



The Corporation of the Municipality of Port Hope

Port Hope

Water Treatment Plant

Old Water Treatment Plant

2005

Summary Report

March 8, 2005

Municipality of Port Hope
P.O. Box 117
56 Queen Street
Port Hope, ON
L1A 3V9

Attention: Mr. Peter Angelo, P. Eng., Director of Municipal Engineering Services

Dear Peter:

RE: 2005 Compliance Report – Port Hope Water Treatment Plant

We are pleased to provide the *2005 Summary Report for the Port Hope Water Treatment Plant* as outlined in Schedule 22 of Ontario Regulation 170/03.

Sincerely,

Rick Trumper

Rick Trumper
Water Treatment Supervisor
Municipality of Port Hope
Water Department

Letter of Transmittal

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1. **INTRODUCTION**

1.1 **BACKGROUND**

The Municipality of Port Hope is located within Northumberland County, approximately 90 km east of Toronto. The Community of Port Hope has a population of 12,500 with combined residential, commercial, industrial and institutional use.

The old conventional Port Hope Water Treatment Plant (WTP) was originally constructed in 1938, with additions/upgrades in 1954 and in the 1970's. Given the Engineers' Report in February 2001, extensive upgrades were required for the old plant, resulting in the construction of a new membrane filtration plant, which was commissioned on August 23, 2005.

On June 1, 2003, the Province introduced Regulation 170/03 under the Ontario Safe Drinking Water Act. This new regulation requires all municipal water systems to complete an Annual Report (submitted to the Ministry of the Environment) and a Summary Report (submitted to Council) for their water treatment plants.

Given that the new plant was commissioned in the middle of 2005 and replaced the old plant, this report is an independent 2005 Summary Report for the old plant. Refer to the 2005 Summary Report for the new plant for information regarding the new plant.

1.2 **TERMS AND CONDITIONS OF THE CERTIFICATE OF APPROVAL**

Table 1-1 lists the headings of the Terms and Conditions of the latest CofA.

Table 1-1 Terms and Conditions of the CofA

Section No.	Heading
1	Drinking Water System Description
2	Definitions and Information
3	General
4	Performance
5	Monitoring and Recording
6	Operations and Maintenance
7	Future Alterations
8	Studies and Upgrades Required
9	Relief from Regulatory Requirements



2. CERTIFICATIONS

This section covers all certifications related to Port Hope WTP and distribution system, including:

- ◆ Certificates of approval;
- ◆ Permits to take water;
- ◆ Facility/distribution system classification; and,
- ◆ Operator classification.

2.1 CERTIFICATES OF APPROVAL

Table 2-1 summarises the Certificates of Approval (CofA), which can be found in **Appendix A**.

Table 2-1 Certificates of Approval

Certificate Type	Certificate Number	Date Issued	Brief Description of Works Approved
Water Treatment Plant	3586-5T6QJL (Air)	Nov. 12/03	Installation of a diesel generator at the future Water Treatment Plant
Water Treatment Plant	5488-6DNHC4	Aug. 25/05	Construction of a new 20,000 Cubic Metre per Day Ultrafiltration Water Treatment Plant.

2.2 PERMIT TO TAKE WATER

The Permit to Take Water (PTTW) for the Port Hope WTP is summarised in Table 2-2 and attached in **Appendix B**.

Table 2-2 Permit To Take Water (PTTW)

Permit Number	Source	Issued Date	Renewal Date	Permitted Amount of Taking
02-P-4040	Lake Ontario	July 12, 2002	July 12, 2012	20,000 m ³ /d

2.3 FACILITY CLASSIFICATION

Details of Port Hope facility certifications are presented in Table 2-3.

Table 2-3 Facility Classifications

Facility Type	Facility Name	Facility Level	Certificate No.	Date of Issue
Plant	Port Hope Water Treatment Plant	III	WT #195	July 2005
Distribution	Port Hope Water Distribution System	II	WD #719	June 1988



2.4 OPERATOR CERTIFICATION

The Corporation of the Municipality of Port Hope currently operates the Port Hope Water Supply System (WSS). Staff members responsible for the water supply and distribution systems are licensed operators with their certifications presented in Table 2-4.

Table 2-4 Operator Certifications

Name	Position	Certificate Level			Certification Number			Expiry Date		
		T	D	WQA	T	D	WQA	T	D	WQA
Rick Trumper	Supervisor Water Treatment	III	III	I	421	422	11995	03/31/08	03/31/08	05/31/07
Mike Stewart	Treatment Operator	II	II	I	13137	15294	11998	10/31/06	03/31/07	05/31/07
Geoff Morgan	Treatment Operator	II	II	-	9907	14148	-	06/30/06	05/31/06	-
Jerry Lord	Treatment Operator	II	II	-	11529	15321	-	11/30/06	04/30/07	-
Ed Symons	Superintendent Water Distribution	II	III	-	5081	5082	-	05/14/06	03/31/09	-
Rick Held	Distribution Operator	II	II	-	4871	4872	-	04/30/06	02/28/07	-
Larry Green	Distribution Operator	II	II	-	9290	9291	-	02/28/06	02/28/06	-
BJ Coull	Distribution Operator	-	OIT	-	-	-	-	-	-	-
T = Treatment License D = Distribution License WQA = Water Quality Analyst License										



3. WATER FLOWS

This section gives a summary of records made relating to flow rate exceedances.

This section also gives a summary and discussion of the quantity of treated water supplied compared to the rated capacity specified in the C of A, including monthly average and maximum daily flows.

Finally, this section accounts for the wastewater production from the water treatment process.

3.1 RAW WATER FLOWS

A summary of the daily quantities of water being taken from Lake Ontario (i.e., raw water flow rates) are shown in Table 3-1,

For this report, the firm rated capacity of the raw water that can be treated at the Port Hope WTP is 20,000 m³/d. The raw water supplied to the treatment system should not exceed this value at anytime.

Table 3-1 shows that the highest maximum day demand of 9,977 m³/d has not exceeded the flow allowed in the PTTW of 20,000 m³/d or the C of A restricting the maximum flow rate to 20,000 m³/d.

Table 3-1 Raw Water Flows

Item	Avg. Day (m ³ /d)	Max. Day (m ³ /d)
January	6,823	8,465
February	6,911	7,520
March	7,290	8,365
April	6,993	8,122
May	7,672	8,668
June	7,646	9,712
July	8,494	9,800
August	9,660	9,977
September	-	-
October	-	-
November	-	-
December	-	-
Avg.	7,686	-
Max.	-	9,970

3.2 TREATED WATER FLOWS

The treated water flows for 2004 are shown in Table 3-2.



Table 3-2 Shows that the plant's rated capacity of 20,000 m³/d had not been exceeded in 2004. The maximum daily water demand has reached 52.3% of the plants rated capacity.

The maximum day factor (ratio of maximum day demand to average day demand) was approximately 1.38, while the peak hour factor (ratio of maximum peak hour demand to average day demand) was approximately 9.11.

Table 3-2 Treated Water Flows

Item	Avg. Day (m ³ /d)	Max. Day (m ³ /d)	% Max/ Rated Capacity	Max. Peak Hour (m ³ /h)
January	7,219	8,909	45	495
February	6,680	7,218	36	450
March	6,670	7,364	37	426
April	6,995	7,659	38	450
May	7,947	9,050	45	630
June	8,140	10,455	52	657
July	8,704	10,091	51	833
August	8,336	9,977	50	725
September	-	-	-	-
October	-	-	-	-
November	-	-	-	-
December	-	-	-	-
Avg.	7,586	-	-	-
Max.	-	10,455	52	833

3.3 WASTEWATER FLOWS

Wastewater is generated on-site from backwashing the filters, cleaning the sedimentation tanks, etc. Table 3-3 shows that wastewater production in any given month has reached up to 3.0% of the raw water flows.

Table 3-3 Wastewater Flows

Item	Total Monthly Raw Water Volume (m ³)	Total Monthly Wastewater Volume (m ³)	% Wastewater/ Raw
January	211,527	5,650	2.7



**SECTION 3
WATER FLOWS**

Item	Total Monthly Raw Water Volume (m³)	Total Monthly Wastewater Volume (m³)	% Wastewater/ Raw
February	193,515	4,586	2.4
March	226,000	5,264	2.3
April	209,780	5,232	2.5
May	237,840	7,087	3.0
June	229,370	7,614	3.2
July	263,320	9,964	3.8
August	182,423	7,705	4.2
September	-	-	-
October	-	-	-
November	-	-	-
December	-	-	-
Max.	263,320	9,964	4.2



4. **CHEMICALS**

This section gives a summary of listing treatment chemicals used, including average dosage rates with special reference to any abnormal usage.

4.1 **PROPERTIES**

Table 4-1 shows the properties of the chemicals used at Port Hope WTP.

Table 4-1 Properties of Chemical Feed Systems

Chemical	Purpose	Concentration (%)	Specific Gravity (g/mL)	Target Dosage (mg/L)
Chlorine gas	Pre-chlorination	100	-	.75-1.5
	Post-chlorination		-	0.85-1.00
Liquid alum	Coagulation	48	1.33	11.15-19.5 mg/L

4.2 **USAGE**

Table 4-2 summarises the annual chemical usage and monthly average dosages.

Table 4-2 Annual Chemical Usage at Port Hope WTP

Chemical	Volume (L) or Weight (kg)	Range of Monthly Avg. Dosages (mg/L)	Month with Highest Avg. Dosage	Comments of Any Abnormal Usage
Chlorine gas	6,443 kg	0.43 – 3.91	June, July, Aug.	-
Liquid alum	36,137 L	11.00 – 30.0	March	-



5. SAMPLING ANALYTICAL RESULTS

This section consists of a summary of analytical results of sampling required by the CofA, including raw water and in-process parameters as specified in the operations manual in accordance with Condition 5.5.

5.1 SAMPLING PROGRAM

Condition 5.5 states the following:

“In addition to the sampling and analysis requirements of O. Reg. 170/03 and Procedure for Disinfection of Drinking Water in Ontario, collect and analyse:” (I) samples of raw water for the parameters and frequencies stated below, (ii) samples of the treated water at a point of entrance to the distribution system for the parameters and the frequencies stated below”.

Appendix A combines the sampling requirements from Conditions 5.5 (i) and (ii). The Port Hope WTP was in compliance with the sampling program.

5.2 SAMPLING RESULTS

5.2.1 Introduction

Appendix B contains the sampling results for 2005, which are summarised in tables, which are identical to Schedules 23 and 24 in *Regulation 170/03, Drinking Water Systems Regulation*.

5.2.2 Microbiological

The bacteriological data in the raw, treated and distribution water supply are shown in Tables D-5 to D-7.

Ontario Reg. 170/03, Schedule 10 states that samples of raw water do not need to be analysed for Heterotrophic plate count (HPC) or background colonies (BKG).

If the treated or distribution water contains more than 500 colonies per mL on a HPC analysis or more than 200 BKG colonies on a total coliform membrane filter analysis, then the sample is considered adverse. Moreover, if either the treated or distribution water contain *any* total coliform (TC) or fecal coliform (FC), then the sample is considered adverse. The corrective action in all cases is to report, resample, analyze and follow the instructions as directed by the Medical Officer of Health.

There was one (1) Adverse Microbiological sample for 2005.

Table 5-1 Adverse Microbiological Samples

Date	Location	Exceedances	Comments
July 7/05	Hamilton Rd. sample station	1 T. Coli	Immediately resample and analyze. There was good free chlorine residual at the time of original sample, which would indicate a poor sample technique.

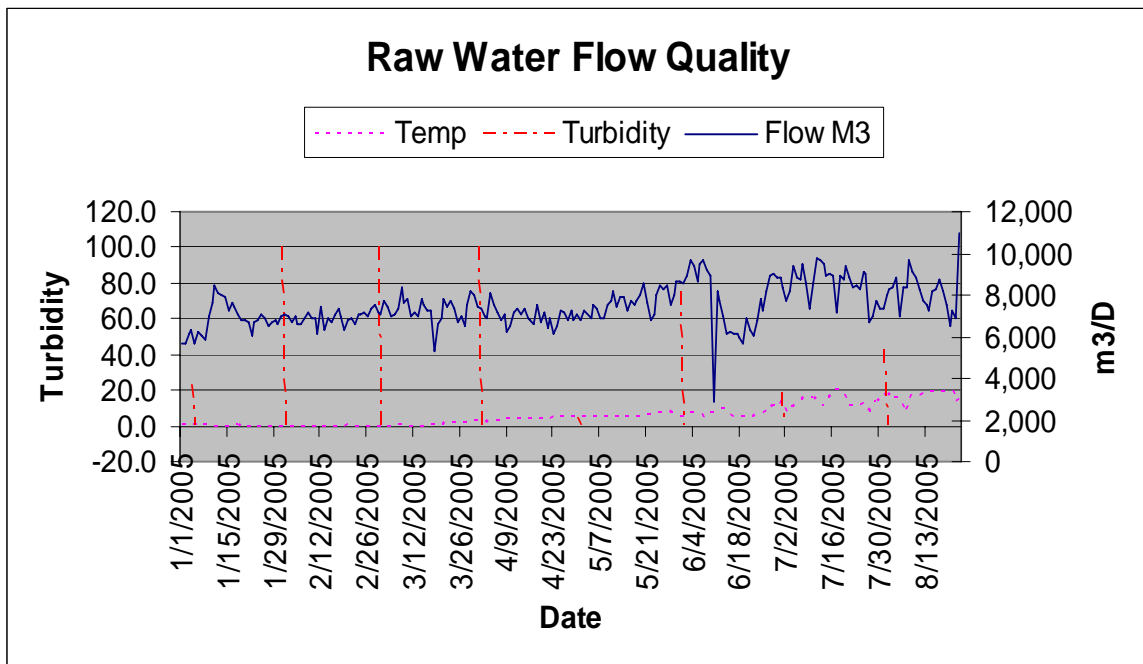


5.2.3 Turbidity/Disinfection

Figure 5-1 plots raw water turbidity with raw water temperatures and flows throughout the year. As shown, turbidity is greatest during the spring run-off when temperatures and flows are low.

Based on an hourly analysis, the raw water turbidity reached as high as 100 NTU, and had an average of 2.36 NTU.

Figure 5-1 Plot of Raw Water Turbidity, Temperature and Flow



2.5-log and 2.0-log removal/inactivation of *Giardia* cysts and viruses, respectively, are credited to Port Hope WTP, provided it can constantly achieve a filtrate turbidity on each filter effluent train less than 0.3 NTU greater than 95% of the time (based on turbidity samples at a frequency of every 4 hours).

Treated water turbidity at Port Hope WTP is sampled on the common treated water header; hence, turbidity data per filter train is not available.



A statistical analysis of the hourly treated water turbidity data is presented in Table 5-2.

Table 5-2 Analysis of Hourly Treated Water Turbidity Data

Train No.	Sample Count	Average	Maximum	% of time < 0.1 NTU	% of time < 0.3 NTU	% of time < 1.0 NTU
Common header	On-line	0.036	.632	99.66	99.88	100.0

Given that filtrate turbidity was less than 0.3 NTU this was achieved 99.88% of the time, Port Hope WTP can be assigned the disinfection credits mentioned above. CofA No. 5488-6DNHC4, Condition 8.2(a)(i) states that the entire Port Hope WTP must achieve total of 4.0-log and 5.0-log removal/inactivation of *Giardia* cysts and viruses, respectively, by September 30,2005. Hence, chlorination must be practised to give the remaining credits of 0.5-log and 2.0-log removal/inactivation of *Giardia* cysts and viruses, respectively.

The First Engineers' Report with following correspondence from the MOE explained that the remaining disinfection credits cannot be achieved after the filters, but can be achieved before the filters by chlorinating at the intake all year round. CofA No. 1110-5GAS3T allows pre-chlorination all year round, with the condition that Trihalomethanes (THMs) are measured monthly in the treated water supply.

5.2.4 Distribution Chlorine Residuals

The Procedure for Disinfection of Drinking Water in Ontario states that “The distribution system must be operated such that at all times and at all locations within the distribution system there is at least a detectable free chlorine residual of 0.05 mg/L at a pH 8.5 or lower, or where monochloramine is used, a combined chlorine residual of 0.25 mg/L”.

O. Reg. 170/03, Schedule 16-3.4 requires and states that the distribution water quality is considered to be adverse if the free chlorine residual is measured to be less than 0.05 mg/L. The corrective action is to restore chlorination immediately and follow the instructions as directed by the Medical Officer of Health.

The Municipality has implemented the following procedures to comply with Reg. 170/03:

- Scheduled flushing of dead end water mains;
- Chlorine addition at the Zone two (2) Reservoir; and,
- Initiation of a “Capital Works” program to replace all 100 mm cast iron water main and loop dead ends within the next five (5) years.

A statistical analysis of the free chlorine residuals measured in the distribution system is presented in Table 5-3.

Table 5-3 Distribution Free Chlorine Residuals

Location	Sample Count	Minimum mg/L	Maximum mg/L	Average mg/L	% of time < 0.05 mg/L ¹	% of time < 0.2 mg/L ²
Distribution	205	0.17	1.59	0.69	0	.98



Location	Sample Count	Minimum mg/L	Maximum mg/L	Average mg/L	% of time < 0.05 mg/L ¹	% of time < 0.2 mg/L ²
System						
Notes:						
1. 0 samples were below 0.05 mg/L.						
2. 2 samples were below 0.2 mg/L						

Table 5-3 shows 2 samples being below 0.2 mg/L.

5.2.5 Supernatant Total Suspended Solids

Condition 4.4 of CofA 5488-6DNHC4 states that the annual average concentration of suspended solids in the effluent discharged from the backwash/wastewater facilities to Lake Ontario should not exceed 25 mg/L.

A statistical analysis of the supernatant total suspended solids (Table 5-4) shows that no samples exceeded the discharge limit of 25 mg/L, or even the objective of 15 mg/L.

Table 5-4 Supernatant Total Suspended Solids

Location	Sample Count	Minimum	Maximum	Average	% of time < 15 mg/L	% of time < 25 mg/L
Lagoon Supernatant Discharge	8	3	7	5	100	100

5.2.6 Other Parameters

Table 5-5 lists the deviations or exceedances of the other water samples summarised in **Appendix B** and deviations from any other Act, CofA or Regulation.

Table 5-5 Deviations from ODWS and Regulation

Treated Table

Parameter	Location	Limit	Exceedances	Comments
Temperature	Raw water	15 C	56 samples above 15 C.	This is an Operational Guideline, which we have no control over.
Temperature	Treated water	15 C	88 samples above 15 C.	This is an Operational Guideline, which we have no control over.
pH	Raw water	6.5-8.5	1 sample above 8.5, (8.58)	Operational guideline. Low pH waters can be corrosive. High pH waters can cause incrustation in pipes and require higher chlorine residual for equal disinfection of a lower pH water.
Aluminum	Treated water	0.1 mg/L	1 above 0.1 mg/L, (0.0114)	22 out of 730 samples were above the guideline.



**SECTION 5
SAMPLING ANALYSIS RESULTS**

Parameter	Location	Limit	Exceedances	Comments
Nitrite, Nitrite	Treated Water	10.0 mg/L	2nd quarterly sample was not taken	Have since implemented further sampling protocols to eliminate this problem.

Distribution Table

Parameter	Location	Limit	Exceedances	Comments
-	-	-	-	-

Deviations from CofA

Parameter	Location	Limit	Exceedances	Comments
-	-	-	-	-

Ministry of the Environment Orders

Date of notification	Location	Order No.	Description	Comments
-	-	-	-	-



6. COMPLIANCE WITH TERMS AND CONDITIONS OF THE CERTIFICATE OF APPROVAL (COFA)

This section provides a statement as to compliance with all of the terms and conditions of the Certificate of Approval (CofA), and a detailed description of the measures taken to ensure compliance with the CofA, including any supporting data or other information.

6.1 STATEMENT AS TO COMPLIANCE WITH TERMS AND CONDITIONS OF COFA

A checklist was used throughout the year to determine compliance with the latest CofA. This checklist includes the requirements of all the Terms and Conditions of this Certificate.

6.2 MEASURES TAKEN TO ENSURE COMPLIANCE WITH TERMS AND CONDITIONS OF COFA

Section 7 lists all the non-compliance items extracted from the checklist with explanations for the non-compliance.



SECTION 7
NON-COMPLIANCE WITH TERMS AND CONDITIONS
OF THE CERTIFICATE OF APPROVAL

7. **NON-COMPLIANCE WITH TERMS AND CONDITIONS OF THE CERTIFICATE OF APPROVAL (COFA)**

This section provides details of any non-compliance with the Terms and Conditions of the latest Certificate of Approval (CofA), as well as details of how and when the non-compliance was corrected.

Table 7-1 Non-Compliance Items in the Terms and Conditions of the CofA

Item No.	Description	Date of Occurrence	Date of Correction	Method of Correction
-	-	-	-	-

As shown, the Port Hope Water Treatment Plant **is fully compliant** with the Terms and Conditions of Certificates of Approval No. 5488-6DNHC4 and 3586-5T6QJL.



8. **REFERENCES**

- KMK, 2001 KMK Consultants Limited. February 2001. Port Hope Water Treatment Plant, First Engineers' Report.
- MOE, 2002 Ministry of the Environment. June 2002. Ontario Safe Drinking Water Act. Toronto, ON, Ontario Ministry of the Environment.
- MOE, 2003 Ministry of the Environment. June 2003. Technical Support Document for Ontario Drinking Water Standards, Objectives and Guidelines. Toronto, ON, Ontario Ministry of the Environment, PIBS #4449e.
- MOE, 2003 Ministry of the Environment. 2003. Ontario Regulation 170/03 Drinking-Water Systems. Toronto, ON, Ontario Ministry of the Environment.
- MOE, 2004 Ministry of the Environment. 2003. Drinking Water Surveillance Reports. Toronto, ON, Ontario Ministry of the Environment, Central Laboratory.

APPENDICES

APPENDICES

APPENDIX A

SAMPLING PROGRAM

APPENDIX A

Table C-1 Sampling Protocol

Parameter	Frequency	Parameters Analyzed
Raw Water		
Microbiological	Weekly	E. Coli, Total Coliform, (excluding HPC or BKG), Ont. Reg. 170/03, Schedule 10
Turbidity	Continuous	Turbidity
pH	Continuous	pH
Sodium	Twice Daily	Sodium
Temperature	Continuous at Low Lift, Twice Daily	Temperature
Treated Water		
Microbiological	Weekly	E. Coli, Total Coliform, Background colonies, Ont. Reg. 170/03, Schedule 10
Turbidity	Continuous	Turbidity
Chlorine	Continuous	Free Chlorine
Volatile Organics	Annual, (THMs monthly) ¹	Ont. Reg. 170/03, Schedule 24
Inorganics	Annually	Ont. Reg. 170/03, Schedule 23
Nitrates/Nitrites	Quarterly	Nitrates/Nitrites
Pesticides & PCB	Annually	Ont. Reg. 170/03, Schedule 24
pH	Continuous	pH
Sodium	Twice Daily	Sodium
Temperature	Twice Daily	Temperature
Arsenic ²	Weekly	Arsenic
Uranium ²	Weekly	Uranium
Distribution Water		
Microbiological	Weekly (Total of 21 Monthly) ³	E. Coli, Total Coliform, Background colonies, Ont. Reg. 170/03, Schedule 10
Chlorine	Grab samples simultaneous to microbiological samples	Free Chlorine
Volatile Organics	Quarterly (THMs at a point reflecting maximum residence time in the distribution system)	Only THMs
Inorganics	Annually (Lead at a point reflecting maximum residence time in the distribution system)	Only Lead
Backwash/Wastewater Effluent to Lake Ontario		
Total Suspended Solids	Composite	Total Suspended Solids

APPENDIX A

Parameter	Frequency	Parameters Analyzed
Note: 1. Monthly sampling of THMs required in amended CofA dated August 24, 2005. 2. Sampled by Port Hope staff weekly for the Health Protection Branch of Health Canada, and quarterly when inorganic sampling is done. 3. Ont. Reg. 170/03, 10-2,(a) if the system serves 100,000 people or less, at least eight distribution samples, plus one additional sample for every 1000 people served by the system, are taken every month, with at least one of the samples being taken in each week . Given a population of 12,500, this equals to a minimum of 21 samples.		

Table C-2 Schedules 23 and 24 in Regulation 170/03, Drinking Water Systems made under Safe Drinking Water Act.

Schedule 23 – Inorganic Parameters		
Antimony Arsenic Barium	Boron Cadmium Chromium	Mercury Selenium Uranium
Schedule 24– Organic Parameters		
Alachlor Aldicarb Aldrin + Dieldrin Atrazine+N-dealkylated metabolites Azinphos-methyl Bendiocarb Benzene Benzo(a)pyrene Bromoxynil Carbaryl Carbofuran Carbon Tetrachloride Chlordane (Total) Chlorpyrifos Cyanazine Diazinon 1,2-Dichlorobenzene 1,4-Dichlorobenzene Dicamba Dichlorodiphenyltrichloroethane(DDT)+metabolites	1,2-dichloroethane 1,1-Dichloroethylene (vinylidene chloride) Dichloromethane 2-4-Dichlorophenol 2,4-Dichlorophenoxy acetic acid (2,4-D) Diclofop-methyl Dimethoate Dinoseb Diquat Diuron Glyphosate Heptachlor+ Heptachlor Epoxide Lindane (Total) Malathion Methoxychlor Metolachlor Metribuzin	Monochlorobenzene Paraquat Parathion Pentachlorophenol Phorate Picloram Polychlorinated Biphenyls (PCB) Prometryne Simazine Temephos Terbufos Tetrachloroethylene (perchloroethylene) 2,3,4,6-Tetrachlorophenol Triallate Trichloroethylene 2,4,6-Trichlorophenol 2,4,5-Trichlorophenoxy acetic acid-(2,4,5-T) Trifluralin Vinyl Chloride

APPENDIX B

SAMPLING RESULTS

APPENDIX B

SAMPLING RESULTS

This Appendix contains the following tables:

Table No.	Title
D-1	Legends for Tables
D-2	Schedule 23, Raw Water
D-2A	Schedule 24, Raw Water
D-3	Schedule 23, Treated Water
D-3A	Schedule 24, Treated Water
D-3B	Treated Water Parameters not previously identified
D-4	Schedule 23, Distribution Water
D-4A	Schedule 24, Distribution Water
D-4B	Distribution Water Parameters not previously identified
D-5	Raw Water Bacteriological Data
D-6	Treated Water Bacteriological Data
D-7	Distribution Water Bacteriological Data
D-8	Radionuclide Analysis for the Raw Water
D-9	Radionuclide Analysis for the Treated Water
D-10	Radionuclide Analysis for the Distribution Water
D-11	Non-Health Related Chemical/Physical Characteristics for the Raw Water
D-12	Non-Health Related Chemical/Physical Characteristics for the Treated Water
D-13	Non-Health Related Chemical/Physical Characteristics for the Distribution Water

Table D-1 Legends for Tables D-2 to D-13

Legend	Definition
AO	Aesthetic Objective
Average	Refers to the Average value measured
D	Deteriorating
Exceed.'s	Refers to the number of exceedances detected for the sample period described
IMAC	Interim Maximum Acceptable Concentration
MAC	Maximum Acceptable Concentration
Maximum	Refers to the maximum value measured
Minimum	Refers to the minimum value measured
<MDL	Parameter results are lower than the method detectable limit
NA	Not Applicable
ND	Not Detected
NT	Not Tested

APPENDIX B

OG	Operational Guideline
S	Safe
SC	Samples Collected
US	Unsafe

Table D-2 Schedule 23, Inorganic Parameters, Raw Water

Parameter	(mg/L unless noted)	2005		
		# of Samples	Results (mg/L)	Exceedance
Antimony	0.006 (MAC)	0	-	-
Arsenic	0.025 (IMAC)	0	-	-
Barium	1.0 (MAC)	0	-	-
Boron	5.0 (IMAC)	0	-	-
Cadmium	0.005 (MAC)	0	-	-
Chromium	0.05 (MAC)	0	-	-
Mercury	0.001 (MAC)	0	-	-
Selenium	0.01 (MAC)	0	-	-
Uranium	0.02 (MAC)	0	-	-

Table D-2A Schedule 24, Organic Parameters, Raw Water

Parameter	(mg/L unless noted)	# of Samples	Results (mg/L)	Exceedance
Alachlor	0.005 (IMAC)	0	-	-
Aldicarb	0.009 (MAC)	0	-	-
Aldrin + Dieldrin	0.0007 (MAC)	0	-	-
Atrazine + N-dealkylated metabolites	0.005 (IMAC)	0	-	-
Azinphos-methyl	0.02 (MAC)	0	-	-
Bendiocarb	.04 (MAC)	0	-	-
Benzene	0.005 (MAC)	0	-	-
Benzo(a)pyrene	0.00001 (MAC)	0	-	-
Bromoxynil	0.005 (MAC)	0	-	-
Carbaryl	0.09 (MAC)	0	-	-
Carbofuran	0.09 (MAC)	0	-	-
Carbon Tetrachloride	0.005 (MAC)	0	-	-
Chlordane (Total)	0.007 (MAC)	0	-	-
Chlorpyrifos	0.09 (MAC)	0	-	-

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Parameter	(mg/L unless noted)			
		# of Samples	Results (mg/L)	Exceedance
Cyanazine	0.01 (IMAC)	0	-	-
Diazinon	0.02 (MAC)	0	-	-
Dicamba	0.12 (MAC)	0	-	-
1,2-Dichlorobenzene	0.2 (MAC),	0	-	-
1,4-Dichlorobenzene	0.005 (MAC), 0.001 (AO)	0	-	-
Dichlorodiphenyltrichloroethane (DDT) + metabolites	0.03 (MAC)	0		-
1,2-dichloroethane	0.005 (IMAC)	0		-
1,1-Dichloroethylene (vinylidene chloride)	0.014 (MAC)	0	-	-
Dichloromethane	0.05 (MAC)	0		-
2,4-Dichlorophenol	0.9 (MAC), 0.0003 (AO)	0	-	-
2,4-Dichlorophenoxy acetic acid (2,4-D)	0.1 (IMAC)	0	-	-
Diclofop-methyl	0.009 (MAC)	0	-	-
Dimethoate	0.02 (IMAC)	0	-	-
Dinoseb	0.010 (IMAC)	0	-	-
Diquat	0.07 (MAC)	0	-	-
Diuron	0.15 (MAC)	0	-	-
Glyphosate	0.28 (IMAC)	0	-	-
Heptachlor + Heptachlor Epoxide	0.003 (MAC)	0	-	-
Lindane (Total)	0.004 (MAC)	0	-	-
Malathion	0.19 (MAC)	0	-	-
Methoxychlor	0.9 (MAC)	0	-	-
Metolachlor	0.05 (IMAC)	0	-	-
Metribuzin	0.08 (MAC)	0	-	-
Monochlorobenzene	0.08 (MAC), 0.03 (AO)	0	-	-
Paraquat	0.01 (IMAC)	0	-	-
Parathion	0.05 (MAC)	0	-	-
Pentachlorophenol	0.06 (MAC) 0.03 (AO)	0	-	-
Phorate	0.002 (IMAC)	0	-	-

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Parameter	(mg/L unless noted)			
		# of Samples	Results (mg/L)	Exceedance
Picloram	0.19 (IMAC)	0	-	-
Polychlorinated Biphenyls (PCB)	0.003 (IMAC)	0	-	-
Prometryne	0.001 (IMAC)	0	-	-
Simazine	0.01 (IMAC)	0	-	-
Temephos	0.28 (IMAC)	0	-	-
Terbufos	0.001 (IMAC)	0	-	-
Tetrachloroethylene (perchloroethylene)	0.030 (MAC)	0	-	-
2,3,4,6-Tetrachlorophenol	0.10 (MAC)	0	-	-
Triallate	0.23 (MAC)	0	-	-
Trichloroethylene	0.05 (MAC)	0	-	-
2,4,6-Trichlorophenol	0.005 (MAC) 0.002 (AO)	0	-	-
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	0.28 (MAC) 0.02 (AO)	0	-	-
Trifluralin	0.045 (IMAC)	0	-	-
Vinyl Chloride	0.002 (MAC)	0	-	-

Table D-3 Schedule 23, Inorganic Parameters, Treated Water

Parameter	(mg/L unless noted)			
		# of Samples	Results (mg/L)	Exceedance
Antimony	0.006 (MAC)	1	0.0006<MDL	NO
Arsenic	0.025 (IMAC)	1	0.002<MDL	NO
Barium	1.0 (MAC)	1	0.023	NO
Boron	5.0 (IMAC)	1	0.020	NO
Cadmium	0.005 (MAC)	1	0.0001MDL	NO
Chromium	0.05 (MAC)	1	0.003<MDL	NO
Mercury	0.001(MAC)	1	0.00002<MDL	NO
Selenium	0.01 (MAC)	1	0.003<MDL	NO
Uranium	0.02 (MAC)	1	0.00017<MDL	NO

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Table D-3A Schedule 24, Organic Parameters, Treated Water

Parameter	(mg/L unless noted)			
		# of Samples	Results (mg/L)	Exceedance
Alachlor	0.005 (IMAC)	1	0.00011<MDL	NO
Aldicarb	0.009 (MAC)	1	0.00030<MDL	NO
Aldrin + Dieldrin	0.0007 (MAC)	1	0.000067<MDL	NO
Atrazine + N-dealkylated metabolites	0.005 (IMAC)	1	0.00012<MDL	NO
Azinphos-methyl	0.02 (MAC)	1	0.00021<MDL	NO
Bendiocarb	.04 (MAC)	1	0.00013<MDL	NO
Benzene	0.005 (MAC)	1	0.00036<MDL	NO
Benzo(a)pyrene	0.00001 (MAC)	1	0.000004<MDL	NO
Bromoxynil	0.005 (MAC)	1	0.000094<MDL	NO
Carbaryl	0.09(MAC)	1	0.00016<MDL	NO
Carbofuran	0.09 (MAC)	1	0.00037<MDL	NO
Carbon Tetrachloride	0.005 (MAC)	1	0.00034<MDL	NO
Chlordane (Total)	0.007 (MAC)	1	0.00011<MDL	NO
Chlorpyrifos	0.09 (MAC)	1	0.00018<MDL	NO
Cyanazine	0.01 (IMAC)	1	0.00018<MDL	NO
Diazinon	0.02 (MAC)	1	0.000081<MDL	NO
Dicamba	0.12 (MAC)	1	0.00017<MDL	NO
1,2-Dichlorobenzene	0.2 (MAC),	1	0.00056<MDL	NO
1,4-Dichlorobenzene	0.005 (MAC), 0.001 (AO)	1	0.00025<MDL	NO
Dichlorodiphenyltrichloroethane (DDT) + metabolites	0.03 (MAC)	1	0.00014<MDL	NO
1,2-dichloroethane	0.005 (IMAC)	1	0.00032<MDL	NO
1,1-Dichloroethylene (vinylidene chloride)	0.014 (MAC)	1	0.00052<MDL	NO
Dichloromethane	0.05 (MAC)	1	0.00117<MDL	NO
2-4-Dichlorophenol	0.9 (MAC), 0.0003 (AO)	1	0.00015<MDL	NO
2,4-Dichlorophenoxy acetic acid (2,4-D)	0.1 (MAC)	1	0.00011<MDL	NO

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Parameter	(mg/L unless noted)	# of Samples	Results (mg/L)	Exceedance
Diclofop-methyl	0.009 (MAC)	1	0.00013<MDL	NO
Dimethoate	0.02 (MAC)	1	0.00012<MDL	NO
Dinoseb	0.010 (MAC)	1	0.000084<MDL	NO
Diquat	0.07 (MAC)	1	0.001<MDL<MDL	NO
Diuron	0.15 (MAC)	1	0.000087<MDL	NO
Glyphosate	0.28 (IMAC)	1	0.006<MDL	NO
Heptachlor + Heptachlor Epoxide	0.003 (MAC)	1	0.00011<MDL	NO
Lindane (Total)	0.004 (MAC)	1	0.000056<MDL	NO
Malathion	0.19 (MAC)	1	0.000091<MDL	NO
Methoxychlor	0.9 (MAC)	1	0.00014<MDL	NO
Metolachlor	0.05 (IMAC)	1	0.000092<MDL	NO
Metribuzin	0.08 (MAC)	1	0.00012<MDL	NO
Monochlorobenzene	0.08 (MAC), 0.03 (AO)	1	0.00046<MDL	NO
Paraquat	0.01 (IMAC)	1	0.001<MDL	NO
Parathion	0.05 (MAC)	1	0.00018<MDL	NO
Pentachlorophenol	0.06 (MAC) 0.03 (AO)	1	0.00015<MDL	NO
Phorate	0.002 (IMAC)	1	0.00011<MDL	NO
Picloram	0.19 (IMAC)	1	0.00020<MDL	NO
Polychlorinated Biphenyls (PCB)	0.003 (IMAC)	1	0.00004<MDL	NO
Prometryne	0.001 (IMAC)	1	0.00023<MDL	NO
Simazine	0.01 (IMAC)	1	0.00015<MDL	NO
Temephos	0.28 (IMAC)	1	0.00031<MDL	NO
Terbufos	0.001 (IMAC)	1	0.00012<MDL	NO
Tetrachloroethylene (perchloroethylene)	0.030 (MAC)	1	0.00048<MDL	NO
2,3,4,6-Tetrachlorophenol	0.10 (MAC)	1	0.00014<MDL	NO
Triallate	0.23 (MAC)	1	0.00010<MDL	NO
Trichloroethylene	0.05 (MAC)	1	0.00054<MDL	NO

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Parameter	(mg/L unless noted)	# of Samples	Results (mg/L)	Exceedance
2,4,6-Trichlorophenol	0.005 (MAC) 0.002 (AO)	1	0.000252<MDL	NO
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	0.28 (MAC) 0.02 (AO)	1	0.00014<MDL	NO
Trifluralin	0.045 (IMAC)	1	0.00012<MDL	NO
Vinyl Chloride	0.002 (MAC)	1	0.00008<MDL	NO

Table D-3B Treated Water Parameters not previously identified

Parameter	(mg/L unless noted)	2005				
		SC	Minimum	Maximum	Average	Exceed's
Fluoride	1.5	0	-	-	-	-
Nitrite	1	1	0.005	0.005	0.005	NO
Nitrate	10	1	.475	.475	0.475	NO
Trihalomethanes	0.100	8	.0092	.020	.0130	NO

Table D-4 Schedule 23, Inorganic Parameters, Distribution Water

Parameter	(mg/L unless noted)	# of Samples	Results (mg/L)	Exceedance
Antimony	0.006 (MAC)	-	-	-
Arsenic	0.025 (IMAC)	-	-	-
Barium	1.0 (MAC)	-	-	-
Boron	5.0 (IMAC)	-	-	-
Cadmium	0.005 (MAC)	-	-	-
Chromium	0.05 (MAC)	-	-	-
Mercury	0.001 (MAC)	-	-	-
Selenium	0.01 (MAC)	-	-	-
Uranium	0.02 (MAC)	-	-	-

Table D-4A Schedule 24, Organic Parameters, Distribution Water

Parameter	ODWS (mg/L unless noted)	# of Samples	Results (mg/L)	Exceedance
Alachlor	0.005 (IMAC)	0	-	-
Aldicarb	0.009 (MAC)	0	-	-
Aldrin + Dieldrin	0.0007 (MAC)	0	-	-

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Parameter	ODWS (mg/L unless noted)			
		# of Samples	Results (mg/L)	Exceedance
Atrazine + N-dealkylated metabolites	0.005 (IMAC)	0	-	-
Azinphos-methyl	0.02 (MAC)	0	-	-
Bendiocarb	.04 (MAC)	0	-	-
Benzene	0.005 (MAC)	0	-	-
Benzo(a)pyrene	0.00001 (MAC)	0	-	-
Bromoxynil	0.005 (MAC)	0	-	-
Carbaryl	0.09(MAC)	0	-	-
Carbofuran	0.09 (MAC)	0	-	-
Carbon Tetrachloride	0.005 (MAC)	0		
Chlordane (Total)	0.007 (MAC)	0	-	-
Chlorpyrifos	0.09 (MAC)	0	-	-
Cyanazine	0.01 (IMAC)	0	-	-
Diazinon	0.02 (MAC)	0	-	-
Dicamba	0.12 (MAC)	0	-	-
1,2-Dichlorobenzene	0.2 (MAC),	0		
1,4-Dichlorobenzene	0.005(MAC), 0.001 (AO)	0	-	-
Dichlorodiphenyltrichloro ethane (DDT) + metabolites	0.03 (MAC)	0	-	-
1,2-dichloroethane	0.005 (IMAC)	0		
1,1-Dichloroethylene (vinylidene chloride)	0.014 (MAC)	0	-	-
Dichloromethane	0.05 (MAC)	0		
2-4-Dichlorophenol	0.9(MAC), 0.0003 (AO)	0	-	-
2,4-Dichlorophenoxy acetic acid (2,4-D)	0.1 (IMAC)	0	-	-
Diclofop-methyl	0.009 (MAC)	0	-	-
Dimethoate	0.02 (IMAC)	0	-	-
Dinoseb	0.010 (IMAC)	0	-	-
Diquat	0.07 (MAC)	0	-	-
Diuron	0.15 (MAC)	0	-	-

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Parameter	ODWS (mg/L unless noted)			
		# of Samples	Results (mg/L)	Exceedance
Glyphosate	0.28 (IMAC)	0	-	-
Heptachlor + Heptachlor Epoxide	0.003 (MAC)	0	-	-
Lindane (Total)	0.004 (MAC)	0	-	-
Malathion	0.19 (MAC)	0	-	-
Methoxychlor	0.9 (MAC)	0	-	-
Metolachlor	0.05 (IMAC)	0	-	-
Metribuzin	0.08 (MAC)	0	-	-
Monochlorobenzene	0.08(MAC), 0.03 (AO)	0	-	-
Paraquat	0.01 (IMAC)	0	-	-
Parathion	0.05 (MAC)	0	-	-
Pentachlorophenol	0.06(MAC) .03(AO)	0	-	-
Phorate	0.002 (IMAC)	0	-	-
Picloram	0.19 (IMAC)	0	-	-
Polychlorinated Biphenyls (PCB)	0.003 (IMAC)	0	-	-
Prometryne	0.001 (IMAC)	0	-	-
Simazine	0.01 (IMAC)	0	-	-
Temephos	0.28 (IMAC)	0	-	-
Terbufos	0.001 (IMAC)	0	-	-
Tetrachloroethylene (perchloroethylene)	0.030 (MAC)	0	-	-
2,3,4,6-Tetrachlorophenol	0.10 (MAC)	0	-	-
Triallate	0.23 (MAC)	0	-	-
Trichloroethylene	0.05 (MAC)	0	-	-
2,4,6-Trichlorophenol	0.005(MAC) 0.002 (AO)	0	-	-
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	0.28 MAC) 0.02 (AO)	0	-	-
Trifluralin	0.045 (IMAC)	0	-	-
Vinyl Chloride	0.002 (MAC)	0	-	-

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Table D-4B Distribution Water Parameters not previously identified

Parameter	(mg/L unless noted)	2004				
		SC	Minimum	Maximum	Average	Exceed's
Lead	0.010	1	0.0006	0.0006	0.0006	No
Trihalomethanes	0.100	2	.020	.025	.0225	No

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Table D-5 Raw Water Bacteriological Data

Year	Total Coliform (org/100 mL)					Fecal Coliform/ <i>Escherichia coli</i> (org/100 mL)				
	SC	0	< 200	> 200	> 300	SC	0	< 200	> 200	> 300
January	4	4	0	0	0	4	4	0	0	0
February	4	4	0	0	0	4	4	0	0	0
March	5	5	0	0	0	5	5	0	0	0
April	4	4	0	0	0	4	4	0	0	0
May	5	5	0	0	0	5	5	0	0	0
June	4	4	0	0	0	4	4	0	0	0
July	4	4	0	0	0	4	4	0	0	0
August	7	5	2	0	0	7	5	2	0	0
September	-	-	-	-	-	-	-	-	-	-
October	-	-	-	-	-	-	-	-	-	-
November	-	-	-	-	-	-	-	-	-	-
December	-	-	-	-	-	-	-	-	-	-
TOTAL	37	35	2	0	0	37	35	2	0	0

Table D-6 Treated Water Bacteriological Data

Year	Total Coliform			Fecal Coliform/ <i>Escherichia coli</i>			BKG			
	SC	S	US	SC	S	US	SC	S	US	D
January	4	4	0	4	4	0	4	4	0	0
February	4	4	0	4	4	0	4	4	0	0
March	5	5	0	5	5	0	5	5	0	0
April	4	4	0	4	4	0	4	4	0	0
May	5	5	0	5	5	0	5	5	0	0
June	4	4	0	4	4	0	4	4	0	0
July	4	4	0	4	4	0	4	4	0	0
August	7	7	0	7	7	0	7	7	0	0
September	-	-	-	-	-	-	-	-	-	-
October	-	-	-	-	-	-	-	-	-	-
November	-	-	-	-	-	-	-	-	-	-
December	-	-	-	-	-	-	-	-	-	-
TOTAL	37	37	0	37	37	0	37	37	0	0

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Table D-7 Distribution Water Bacteriological Data

Year	Total Coliform			Fecal Coliform/ <i>Escherichia coli</i>			BKG			
	SC	S	US	SC	S	US	SC	S	US	D
January	24	24	0	24	24	0	24	24	0	0
February	24	24	0	24	24	0	24	24	0	0
March	30	30	0	30	30	0	30	30	0	0
April	24	24	0	24	24	0	24	24	0	0
May	30	24	0	30	30	0	30	30	0	0
June	24	29	0	24	24	0	24	24	0	0
July	30	29	1 ¹	30	30	0	30	30	0	0
August	36	30	0	36	36	0	36	36	0	1
September	-	-	-	-	-	-	-	-	-	-
October	-	-	-	-	-	-	-	-	-	-
November	-	-	-	-	-	-	-	-	-	-
December	-	-	-	-	-	-	-	-	-	-
TOTAL	222	222	1	222	222	0	222	222	0	1
Notes: 1- July 7, 2005, Hamilton Rd. Sample station 1 Total Coliform.										

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Table D-8 Radionuclide Analysis for the Raw Water

Parameter	ODWS	2004				
		SC	Minimum	Maximum	Average	Exceedances
Gross Alpha Emissions	0.1 Bq/L	1	<0.1	<0.1	<0.1	No
Gross Beta Emissions	1 Bq/L	1	0.1	0.1	0.1	No
Tritium	7000 Bq/L	1	<1000	<1000	<1000.00	No

Table D-9 Radionuclide Analysis for the Treated Water

Parameter	ODWS	2004				
		SC	Minimum	Maximum	Average	Exceedances
Gross Alpha Emissions	0.1 Bq/L	0	-	-	-	-
Gross Beta Emissions	1 Bq/L	0	-	-	-	-
Tritium	7000 Bq/L	0	-	-	-	-

Table D-10 Radionuclide Analysis for the Distribution Water

Parameter	ODWS	2004				
		SC	Minimum	Maximum	Average	Exceedances
Gross Alpha Emissions	0.1 Bq/L	0	-	-	-	-
Gross Beta Emissions	1 Bq/L	0	-	-	-	-
Tritium	7000 Bq/L	0	-	-	-	-

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Table D-11 Non-Health Related Chemical/Physical Characteristics for the Raw Water

Parameter	ODWS (mg/L unless noted)			
		# of Samples	Results	Exceedances
Alkalinity (as CaCO ₃)	30-500 (OG)	-	-	-
Aluminium	0.1 (OG)	-	-	-
Chloride	250 (AO)	-	-	-
Colour	5 TCU (AO)	-	-	-
Copper	1.0 (AO)	-	-	-
Dissolved Organic Carbon	5.0 (AO)	-	-	-
Ethylbenzene	0.0024 (AO)	-	-	-
Hardness (as CaCO ₃)	80-100 (AO)	-	-	-
Iron	0.3 (AO)	-	-	-
Manganese	0.05 (AO)	-	-	-
Methane	3 L/m (AO)	-	-	-
Odour		-	-	-
Organic Nitrogen	0.15 (OG)	-	-	-
pH	6.5-8.5 (OG)	Continuous	7.08 – 8.58	No
Sodium	200 (OG)	470	7.75 – 14.80	No
Sulphate	500 (OG)	-	-	-
Sulphide	0.05 (OG)	-	-	-
Taste	inoffensive	-	-	-
Temperature	15 (OG)	Continuous	-.5 - 20	Yes
Toluene	0.024 (OG)	-	-	-
Total Dissolved Solids	500 (OG)	-	-	-
Turbidity	NTU	Continuous	0.03 – 100.0	No
Xylenes	0.3 (OG)	-	-	-
Zinc	5.0 (OG)	-	-	-

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Table D-12 Non-Health Related Chemical/Physical Characteristics for the Treated Water

Parameter	ODWS (mg/L unless noted)			
		# of Samples	Results	Exceedances
Alkalinity (as CaCO ₃)	30-500 (OG)	1	80.0	No
Aluminium	0.1 (OG)	1	.083	No
Chloride	250 (AO)	1	26.0	No
Colour	5 TCU (AO)	1	3<MDL	No
Copper	1.0 (AO)	1	0.0016<MDL	No
Dissolved Organic Carbon	5.0 (AO)	1	.36	No
Ethylbenzene	0.0024 (AO)	1	.00047<MDL	No
Hardness (as CaCO ₃)	80-100 (AO)	1	129	No
Iron	0.3 (AO)	1	.018<MDL	No
Manganese	0.05 (AO)	1	.002<MDL	No
Methane L/m3	3 L/m (AO)	1	.006<MDL	No
Odour	Inoffensive (AO)	-	-	-
Organic Nitrogen	0.15 (OG)	1	0.22	No
pH	6.5-8.5 (OG)	Continuous	7.02 – 8.0	No
Sodium	200 (OG)	470	8.04 – 16.87	No
Sulphate	500 (OG)	1	34	No
Sulphide	0.05 (OG)	1	.004<MDL	No
Taste	(OG)	-	-	-
Temperature	15 (OG)	470	1.0 – 24.0	Yes
Toluene	0.024 (OG)	1	.00058<MDL	No
Total Dissolved Solids	500 (OG)	1	183.00	No
Turbidity	1 NTU	Continuous	0.023 – 0.628	No
Xylenes	.3 (OG)	1	.00058<MDL	No
Zinc	5	1	.013	No

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Table D-13 Non-Health Related Chemical/Physical Characteristics for the Distribution Water

Parameter	ODWS (mg/L unless noted)			
		# of Samples	Results	Exceedances
Alkalinity (as CaCO ₃)	30-500 (OG)	0	-	-
Aluminium	0.1 (OG)	0	-	-
Chloride	250 (AO)	0	-	-
Colour	5 TCU (AO)	0	-	-
Copper	1.0 (AO)	0	-	-
Dissolved Organic Carbon	5.0 (AO)	0	-	-
Ethylbenzene	0.0024 (AO)	0	-	-
Hardness (as CaCO ₃)	80-100 (AO)	0	-	-
Iron	0.3 (AO)	0	-	-
Manganese	0.05 (AO)	0	-	-
Methane	3 L/m (AO)	0	-	-
Odour	Inoffensive (AO)	0	-	-
Organic Nitrogen	0.15 (OG)	0	-	-
pH	6.5-8.5 (OG)	0	-	-
Sodium	200 (OG)	0	-	-
Sulphate	500 (OG)	0	-	-
Sulphide	0.05 (OG)	0	-	-
Taste	(OG)	0	-	-
Temperature	15 (OG)	0	-	-
Toluene	0.024 (OG)	0	-	-
Total Dissolved Solids	500 (OG)	0	-	-
Xylenes	0.3 (OG)	0	-	-
Zinc	5.0 (OG)	0	-	-

APPENDIX C

Correspondence

APPENDIX C

Memorandum

To: Whom it my concern
CC: Peter Angelo
From: Rick Trumper
Date: July7, 2005
Re: Adverse water quality, **AWQI # 56520**

Hello,

This is written notice of Adverse water quality incident at a permanent sampling station located on the west side of Hamilton Road just south of Croft St. East in the Community of Port Hope.

We will be sampling the system at this location due to a parameter exceedance on July 7, 2004, AWQI No. 56520, of T. Coli (1 colony).

If you or any of the MOE staff have any questions please call me at the numbers provided.

Yours Truly,

Rick Trumper
Water Treatment Supervisor
Municipality of Port Hope
Water Department

Phone (905) 885 -2209
Fax (905) 885-7509
Cell (905) 375-8004

APPENDIX C

Memorandum

To: Whom it my concern
CC: Peter Angelo
From: Rick Trumper
Date: July11, 2005
Re: Resolution to Adverse water quality **AWQI #56520**

Hello,

This is written notice of resolution to an Adverse water quality incident dated July 11/2005 at a permanent sampling location on Hamilton Rd. south of Croft St. E. in the community of Port Hope.

We have sampled the system at the original and other locations and the results returned showed that the parameter in question has returned below the MAC value.

We are requesting that this adverse incident be resolved.

If you or any of the MOE staff have any questions please contact me at the numbers provided.

Yours Truly,

Rick Trumper
Water Treatment Supervisor
Municipality of Port Hope
Water Department

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