January - March 2002 Water Quarterly Report

Parameters Related to Microbiological Quality	MAC, IMAC or Minimum	Number of Samples	Number of Detectable Results	Sampling Date	Range	Adverse Results?	Typical Source of Contaminant
Turbidity							
Filter # 1	Mac 1.0 NTU	Continuous	Continuous	January 1/02- March 31/02	0.028-0.270 NTU	No	Indicates presence of particles in water due to process difficulties.
Filter # 2		Continuous	Continuous		0.033-1.725 NTU	Yes. See summary.	
Filter # 3		Continuous	Continuous		0.030-0.244 NTU	No	
Filter # 4		Continuous	Continuous		0.044-0.274 NTU	No	
Plant Effluent Online		Continuous	Continuous		0.030-0.069 NTU	No	
Plant Effluent Lab.		90	90		0.029-0.055 NTU	No	
Free Chlorine Entering Distribution System	Indicator of adverse water quality if below 0.05mg/L						Free chlorine entering distribution system must be high enough to maintain a minimum of 0.20 mg/L in all parts of the distribultion system.
Plant Effluent Online		Continuous	Continuous	January 1/02- March 31/02	1.425-2.063 mg/L	No	
Plant Effluent Lab.		90	90		1.59-2.03 mg/L	No	
Free Chlorine @ Sites Throughout Distribution System	Indicator of adverse water quality if below 0.05mg/L	363	363	January 1/02- March 31/02	0.23-1.87 mg/L	No	

Microbiological Parameters	MAC , IMAC or Aesthetic Objective	Number of Samples	Number of Detectable Results	Sampling Date	Range	Adverse Results?	Typical Source of Contaminant
Total Coliforms	MAC = 0 *See Note	105	0	January 1/02- March 31/02	N/A	No	Inadequate filtration/disinfection.
Fecal Coliforms	MAC = 0 *See Note		0	January 1/02- March 31/02	N/A	No	Sewage Contamination.
E . Coli	MAC = 0 *See Note		0	January 1/02- March 31/02	N/A	No	Sewage Contamination.
Deterioration Indicators	MAC = 0 *See Note		0	January 1/02- March 31/02	N/A	No	Inadequate filtration/disinfection.
Heterotrophic Plate Count Colonies / mL	MAC 500 Colonies/mL	20	6	January 1/02- March 31/02	0-2 colonies	No	Used to monitor disinfection efficiency at plant or water quality deterioration in system.

Note * Indicator of Adverse Water Quality if present in treated water.

Volatile Organics	MAC , IMAC or Aesthetic Objective	Detection Limit	Number of Samples	Sampling Date	Result	Exceedance ?	Typical Source of Contaminant
Benzene	MAC 5 ug/L	0.5 ug/L	1	February 12/02	<0.5 ug/L	No	Petroleum products, vehicle emissions, cigarette smoke.
CarbonTetrachloride	MAC 5 ug/L	0.5 ug/L	1	February 12/02	<0.5 ug/L	No	Industrial waste.
1,2-Dichlorobenzene	MAC 200 ug/L	1.0 ug/L	1	February 12/02	<1.0 ug/L	No	Used in specialty chemical blends (degreasing agents, dye carriers).
1,4-Dichlorobenzene	MAC 5 ug/L	0.5 ug/L	1	February 12/02	<0.5 ug/L	No	Synthetic material widely used in toilet pucks & moth balls.
1,2-Dichloroethane	IMAC 5 ug/L	0.5 ug/L	1	February 12/02	<0.5 ug/L	No	Used in production of vinyl chloride also as a solvent and fumigant.
1,1-Dichloroethelyne	MAC 14 ug/L	1.0 ug/L	1	February 12/02	<1.0 ug/L	No	Used in food packaging industry and textile industry.
Dichloromethane (Methylene Chloride)	MAC 50 ug/L	1.0 ug/L	1	February 12/02	<1.0 ug/L	No	Industrial paint stripper and degreasing agent.
Ethylbenzene	Aesthetic Objective 2.4 ug/L	1.0 ug/L	1	February 12/02	<1.0 ug/L	No	Component of gas octane booster also used in solvant based paint.
Monochlorobenzene (Chlorobenzene)	MAC 0.08 mg/L Aesthetic Objective/ 30 ug/L	1.0 ug/L	1	February 12/02	<1.0 ug/L	No	Used to produce ingredients for waxes paints, polishes,rubber, and metal cleaning solvents.
Tetrachloroethylene	MAC 30 ug/L	1.0 ug/L	1	February 12/02	<1.0 ug/L	No	Solvent for dry cleaning and the metal cleaning industries.
Toluene	Aesthetic Objective 24 ug/L	1.0 ug/L	1	February 12/02	<1.0 ug/L	No	Petroleum products, and benzene derived products.
Total Trihalomethanes (current quarter)	See running average of four quarters below	1.0 ug/L	1	February 12/02	122 ug/L	N/A	Trihalomethanes are the most widely occurring synthetic organics found in chlorinated drinking water. They are caused by the action of chlorine with naturally occurring organics.
Total Trihalomethanes (Running Average)	MAC 100 ug/L *Based on a four quarter moving annual average	1.0 ug/L	Average of last four quarterly samples	Feb. 12/02 Nov. 28/01 Aug. 15/01 May 30/01	163 ug/L	Yes. See summary.	
Trichloroethylene (Trichloroethene)	MAC 50 ug/L	1.0 ug/L	1	February 12/02	<1.0 ug/L	No	Dry cleaning, metal degreasing, tetrachloroethylene production.
Vinyl Chloride	MAC 2 ug/L	0.2 ug/L	1	February 12/02	<0.2 ug/L	No	Used in making PVC.
m+p-Xylene	Aesthetic Objective 300 ug/L	1.0 ug/L	1	February 12/02	<1.0 ug/L	No	Industrial solvents, intermediate for dyes and organic synthesis, compound of paints, paint cleaners, and petroleum products.
o-Xylene	Aesthetic Objective 300 ug/L	1.0 ug/L	1	February 12/02	<1.0 ug/L	No	

Pesticides and PCBs	MAC , IMAC or Aesthetic Objective	Detection Limit	Number of Samples	Sampling Date	Result	Exceedance ?	Typical Source of Contaminant
Alachlor	IMAC 5 ug/L	0.1 ug/L	1	February 12/02	<0.1 ug/L	No	Herbicide when growing corn and soybeans/banned in 1985.
Aldicarb	MAC 9 ug/L	0.9 ug/L	1	February 12/02	<0.9 ug/L	No	Insecticide.
Aldrin + Dieldrin	MAC .7 ug/L	0.04 ug/L	1	February 12/02	<0.04 ug/L	No	Pesticides partially banned in Ontario in 1969 fully banned in 1994.
Atrazine + N-dealkylated metabolites	IMAC 5 ug/L	0.2 ug/L	1	February 12/02	<0.2 ug/L	No	Herbicide.
Azinphos -methyl	MAC 20 ug/L	0.1 ug/L	1	February 12/02	<0.1 ug/L	No	Insecticide.
Bendiocarb	MAC 40 ug/L	0.1 ug/L	1	February 12/02	<0.1 ug/L	No	Insecticide.
Bromoxynil	IMAC 5 ug/L	0.2 ug/l	1	February 12/02	<0.2 ug/l	No	Herbicide.
Carbaryl	MAC 90 ug/L	0.1 ug/L	1	February 12/02	<0.1 ug/L	No	Insecticide.
Carbofuran	MAC 90 ug/L	0.1 ug/L	1	February 12/02	<0.1 ug/L	No	Insecticide.
Chlordane (Total)	MAC 7 ug/L	0.3 ug/L	1	February 12/02	<0.3 ug/L	No	Insecticide.
Clorpyrifos	MAC 90 ug/L	0.1 ug/L	1	February 12/02	<0.1 ug/L	No	Insecticide.
Cyanazine	IMAC 10 ug/l	0.1 ug/L	1	February 12/02	<0.1 ug/L	No	Herbicide.
Diazinon	MAC 20 ug/L	0.1ug/L	1	February 12/02	<0.1 ug/L	No	Insecticide.
Dicamba	MAC 120 ug/L	0.2 ug/L	1	February 12/02	<0.2 ug/L	No	Herbicide.
2,4-Dichlorophenol	MAC 900 ug/L	0.5 ug/L	1	February 12/02	<0.5 ug/L	No	The action of chlorine on phenolic precursers.
DDT & Metabolites	MAC 30 ug/L	0.4 ug/L	1	February 12/02	<0.4 ug/L	No	Insecticide.
2,4-D	IMAC 100 ug/L	0.2 ug/L	1	February 12/02	<0.2 ug/L	No	Herbicide.
Diclofop - methyl	MAC 9 ug/L	0.1 ug/L	1	February 12/02	<0.1 ug/L	No	Herbicide.
Dimethoate	IMAC 20 ug/L	0.1 ug/L	1	February 12/02	<0.1 ug/L	No	Insecticide.
Dinoseb	MAC 10 ug/L	0.2 ug/L	1	February 12/02	<0.2 ug/L	No	Herbicide.
Diquat	MAC 70 ug/L	7 ug/L	1	February 12/02	<7 ug/L	No	Herbicide.
Diuron	MAC 150 ug/L	15 ug/L	1	February 12/02	<15 ug/L	No	Herbicide.
Glyphosate	IMAC 280 ug/L	28 ug/L	1	February 12/02	<28 ug/L	No	Herbicide.
Heptachlor	MAC 3 ug/L	0.1 ug/L	1	February 12/02	<0.1 ug/L	No	Insecticide.
Heptachlor Epoxide	MAC 3 ug/L	0.1 ug/L	1	February 12/02	<0.1 ug/L	No	Insecticide.
Lindane(Total)	MAC 4 ug/L	0.1 ug/L	1	February 12/02	<0.1 ug/L	No	Insecticide.
Malathion	MAC 190 ug/L	0.1 ug/L	1	February 12/02	<0.1 ug/L	No	Insecticide.
Methoxychlor	MAC 900 ug/L	0.1 ug/L	1	February 12/02	<0.1 ug/L	No	Insecticide.
Metolachlor	IMAC 50 ug/L	0.1 ug/L	1	February 12/02	<01. ug/L	No	Herbicide.
Metribuzin	MAC 80 ug/L	0.1 ug/L	1	February 12/02	<0.1 ug/L	No	Herbicide.
Paraquat	10 ug/L 10 ug/L	1 ug/L	1	February 12/02	<1 ug/L	No	Herbicide.
Parathion	MAC 50 ug/L	0.1 ug/L	1	February 12/02	<0.1 ug/L	No	Insecticide.
Pentachlorophenol	MAC 60 ug/L	0.5 ug/L	1	February 12/02	<0.5 ug/L	No	Pesticides and wood preservatives.
Phorate	IMAC 2 ug/L	0.1 ug/L	1	February 12/02	<0.1 ug/L	No	Insecticide.
Picloram	IMAC 190 ug/L	0.2 ug/L	1	February 12/02	<0.2 ug/L	No	Herbicide.
PCBs	IMAC 3 ug/L	0.06 ug/L	1	February 12/02	<0.06 ug/L	No	Transformers.
Prometryne	IMAC 1 ug/L	0.1 ug/L	1	February 12/02	<0.1 ug/L	No	Herbicide.
Simazine	IMAC 10 ug/L	0.1 ug/L	1	February 12/02	<0.1 ug/L	No	Herbicide.
Temephos	IMAC 280 ug/L	0.1 ug/L	1	February 12/02	<0.1 ug/L	No	Insecticide.
Terbufos	IMAC 1 ug/L	0.1 ug/L	1	February 12/02	<0.1 ug/L	No	Insecticide.
2,3,4,6-Tetrachlorophenol	MAC 1 ug/L	0.5 ug/L	1	February 12/02	<0.5 ug/L	No	Wood preservative.
Triallate	MAC 230 ug/L	0.1 ug/L	1	February 12/02	<0.1 ug/L	No	Herbicide.
2,4,6-Trichlorophenol	MAC 5 ug/L	0.5 ug/L	1	February 12/02	<0.5 ug/L	No	Used in the manufacture of pesticides.
Trifluralin	IMAC 45 ug/L	0.1 ug/L	1	February 12/02	<0.1 ug/L	No	Herbicide.
2,4,5-T (2,4,5-Trichlorophenoxy acetic acid)	28 ug/L	0.1 ug/L	1	February 12/02	<0.1 ug/L	No	Herbicide.

Inorganics	MAC , IMAC or Aesthetic Objective	Detection Limit	Number of samples	Sampling Date	Result	Exceedance ?	Typical Source of Contaminant
Arsenic	IMAC 25 ug/L	1 ug/L	1	November 28/01	<1 ug/L	No	Mine drainage waters and leachates, also occurrs naturally.
Barium	MAC 1000 ug/L	10 ug/L	1	November 28/01	<10 ug/L	No	Limestone and dolomite.
Boron	IMAC 5000 ug/L	50 ug/L	1	November 28/01	<50ug/L	No	Antiseptic agents.
Cadmium	MAC 5 ug/L	0.5 ug/L	1	November 28/01	<0.5 ug/L	No	Electroplating wastes.
Chromium	MAC 50 ug/L	1 ug/L	1	November 28/01	<1 ug/L	No	Chlorination, older yellow paints, and water cooling systems.
Copper	Aesthetic Objective 1000 ug/L	1 ug/L	1	November 28/01	<1 ug/L	No	Plumbing.
Fluoride	Optimum Level 0.5 mg/L-0.8 mg/L	0.03 mg/L	1	February 12/02	0.14 mg/L	No. See summary.	Natural or added to prevent tooth decay
Iron	Aesthetic Objective 300 ug/L	50 ug/L	1	November 28/01	<50 ug/L	No	Anaerobic decay in sediments and complex formations.
Lead	MAC 10 ug/L	1 ug/L	2	November 28/01	<1 ug/L	No	Corrosion of lead solder, some brass fittings or from lead pipes.
Manganese	Aesthetic Objective 50 ug/L	1 ug/L	1	November 28/01	<1 ug/L	No	Anaerobic decay processes in sediments.
Mercury	MAC 1 ug/L	0.1 ug/L	1	November 28/01	<0.1 ug/L	No	Air pollution, metal refining, and natural mineral deposits.
Nitrate	MAC 10 mg/L	0.03 mg/L	1	February 12/02	0.33 mg/L	No	Decayed plants or animals or from sewage,geological formations.
Nitrite	MAC 1.0 mg/L	0.02 mg/L	1	February 12/02	<0.02 mg/L	No	Unoxidized nitrate.
Selenium	MAC 10 ug/L	5 ug/L	1	November 28/01	<5 ug/L	No	Occurs naturally eg.weathering of rocks.
Sodium	Aesthetic Obj. 200.0 mg/L	0.005 mg/L	1	November 28/01	13.8 mg/L	No	Natually ocurring or through the addition of water treatment process
Uranium	MAC 100 ug/L	5 ug/L	1	November 28/01	<5 ug/L	No	Naturally occuring.