2 mg/L	Nitrate NO3 mg/L	Ammonia NH3 mg/L	E-Coli Per 100ml	Reactive P mg/L	pH
1 05-Nov	4928	2568	307	240	39.2	6.1	70	1.0	0.3	0.5	0.63	20	0.003	10.4	0.08	2	0.57	7.05
2 12-Nov	3490	2834	260	92	50.9	7.9	82	1.0	0.3	0.5	0.30	18	0.003	9.7	0.05	2	0.20	7.02
3 19-Nov	5070	3161	196	416	41.8	7.5	80	1.0	0.3	1.1	0.33	40	0.007	7.6	0.08	4	0.26	7.10
4 26-Nov	4914	3845	261	110	30.0	4.8	92	1.0	0.3	0.5	0.28	32	0.004	8.3	0.11	2	0.20	7.06
5																		
6 /																		
Number of Tests			4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Monthly Average:			256	215	40.5	6.6	81	1.0	0.3	0.7	0.39	28	0.004	9.0	0.08	2	0.31	7.06

Comments:

2008 WEEKLY ANALYTICAL and MONTHLY AVERAGE RESULTS

Petrolia W.P.C.P.
Operations Number 110000579
Operating Authority: O.M.I. Canada Inc.
Municipality: Town of Petrolia

MONTH: December

YEAR: 2008

Analyst : Dale Wright

	Aeration	RAW INFLUENT						FINAL EFFLUENT										
Test # Date	MLSS mg/L	Flows m³	BOD5 mg/L	S. S. mg/L	TKN mg/L	Total P mg/L	Alkalinity CaCO3 mg/L	BOD5 mg/L	S. S. mg/L	TKN mg/L	Total P mg/L	Alkalinity CaCO3 mg/L	Nitrite NO2 mg/L	Nitrate NO3 mg/L	Ammonia NH3 mg/L	E-Coli Per 100ml	Reactive P mg/L	pH
1 03-Dec	4774	3396	275	220	39.3	6.4	72	1.0	0.3	2.0	0.31	24	0.005	7.6	0.07	N/A	0.26	7.30
2 10-Dec	4844	4926	260	90	27.6	4.0	72	1.0	0.8	2.1	0.50	20	0.048	10.8	0.25	N/A	0.45	7.27
3 17-Dec	4758	3110	339	248	38.4	6.0	76	3.0	0.3	1.5	0.37	20	0.005	11.3	0.12	N/A	0.30	7.47
4 22-Dec	4886	2973	119	172	33.8	5.6	74	3.0	2.0	1.2	0.35	20	0.003	14.9	0.07	N/A	0.25	7.56
5 29-Dec	4508	5406	65	82	10.8	1.8	72	2.0	0.8	0.5	0.25	20	0.008	5.9	0.10	N/A	0.18	7.67
6																		
Number of Tests			5	5	5	5	5	5	5	5	5	5	5	5	5	0	5	5
Monthly Average:			212	162	30.0	4.8	73	2.0	0.8	1.5	0.36	21	0.014	10.1	0.12	N/A	0.29	7.45

Comments: Seasonal disinfection

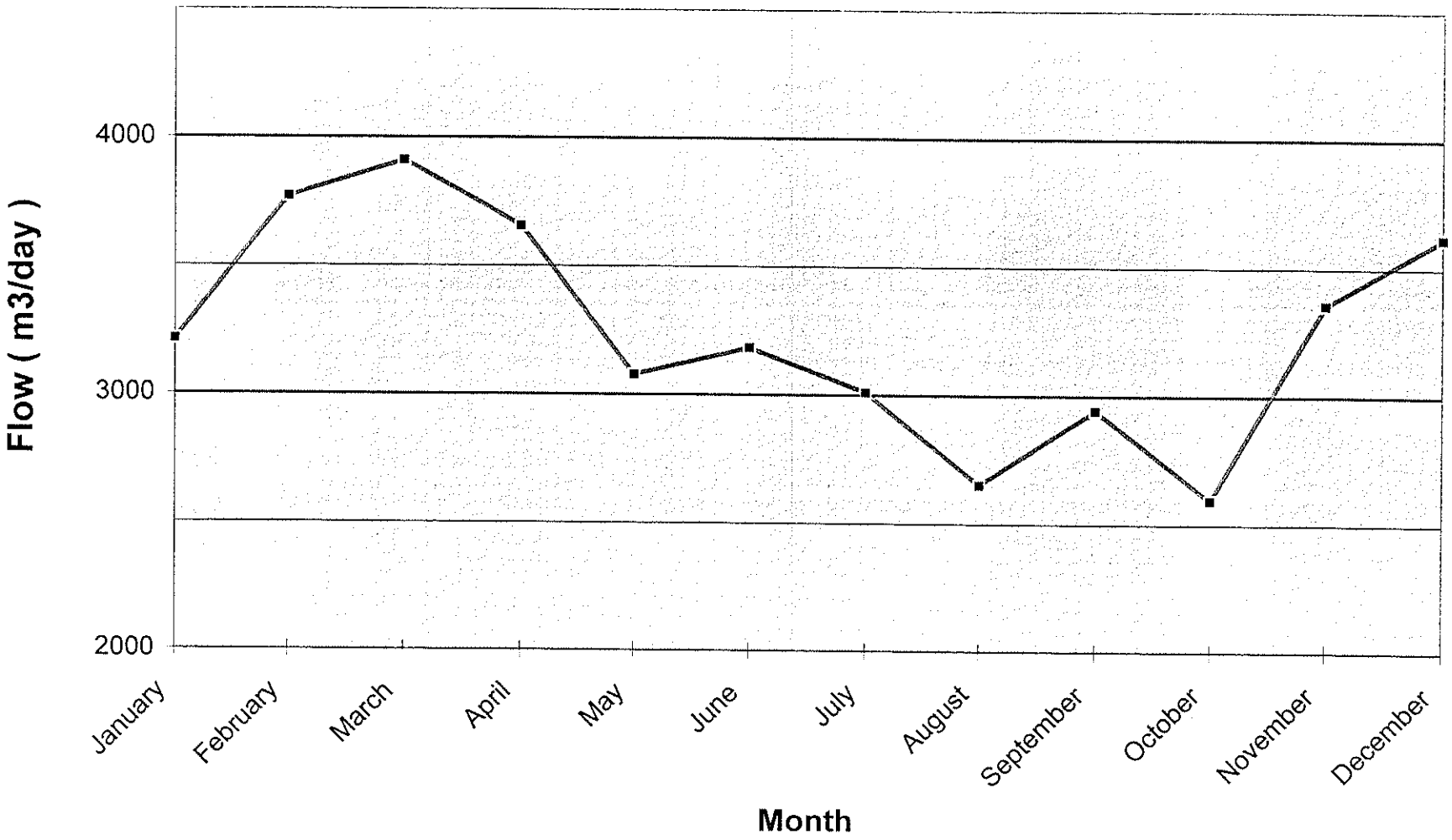
FLOW DATA

O.M.I. Canada Flow Reports Petrolia W.P.C.P. 2008

Date	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	m3/d
1	3497	3190	3316	7079	2963	2403	2852	2339	2230	2580	2650	3724	m3
2	3273	3051	3364	3823	3279	2637	3220	2447	2398	2545	2647	3215	m3
3	2974	2944	4790	3858	3302	2983	4578	1978	2636	2654	3328	3396	m3
4	2731	2983	4570	4577	2526	3293	3249	1994	2589	2496	2703	3286	m3
5	2614	5287	3993	4021	2721	3423	3171	3552	2420	2482	2568	3099	m3
6	3485	6462	3831	3634	2844	3466	2882	2764	2560	2503	2396	2885	m3
7	3703	3814	3768	3397	3421	3452	3050	3013	2785	2378	2835	2735	m3
8	3733	3386	3386	3763	3541	3250	2983	2847	2566	2600	2969	2787	m3
9	6579	3504	3298	3429	3300	3474	3271	2528	3872	2383	2850	4650	m3
10	3820	3250	3390	3266	2748	4737	3097	3804	2894	2435	2983	4926	m3
11	3291	3084	3454	3832	2799	3342	3115	3453	2780	2569	2773	3463	m3
12	3064	2982	2950	4424	4442	2973	3045	2667	2656	2478	2834	3226	m3
13	2932	3061	3383	4349	3451	3071	2896	3403	4835	2594	4573	3053	m3
14	3064	2925	4185	3931	3121	3108	2907	3092	6203	2598	3342	3056	m3
15	3110	2931	4302	3456	2960	2824	2872	2716	5956	2637	7283	3602	m3
16	3002	3029	3613	3402	3059	3033	2848	2257	3109	2851	5201	3391	m3
17	3006	8015	3498	3381	2642	3040	2995	2111	3140	2464	4726	3110	m3
18	2997	7018	4009	3343	2563	3076	2840	2434	2795	2450	3119	3010	m3
19	2878	4052	6656	3408	2386	3135	2777	2683	2657	2475	3161	3033	m3
20	2703	3727	4354	3086	2670	2849	2790	2718	2377	2643	3201	2916	m3
21	2854	3512	3826	3306	3181	3026	2824	2773	2311	3253	3155	2960	m3
22	2928	3356	3481	3724	3082	2215	3395	2716	2313	2472	3056	2973	m3
23	3073	3346	3061	3472	2988	2500	3931	2460	2459	2438	2997	2880	m3
24	2804	3193	3059	3277	2994	2957	3351	2200	2594	2380	3201	3989	m3
25	2773	3431	3457	3288	2960	3145	2838	2290	2551	2793	3819	3640	m3
26	2691	3496	4416	3130	3051	3775	2520	2635	2477	2602	3845	2985	m3
27	2805	3572	4403	2715	2858	3184	2200	2344	2330	2567	3433	6359	m3
28	3008	3381	4566	3024	2816	4657	2694	2429	2334	3139	3150	8126	m3
29	3292	3281	4004	3354	3268	3311	2688	2646	2491	2723	2955	5406	m3
30	3803		3651	2858	3040	3124	2901	2533	2927	2595	2936	3185	m3
31	3063		5142		4371		2543	2320		2596		3008	m3
Total	**99550**	**109263**	**121176**	**109607**	**95347**	**95463**	**93323**	**82146**	**88245**	**80373**	**100689**	**112074**	m3
Min.	2614	2925	2950	2715	2386	2215	2200	1978	2230	2378	2396	2735	m3
Max	6579	8015	6656	7079	4442	4737	4578	3804	6203	3253	7283	8126	m3
Avg.	3211	3768	3909	3654	3076	3182	3010	2650	2942	2593	3356	3615	m3

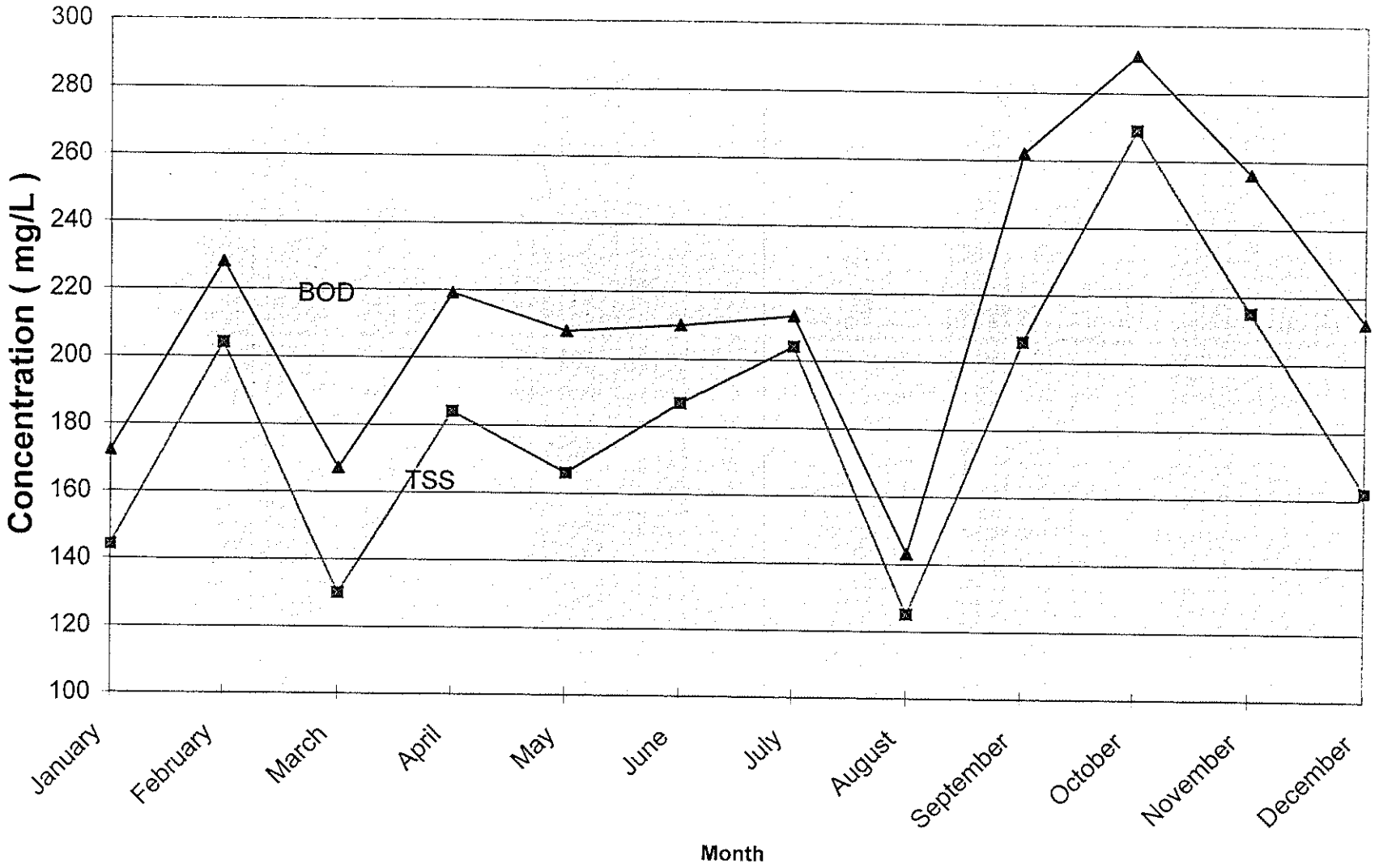
2006 Total Flow m3	1074881
2006 Daily Avg.	2945
2007 Total Flow m3	1073287
2007 Daily Avg.	2941
Total yearly flow m3	1187256
Daily Avg. m3	3247

Petrolia W.P.C.P. 2008 Flows

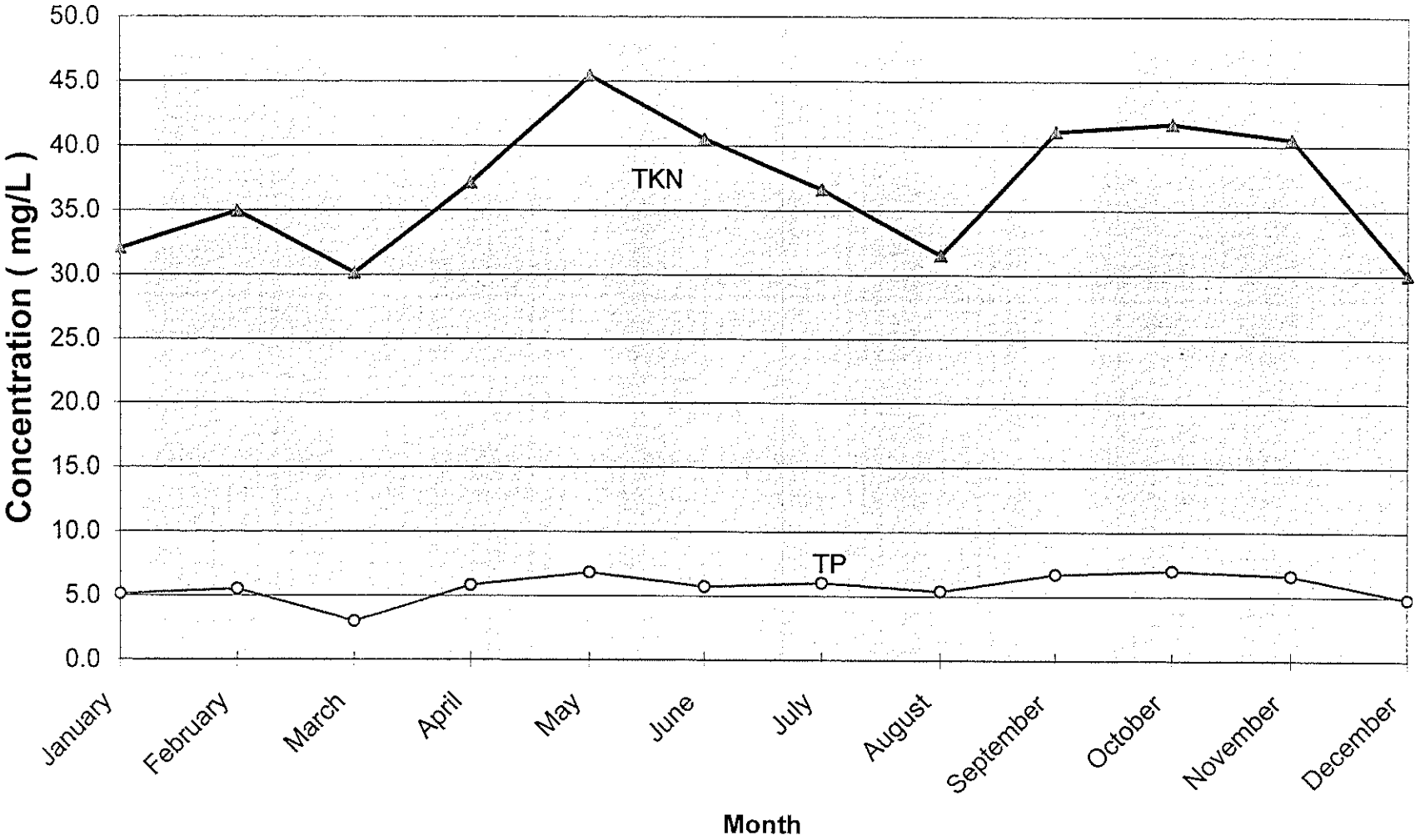


GRAPHS

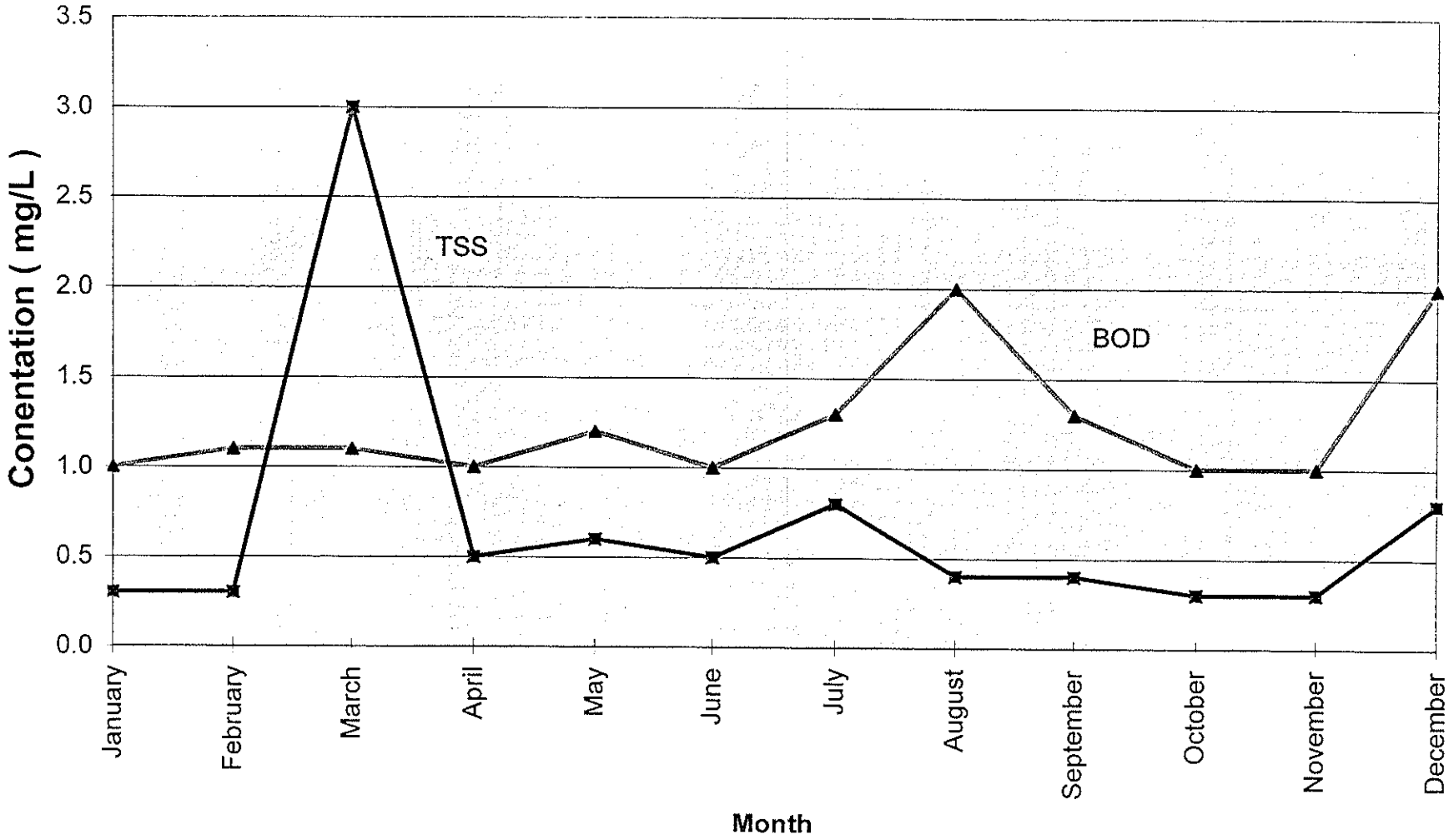
Petrolia W.P.C.P. 2008 Influent BOD and T.S.S.



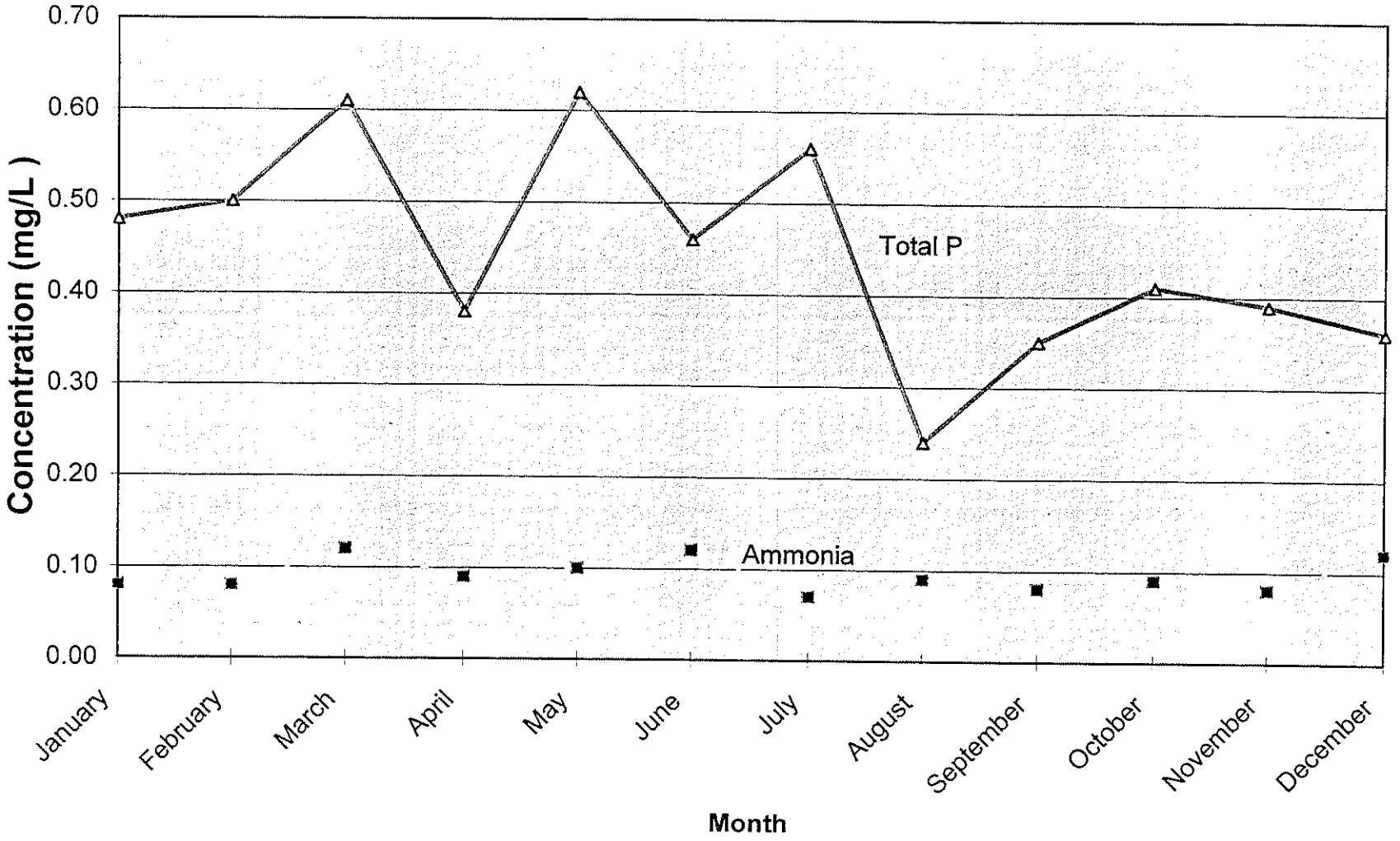
Petrolia W.P.C.P. 2008 Influent TKN and Total P



Petrolia W.P.C.P. 2008 Effluent BOD and TSS



Petrolia W.P.C.P. 2008 Effluent Total P & Ammonia



LAGOON &
SLUDGE

SGS Lakefield Research Limited
P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - K0L 2H0
Phone: 705-652-2000 FAX: 705-652-6365

O.M.I. Canada Inc.(Petrolia WPCP) Thursday, December 11, 2008
Attn : Candace Tidball ctidball@lambtonshores.ca; omipetrolia@xcelco.on.ca

7550 Brush Rd., Box 659
Forest, ON
N0N 1J0, Canada

Phone: 519-786-2421
Fax:excel (SMP), pdf

Date Rec. : 04 December 2008
LR Report: **CA12095-DEC08**

Copy: #1

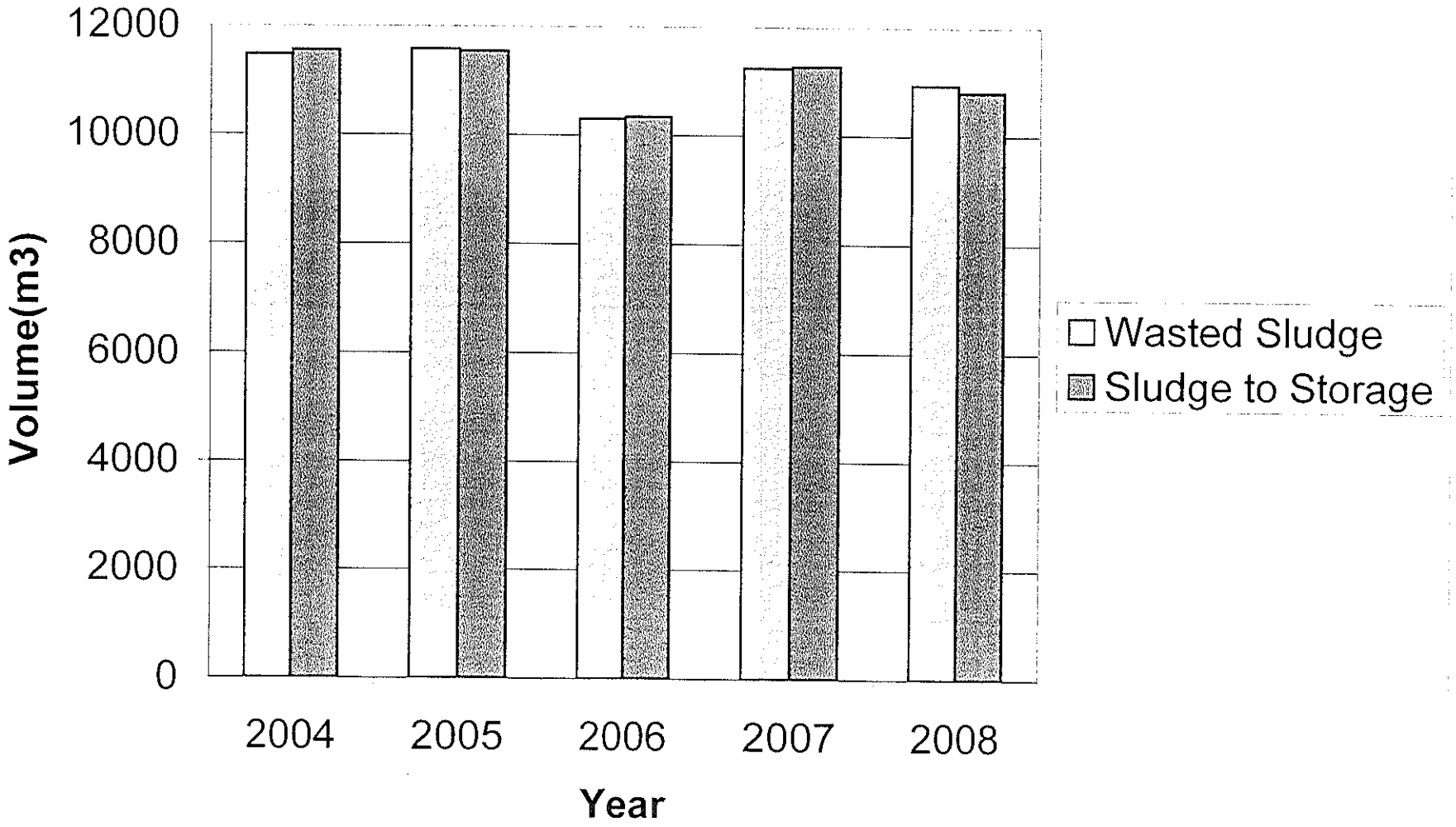
CERTIFICATE OF ANALYSIS
Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Approval Date	4: Analysis Approval Time	5: Petrolia Sludge
Sample Date & Time					03-Dec-08 08:00
Temperature Upon Receipt [°C]	--	---	---	---	2.0
Total Solids [mg/L]	08-Dec-08	08:41	11-Dec-08	13:50	7700
TS ASH [mg/L]	08-Dec-08	08:41	11-Dec-08	13:50	2850
TS LOI [mg/L]	08-Dec-08	08:41	11-Dec-08	13:50	4900
T. kjeldahl Nitrogen [as N mg/L]	05-Dec-08	10:34	08-Dec-08	15:13	462
Ammonia+Ammonium (N) [mg/L]	05-Dec-08	13:25	09-Dec-08	08:12	27.4
Nitrite as N [mg/L]	05-Dec-08	18:04	09-Dec-08	11:18	0.4
Nitrate as N [mg/L]	05-Dec-08	18:04	09-Dec-08	11:18	2.5
Nitrite+Nitrate as N [mg/L]	05-Dec-08	18:04	09-Dec-08	11:18	2.9
Arsenic [mg/L]	08-Dec-08	08:00	08-Dec-08	14:23	< 0.3
Cadmium [mg/L]	08-Dec-08	08:00	08-Dec-08	14:23	< 0.03
Cobalt [mg/L]	08-Dec-08	08:00	08-Dec-08	14:23	< 0.05
Chromium [mg/L]	08-Dec-08	08:00	08-Dec-08	14:23	0.5
Copper [mg/L]	08-Dec-08	08:00	08-Dec-08	14:23	5.0
Mercury [mg/L]	08-Dec-08	10:45	08-Dec-08	14:23	0.002
Potassium [mg/L]	08-Dec-08	08:00	08-Dec-08	14:23	49
Molybdenum [mg/L]	08-Dec-08	08:00	08-Dec-08	14:23	< 0.1
Nickel [mg/L]	08-Dec-08	08:00	08-Dec-08	14:23	0.2
Phosphorus [mg/L]	08-Dec-08	08:00	08-Dec-08	14:23	310
Lead [mg/L]	08-Dec-08	08:00	08-Dec-08	14:23	0.7
Selenium [mg/L]	08-Dec-08	08:00	08-Dec-08	14:23	< 0.3
Zinc [mg/L]	08-Dec-08	08:00	08-Dec-08	14:23	3.4

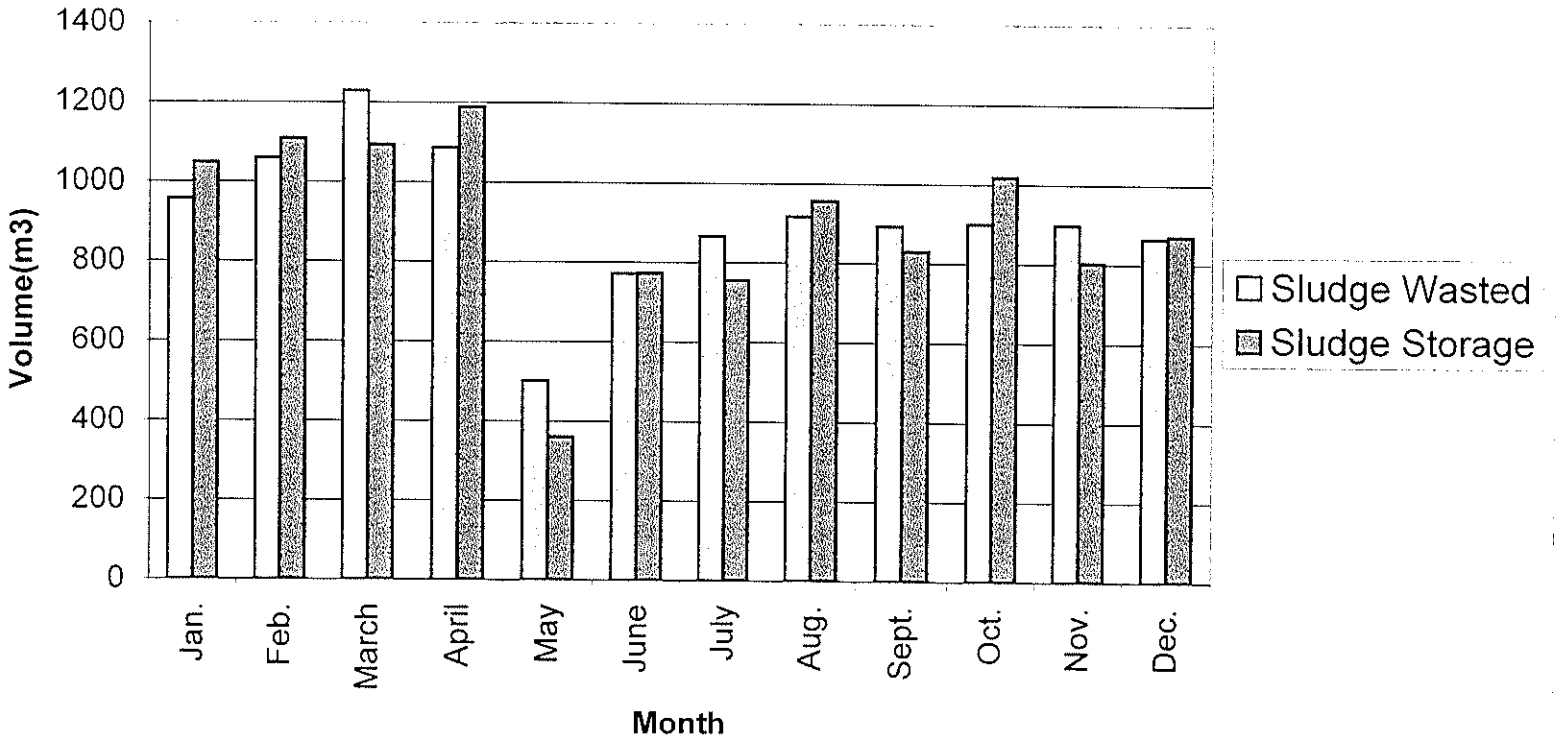
Petrolia WPCP 2008 Sludge Summary Report

Month	Sludge Wasted/ To Storage m3		Total m3
Jan	957 1049		957 1049
Feb	1060 1109		1060 1109
Mar	1229 1094		1229 1094
Apr	1086 1190		1086 1190
May	501 361		501 361
June	771 773		771 773
July	866 756		866 756
Aug	916 957		916 957
Sept	893 830		893 830
Oct	900 1018		900 1018
Nov	898 803		898 803
Dec	864 870		864 870
Total Sludge Wasted	10941		10941
Total Sludge to Storage	10810		10810

Sludge Summary Report for Petrolia WPCP



Petrolia WPCP Sludge Summary for 2008



Petrolia lagoons 2008

Flow Meter

A Pulsar Ultra 3 flow meter with transducer was installed on the line going to the lagoons and was commissioned on April 7 2008. The flow meter had to be calibrated numerous times by the supplier, ACI Instrumentation Limited, Shailesh Bhadresa, due to a discrepancy between manual flow calculations, where a known volume of sludge was being transferred to the east lagoon, and flow meter results. The flow meter is now calibrated correctly. As a result of the discrepancy, I have used the manual calculations, as in previous years, to estimate the volume of sludge transferred to the east lagoon for 2008. I feel this is a more accurate reflection of the total volume of sludge transferred to the east lagoon.

East Lagoon

There was no discharge from the east lagoon in 2008. Approximately 10810m3 of sludge was transferred to the east lagoon in 2008.

West Lagoon

The west lagoon was partially discharged in May 2008. Approximately 15817 m3 was discharged. Refer to next two pages for details and sample results. Approximately 39688 m3 of flow was sent to the west lagoon in 2008. This included plant maintenance flows, flows from rain events or high flow conditions, leaking valves, infiltration, etc.

Petrolia West Lagoon Discharge May 2008

May 21 2008. OCWA put Clarion A510P, 4466 imperial gallons in Petrolia west lagoon. Started about 1230 and finished about 1430 hours. Used three OCWA boats and chemical from General Chemical.

May 22. Collected west lagoon pre discharge sample at 0900 and tested in Forest and submit TKN and bacti samples to SGS Lakefield Research.

May 22 1700 hours. Emailed Don Hayes and Randy Brown with the test results.

May 23 0940 hours. Phoned Randy Brown and advised of our intention to begin discharging, if he wants to collect samples.

May 23 at 1000 hours began discharge. Collected Start of discharge samples at 1015 and tested in Forest and submit TKN and bacti samples to SGS Lakefield Research. Level of west lagoon 41 inches below the top of the cement.

May 24 checked west lagoon discharge.

May 26 collected during discharge sample at 0800. Stopped west lagoon discharge at 0805. Notified Randy Brown that the discharge is stopped. Level at 48.5 inches from the top of the cement. Did tests in Forest and submit TKN and bacti samples to SGS Lakefield Research.

Duration of discharge 70 hours.
Total volume discharged to Bear Creek 15817 m3. (48.5 inches - 41 inches = 7.5 inches discharged at approximately 2109m3 per inch). The loading limits were not exceeded during the month of May.

Plant flows for May: 95347 m3
West lagoon discharge flows for May 23 - May 26: 15817 m3
Total flow to Bear Creek for May: 111164 m3 / 31 days = 3585 m3 /day
Total flow to Bear Creek during May 23 – 26: 8942 + 15817 = 24759 m3 / 3 days = 8253 m3/day

May Monthly Loading and Concentration including lagoon discharge and plant discharge.

Parameter	BOD	SS	Total P	Ammonia
Avg monthly Loading Kg/d	7.17	12.18	1.82	2.15
Avg monthly concentration mg/L	2.0	3.4	0.51	0.60
Monthly flow 3585 m3				
Monthly loading limits Kg/d	38	38	3.8	11.4
Monthly concentration limits mg/L	10	10	1	3

LAGOON DATA
LOCATION: Petrolia West
YEAR: 2008

	LAGOON EFFLUENT										
Date	BOD5 mg/L	S. S. mg/L	TKN mg/L	Total P mg/L	Alkalinity CaCO3 mg/L	Nitrite NO2 mg/L	Nitrate NO3 mg/L	Ammonia NH3 mg/L	E-Coli Per 100ml	Reactive P mg/L	pH -log[H]+
02-Apr 9:00	1.9	35.0	7.2	0.65	170	0.015	2.3	7.10	146	0.25	8.16
07-May 930	N/A	109.0		>0.90	N/A	N/A	N/A	N/A		0.27	N/A
22-May 9:00 PreD	1.0	9.5	2.0	0.15	20	0.018	1.6	1.05	2	0.02	7.30
23-May 10:15 Start	1.6	8.0	2.6	0.19	20	0.021	1.6	1.15	4	0.09	7.21
26-May 8:00 During	5.8	10.0	3.3	0.29	24	0.020	1.6	2.10	42	0.03	7.32
03-Dec 9:00 PreD		22.0		0.33				4.30	30	0.13	

Comments:

Petrolia WPCP Flow Diversion to Lagoons

Year 2008 Month Jan-Mar

CH2MHILL OMI

Date	Start time	m3	End time	m3	East	West	reason for flow
01/02/2008					200		Transferred sludge
01/09/2008					118		Transferred sludge
01/09/2008	4:55	2588	9:00	3855		1267	Bypassed sand filter
01/14/2008					274		Transferred sludge
01/16/2008	15:00	2206	16:15	2396		190	Cleaned clarifiers
01/22/2008					227		Transferred sludge
01/28/2008					230		Transferred sludge
01/29/2008	11:20	1785	16:05	2558		773	Cleaned clarifiers and contact chamber
02/05/2008					230		Transferred sludge
02/06/2008	8:30	3242	15:00	4530		1288	High flows
02/12/2008					233		Transferred sludge
02/17/2008	21:05	6962	23:59	8015		1053	High flows
02/18/2008	0:00	0	10:30	4640		4640	High flows
02/19/2008					241		Transferred sludge
02/25/2008					233		Transferred sludge
02/29/2008					172		Transferred sludge
03/05/2008					112		Transferred sludge
03/07/2008					164		Transferred sludge
03/11/2008					216		Transferred sludge
03/17/2008					246		Transferred sludge
03/20/2008					88		Transferred sludge
03/27/2008					268		Transferred sludge
Total					3252	9211	

Petrolia WPCP Flow Diversion to Lagoons

Year 2008 Month April

CH2MHILL OMI

Date	Start time	m3	End time	m3	East	West	reason for flow
1	13:00	4918	16:20	6031		1113	Hosing weirs
2	10:20	1764	16:15	2953		1189	Cleaned clarifiers
3					257		Transferred sludge
4							
5							
6							
7						37.91	Programming flow meter
8						3.78	Sand filter flow
9					73.51		Transferred sludge
10					153.64		Transferred sludge and HD
11						8.38	Sand filter flow
12						14.81	Sand filter flow
13						16.53	Sand filter flow
14						12.81	Sand filter flow
15						9.29	Sand filter flow
16						175.46	Hosed weirs, cleaned contact chamber
17					171.33		Transferred sludge and HD
18						2.63	Valve leaking
19						1.51	Valve leaking
20						1.17	Valve leaking
21						3.47	Valve leaking
22					167.45		Transferred sludge
23						556.67	Cleaned clarifiers and contact chamber
24						1.55	Valve leaking
25						15.43	HD
26						21.07	Sludge under transducer
27						11.46	Sludge under transducer
28						16.21	Sludge under transducer
29					195.98		Transferred sludge
30						2.9	Valve leaking
31							
Total					1018.91	3215.04	

Flow meter commissioned April 7 2008

Petrolia WPCP Flow Diversion to Lagoons

Year 2008 Month May

CH2MHILL OMI

Date	Start time	m3	End time	m3	East	West	reason for flow
1						0.67	Valve leaking
2						10.78	HD
3						6.20	Valve leaking
4						3.80	Valve leaking
5						2.74	Valve leaking
6					163.33		Transferred sludge
7						14.45	Cleaned contact chamber
8						160.96	Cleaned clarifiers
9						0.84	Valve leaking
10						3.53	Valve leaking and rain
11						0.85	Valve leaking
12						626.45	Cleaned clarifiers
13						485.78	Cleaned clarifiers
14						518.94	Hosed weirs and bleached
15						1.22	Valve leaking
16						0.65	Valve leaking
17						0.86	Valve leaking
18						3.28	Valve leaking and rain
19						7.74	Valve leaking and rain
20					118.60		Transferred sludge
21						0.25	Valve leaking
22						0.51	Valve leaking
23						0.44	Valve leaking
24						0.24	Valve leaking
25						0.17	Valve leaking
26						0.22	Valve leaking
27						0.13	Valve leaking
28						8.35	HD
29						0.31	Valve leaking
30						0.55	Valve leaking
31						17.47	Rain
Total					281.93	1878.38	

Petrolia WPCP Flow Diversion to Lagoons

Year 2008 Month June

CH2MHILL OMI

Date	Start time	m3	End time	m3	East	West	reason for flow
1						2.31	Rain
2					143.78		Transferred sludge
3						201.16	Cleaned clarifiers
4						237.28	Cleaned clarifiers
5						0.77	Leaking valve
6						0.03	Leaking valve
7						2.16	Rain
8						5.70	Rain
9						7.89	Rain
10					5.39		Transferred sludge
11						0.00	
12						9.93	HD
13						0.00	
14						0.00	
15						0.00	
16					117.37		Transferred sludge
17						0.04	Valve leaking
18						492.42	Cleaned clarifiers
19						175.62	Cleaned clarifiers
20						6.81	Rain
21						0.00	
22						0.05	Leaking valve
23						419.51	Cleaned clarifiers
24						140.69	Hosed weirs and cleaned contact chamber
25					162.04		Transferred sludge
26						9.26	HD
27						2.18	Hosed weirs
28						15.12	Rain
29						12.42	Rain
30						5.58	Rain
31							
Total					428.58	1746.93	

Petrolia WPCP Flow Diversion to Lagoons

Year 2008 Month July

CH2MHILL OMI

Date	Start time	m3	End time	m3	East	West	reason for flow
1						2.53	Rain
2						3.27	Rain
3						622.52	HD and cleaned clarifiers
4					120.35		Transferred sludge
5						0.00	
6						0.00	
7						0.00	
8						0.00	
9						0.03	Leaking valve
10						0.35	Hosed weirs
11					132.44		Transferred sludge
12						0.00	
13						0.00	
14						0.02	Leaking valve
15						0.15	Leaking valve
16						108.88	Hosed weirs and HD
17						0.01	Leaking valve
18					137.81		Transferred sludge
19						3.00	Rain
20						7.09	Rain
21						7.05	Rain
22						1.20	Rain
23						12.29	Rain
24						8.51	HD
25					72.78		Transferred sludge
26						0.04	Leaking valve
27						0.08	Leaking valve
28						0.08	Leaking valve
29						7.99	Rain
30						0.94	Rain
31						0.16	Leaking valve
Total					463.38	786.19	

Petrolia WPCP Flow Diversion to Lagoons

Year 2008 Month Aug

CH2MHILL OMI

Date	Start time	m3	End time	m3	East	West	reason for flow
1						6.66	Rain
2						2.78	Rain
3					30.44		Transferred sludge
4					24.31		Transferred sludge
5					87.53		Transferred sludge
6						163.72	Rain, pumps plugged at Main lift
7					103.84		Transferred sludge
8						535.57	Cleaned clarifiers
9						0.04	Leaking valve
10						133.29	Sludge under transducer?
11						18.33	Sludge under transducer?
12					133.39		Transferred sludge
13						0.35	Leaking valve
14						7.27	HD
15						0.00	
16						0.00	
17						0.30	Leaking valve
18						0.00	
19						0.00	
20						0.00	
21					162.45		Transferred sludge
22						22.99	HD
23						4.03	Leaking valves or sludge under transducer
24						2.97	Leaking valves or sludge under transducer
25						1.03	Leaking valves or sludge under transducer
26						0.67	Leaking valves or sludge under transducer
27						0.81	Leaking valves or sludge under transducer
28					110.09		Transferred sludge
29						18.13	HD
30						0.07	Sludge under transducer
31						1.14	Sludge under transducer
Total					652.05	920.15	

Petrolia WPCP Flow Diversion to Lagoons

Year 2008 Month Sept

CH2MHILL OMI

Date	Start time	m3	End time	m3	East	West	reason for flow
1						1.31	Leaking valve
2						1.96	Leaking valve
3						0.65	Leaking valve
4					134.31		Transferred sludge
5						1.23	Leaking valve
6						0.89	Leaking valve
7						5.65	Leaking valve
8						195.17	Cleaned clarifiers
9						1.94	Leaking valve
10						0.04	Leaking valve
11					206.00		Transferred sludge and HD
12						0.00	
13						114.34	Rain event, surge tank overflow
14						520.37	Rain event, surge tank and put flows to lagoon
15						4948.44	Rain event, flows to lagoon
16						2.27	Leaking valve
17						0.90	Leaking valve
18					144.61		Transfer sludge
19						6.42	HD
20						0.05	Leaking valve
21						0.04	Leaking valve
22						0.07	Leaking valve
23						0.07	Leaking valve
24						0.08	Leaking valve
25					87.43		Transfer sludge
26						8.86	HD
27						0.07	Leaking valve
28						0.00	Leaking valve
29						0.03	Leaking valve
30						1.13	Leaking valve
31							
Total					572.35	5811.98	

Petrolia WPCP Flow Diversion to Lagoons

Year 2008 Month Oct

CH2MHILL
OMI

Date	Start time	m3	End time	m3	East	West	reason for flow
1						118.99	Hosed clarifier weirs
2					148.86		Transfer sludge
3						0.00	
4						0.00	
5						0.00	
6						0.00	
7						0.00	
8						0.04	Leaking valve
9					125.29		Transfer sludge
10						16.45	HD
11						0.40	Leaking valve
12						0.19	Leaking valve
13						0.85	Leaking valve
14						0.85	Leaking valve
15						315.61	Cleaned clarifiers
16					110.57		Transfer sludge
17						8.72	HD
18						0.00	
19						0.00	
20						0.00	
21						1.37	Leaking valve
22						0.06	Leaking valve
23					121.62		Transfer sludge
24						0.08	Leaking valve
25						0.31	Rain
26						0.02	Leaking valve
27						0.03	Leaking valve
28						9.05	HD
29						0.31	Rain
30					124.08		Transfer sludge
31						0.26	Leaking valve
Total					630.42	473.59	

Petrolia WPCP Flow Diversion to Lagoons

Year 2008 Month Nov

CH2MHILL OMI

Date	Start time	m3	End time	m3	East	West	reason for flow
1						0.28	Leaking valve
2						0.15	Leaking valve
3						13.12	HD
4						5.16	Flushed line to lagoon
5						4.38	Flushed line to lagoon
6					131.45		Transferred sludge
7						8.68	HD
8						0.70	Leaking valve
9						0.00	
10						0.00	
11						0.00	
12						7.68	HD
13					135.37		Transferred sludge
14						22.49	HD
15						1226.00	Heavy rain, bypassed clarifier flows to lagoon
16						3556.00	Heavy rain, bypassed clarifier flows to lagoon
17						49.46	Excess flow from surge tank
18						1.63	Leaking valve
19						1.86	Leaking valve
20					123.12		Transferred sludge
21						9.45	HD
22						1.29	Leaking valve or infiltration
23						0.52	Leaking valve or infiltration
24						9.05	HD
25						3.87	Leaking valve or infiltration
26						3.75	Leaking valve or infiltration
27					110.35		Transferred sludge
28						16.67	Sludge under transducer?
29						11.27	Sludge under transducer?
30						10.81	Sludge under transducer?
31							
Total					500.29	4964.27	

Petrolia WPCP Flow Diversion to Lagoons

Year 2008 Month Dec

CH2MHILL OMI

Date	Start time	m3	End time	m3	East	West	reason for flow
1						10.11	Sludge under transducer?
2						54.49	Hosed weirs
3						1.81	infiltration
4						157.48	Drained forcemain from Main Lift
5					144.52		Transferred sludge
6						0.98	Leaking valves or infiltration
7						0.37	Leaking valves or infiltration
8						7.26	HD
9						881.06	Cleaned clarifiers and weirs
10						714.37	Cleaned weirs and contact chamber
11						23.83	infiltration
12					226.25		Transferred sludge
13						13.89	infiltration
14						15.17	infiltration
15						466.75	line between surge and filter plugged for app 3 hrs
16	12:00		15:30			420.84	Clarifier flows to lagoon to clean out surge tank
17						13.15	infiltration
18					209.62		Transferred sludge and HD
19						12.26	infiltration
20						11.19	infiltration
21						14.62	infiltration
22						23.90	HD
23						7.02	infiltration
24						64.54	Overflow from Main Lift, pumps plugged
25						217.79	Overflow from Main Lift, pumps plugged
26						23.88	infiltration
27						969.00	Surge tank overflow, high flows, rain and snow melt
28						3991.00	Surge tank overflow, high flows, rain and snow melt
29					198.17	2249.00	Surge tank overflow, high flows, rain and snow melt Xferred sludge
30						297.29	Cleaned contact chamber, hosed weirs
31						17.53	infiltration
Total					778.56	10680.58	

CALIBRATION RECORDS

HOLLEN
CONTROLS LIMITED
519-766-1152 Fax 519-766-1153

Instrument Calibration Sheet

Client Name:OMI Canada Inc

Date: December 9, 2008

Equipment Description: Influent Flow Meter

Assigned Number: Inf Flow

Area Located: Petrolia STP

Drawing Number:_____

Instrument Data

Manufacturer: Grayline

Model Number: OCF-III

Type: Open Channel

Flume/Weir type: 9" Parshall Flume

Range:0 - 175.6 l/s

Accuracy: +/- 1%

Method Of Calibration: Standard Measurement

Application: Wastewater

Calibration Data

Input %	Input	As Found	Theoretical	% Error
0.0	0.00 cm	0 l/s	0 l/s	
25	12.065 cm	22.41 l/s	22.44 l/s	
50	24.13 cm	60.78 l/s	60.81 l/s	
75	36.195 cm	113.01 l/s	113.09 l/s	
100	48.26 cm	175.50 l/s	175.61 l/s	

Confirmed Run Mode: √

Placed back in service: √

Comments:
Finding verified using ISCO open channel flow handbook (sixth edition)

Checked By: Greg Pierce CCST

Signature:

HOLLEN
CONTROLS LIMITED
519-766-1152 Fax 519-766-1153

Instrument Calibration Sheet

Client Name:OMI Canada Inc

Date: December 09, 2008

Equipment Description: RAS Flow Meter

Assigned Number:_____

Area Located: Petrolia STP

Drawing Number:_____

Instrument Data

Manufacturer: Grayline

Model Number: DFM-IV-A1A1A1B1A

Type: Doppler

Serial Number: 15938

Range:0 - 55.0 l/s

Accuracy: +/- 1%

Method Of Calibration: Standard Measurment

Application: Wastewater

Calibration Data

Input %	Input	As Found	As Left	% Error
0.0	4.00 mA	0 l/s	0 l/s	
25	8.00 mA	13.75 l/s	13.75 l/s	
50	12.00 mA	27.50 l/s	27.50 l/s	
75	16.00 mA	41.25 l/s	41.25 l/s	
81	17.05 mA	44.87 l/s	44.87 l/s	
100	20.00 mA	55.00 l/s	55.00 l/s	
	20.00 mA	55.0 l/s	55.0 l/s	

Confirmed Run Mode: √

Placed back in service: √

Comments:

Checked By: Greg Pierce CCST

Signature:

HOLLEN
CONTROLS LIMITED
519-766-1152 Fax 519-766-1153

Instrument Calibration Sheet

Client Name:OMI Canada Inc

Date: December 9, 2008

Equipment Description: Flow Meter

Assigned Number:_____

Area Located: Petrolia STP

Drawing Number:_____

Instrument Data

Manufacturer: Pulsar

Model Number: Ultra 3

Type: Ultrasonic Measument

Flume/Weir Type: 60° V notch weir

Range:0 - 222.2 l/s

Accuracy: +/- 5%

Method Of Calibration: Standard Measurment

Application: Wastewater

Calibration Data

Input %	Input	As Found	Therorectical	% Error
0.0	0 cm	0.00 l/s	0.00 l/s	
25	15 cm	6.99 l/s	6.94 l/s	
50	30 cm	39.33 l/s	39.27 l/s	
75	45 cm	108.25 l/s	108.22 l/s	
100	60 cm	222.2 l/s	222.16 l/s	

Confirmed Run Mode: √

Placed back in service: √

Comments:

Findings verified using Isco Open Channel Flow Handbood (sixth edition)

Checked By: Greg Pierce CCST

Signature:

HOLLEN
CONTROLS LIMITED
519-766-1152 Fax 519-766-1153

Instrument Calibration Sheet

Client Name:OMI Canada Inc

Date: December 9, 2008

Equipment Description: Flow Meter

Assigned Number:_____

Area Located: Petrolia STP

Drawing Number:_____

Instrument Data

Manufacturer: Siemens/Milltronics

Model Number: OCM III

Type: Ultrasonic Measument

Flume/Weir Type: 36" Non Contracted Suppression Weir

Range:0 - 53.5185 l/s

Accuracy: +/- 1%

Method Of Calibration: Standard Measurment

Application: Wastewater

Calibration Data

Input %	Input	As Found	Therorectical	% Error
0.0	0 "	0.00 l/s	0.00 l/s	
25	1"	6.689812 l/s	6.77 l/s	
50	2"	18.92164 l/s	19.15 l/s	
75	3"	34.76128 l/s	35.18 l/s	
100	4"	53.5185 l/s	54.16 l/s	

Confirmed Run Mode: √

Placed back in service: √

Comments:

Findings verified using Isco Open Channel Flow Handbood (sixth edition)

Checked By: Greg Pierce CCST

Signature:

HOLLEN CONTROLS LIMITED

Alphabetical Parameter Listing OCM III

Tag # Effluent Flow

Date: December 9, 2008

#	Parameter	Value	#	Parameter	Value
P0	Language	0	D0	Head	2.09
P1	Dimensional Units	1	D1	Flow Rate	20.19
P2	Temperature Units	0	D2	Short Total	1845.859
P3	Primary Element	0	D3	Maximum Flow Rate	43.94425
P4	Method of Calculation	1	D4	Minimum Flow Rate	0
P5	Flow Rate Units	0	D5	Temperature	8.75
P6	Flow at Maximum Head	53.5185	D6	Maximum Temperature	29.20
P7	Height of Maximum Head	4	D7	Minimum Temperature	-0.20
P8	Volts in at Zero Velocity	----	D8	Velocity	----
P9	Velocity at 5 Volts In	----	D9	Nominal Target Range	28
P10	Velocity at maximum flow	----	D10	Analog Milliamps	9.94
P13	Display Damping	0	D11	Internal DC Volts	26.95
P14	Display Lighting	0	D12	Velocity Volts	----
P15	Relay 1 Assignment	0	D13	Auxiliary Input Volts	0.00
P16	Relay 1 High Set Point	----	D14	Temperature Sensor Ohms	11061
P17	Relay 1 Low Set Point	----	D15	Self-test Checksum	0000H
P18	Relay 2 Assignment	0	D16	Restarts	431
P19	Relay 2 High Set Point	----	D17	Exceptions	0
P20	Relay 2 Low Set Point	----	D18	Valid Echos per 100	78
P21	Relay 3 Assignment	0			
P22	Relay 3 High Set Point	----			
P23	Relay 3 Low Set Point	----			
P24	mA assignment	0	F2	Run Mode l/s	
P25	If Custom mA, 20 mA =?	----		Total X 1000	
P26	mA Span	0	F6	Software Identification Number	
P27	mA Damping	10	F7	View Min/Max Data	
P28	mA Options	0		Max Flow	43.94
P29	Fail-safe Time	0		Time	14:46:55
P30	Fail-safe Analog Mode	1		Date	11/07/07
P31	Fail-safe Analog mA	4		Min Flow	0.00
P32	Totalizer Multiplier	4		Time	11:30:15
P33	Flow Rate Display	2		Date	19/12/06
P34	Printer Mode	0		Max Temperature	29.19
P35	Printer Timing	----		Time	17:38:06
P36	Measurement Interval	0		Date	03/08/07
P37	Serial Data Rate	5		Min Temperature	-0.19
P38	Site Number	0		Time	04:27:26
P39	Data Logging Rate	2		Date	17/01/07
P40	Log Rapid Setpoint	----	F8	Reset Min/Max Data	
P41	Log Normal Setpoint	----			
P42	Head Determination	0			
P43	Volts in For Zero Head	----			
P44	Head at 5 Volts In	----			
P45	Low Flow Cut-off Head	0			
P46	Range at Zero Head	30.39487			
P47	Blanking Distance	25			
U0	Exponent	1.5			

Site Location: Petrolia STP