January-March 2003 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		Continuous	Continuous		0.034-0.247 NTU	No	
Filter # 2	Mac	Continuous	Continuous	January 1/03-	0.034-0.443 NTU	No	Indicates presence of particles in water
Filter # 3	1.0 NTU	Continuous	Continuous	March 31/03	0.032-0.214 NTU	No	due to process difficulties.
Filter # 4		Continuous	Continuous		0.040-0.254 NTU	No	
Plant Effluent Online		Continuous	Continuous		0.019-0.044 NTU	No	
Plant Effluent Lab.		90	90		0.024-0.038 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 1/03-	1.340-2.166 mg/L	No	
Plant Effluent Lab.	Indicator of adverse water quality if below 0.05mg/L	90	90	March 31/03	1.27-1.86 mg/L	No	
Free Chlorine @ Sites Throughout Distribution System		125	125	January 1/03- March 31/03	0.31-1.54 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	87	0	January 1/03- March31/03	N/A	No	Inadequate filtration/disinfection.
Fecal Coliforms	MAC = 0 *See Note		0	January 1/03- March 31/03	N/A	No	Sewage Contamination.
E . Coli	MAC = 0 *See Note		0	January 1/03- March 31/03	N/A	No	Sewage Contamination.
Deterioration Indicators	MAC = 0 *See Note		0	January 1/03- March 31/03	N/A	No	Inadequate filtration/disinfection.
Heterotrophic Plate Count Colonies / mL	MAC 500 Colonies/mL	18	8	January 1/03- March 31/03	0-12 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 26 / 03	<0.5 ug/L	No	Petroleum products, vehicle emissions, cigarette smoke.
CarbonTetrachloride	MAC 5 ug/L	0.5 ug/L	1	February 26 / 03	<0.5 ug/L	No	Industrial waste.
1,2-Dichlorobenzene	MAC 200 ug/L	0.5 ug/L	1	February 26 / 03	<0.5 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 26 / 03	<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 26 / 03	<0.5 ug/L	No	Used in production of vinyl chloride also as a solvent and fumigant.
1,1-Dichloroethelyne	MAC 14 ug/L	0.5 ug/L	1	February 26 / 03	<0.5 ug/L	No	Used in food packaging industry and textile industry.
Dichloromethane (Methylene Chloride)	MAC 50 ug/L	0.5 ug/L	1	February 26 / 03	<0.5 ug/L	No	Industrial paint stripper and degreasing agent.
Ethylbenzene	Aesthetic Objective 2.4 ug/L	0.5 ug/L	1	February 26 / 03	<0.5 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	0.5 ug/L	1	February 26 / 03	<0.5 ug/L	No	Used to produce ingredients for waxes paints, polishes,rubber,
Tetrachloroethylene	MAC 30 ug/L	0.5 ug/L	1	February 26 / 03	<0.5 ug/L	No	Solvent for dry cleaning and the metal cleaning industries.
Toluene	Aesthetic Objective 24 ug/L	0.5 ug/L	1	February 26 / 03	<0.5 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	March 4/03	89.2 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	March 4/03 November 12 / 02 August 4/02 May 14/02	143 ug/L	Yes. See summary.	
Trichloroethylene (Trichloroethene)	MAC 50 ug/L	0.5 ug/L	1	February 26 / 03	<0.5 ug/L	No	Dry cleaning, metal degreasing, tetrachloroethylene production.
Vinyl Chloride	MAC 2 ug/L	0.5 ug/L	1	February 26 / 03	<0.5 ug/L	No	Used in making PVC.
m+p-Xylene	Aesthetic Objective 300 ug/L	1.0 ug/L	1	February 26 / 03	<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	0.5 ug/L	1	February 26 / 03	<0.5 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 26 / 03	<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 26 / 03	<0.9 ug/L	No	Insecticide.
Aldrin + Dieldrin	MAC .7 ug/L	0.04 ug/L	1	February 26 / 03	<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 26 / 03	<0.2 ug/L	No	Herbicide.
Azinphos -methyl	MAC 20 ug/L	0.1 ug/L	1	February 26 / 03	<0.1 ug/L	No	Insecticide.
Bendiocarb	MAC 40 ug/L	0.5 ug/L	1	February 26 / 03	<0.5 ug/L	No	Insecticide.
Bromoxynil	IMAC 5 ug/L	0.2 ug/l	1	February 26 / 03	<0.2 ug/l	No	Herbicide.
Carbaryl	MAC 90 ug/L	0.5 ug/L	1	February 26 / 03	<0.5 ug/L	No	Insecticide.
Carbofuran	MAC 90 ug/L	0.5 ug/L	1	February 26 / 03	<0.5 ug/L	No	Insecticide.
Chlordane(Total)	MAC 7 ug/L	0.3 ug/L	1	February 26 / 03	<0.3 ug/L	No	Insecticide.
Chlorpyrifos	MAC 90 ug/L	0.1 ug/L	1	February 26 / 03	<0.1 ug/L	No	Insecticide.
Cyanazine	IMAC 10 ug/l	0.1 ug/L	1	February 26 / 03	<0.1 ug/L	No	Herbicide.
Diazinon	MAC 20 ug/L	0.1ug/L	1	February 26 / 03	<0.1 ug/L	No	Insecticide.
Dicamba	MAC 120 ug/L	0.2 ug/L	1	February 26 / 03	<0.2 ug/L	No	Herbicide.
2,4-Dichlorophenol	MAC 900 ug/L	0.5 ug/L	1	February 26 / 03	<0.5 ug/L	No	The action of chlorine on phenolic precursers.
DDT & Metabolites	MAC 30 ug/L	0.4 ug/L	1	February 26 / 03	<0.4 ug/L	No	Insecticide.
2,4-D	IMAC 100 ug/L	0.2 ug/L	1	February 26 / 03	<0.2 ug/L	No	Herbicide.
Diclofop - methyl	MAC 9 ug/L	0.1 ug/L	1	February 26 / 03	<0.1 ug/L	No	Herbicide.
Dimethoate	IMAC 20 ug/L	0.1 ug/L	1	February 26 / 03	<0.1 ug/L	No	Insecticide.
Dinoseb	MAC 10 ug/L	0.2 ug/L	1	February 26 / 03	<0.2 ug/L	No	Herbicide.
Diquat	MAC 70 ug/L	7 ug/L	1	February 26 / 03	<7 ug/L	No	Herbicide.
Diuron	MAC 150 ug/L	15 ug/L	1	February 26 / 03	<15 ug/L	No	Herbicide.
Glyphosate	IMAC 280 ug/L	28 ug/L	1	February 26 / 03	<28 ug/L	No	Herbicide.
Heptachlor	MAC 3 ug/L	0.1 ug/L	1	February 26 / 03	<0.1 ug/L	No	Insecticide.
Heptachlor Epoxide	MAC 3 ug/L	0.1 ug/L	1	February 26 / 03	<0.1 ug/L	No	Insecticide.
Lindane(Total)	MAC 4 ug/L	0.1 ug/L	1	February 26 / 03	<0.1 ug/L	No	Insecticide.
Malathion	MAC 190 ug/L	0.1 ug/L	1	February 26 / 03	<0.1 ug/L	No	Insecticide.
Methoxychlor	MAC 900 ug/L	0.1 ug/L	1	February 26 / 03	<0.1 ug/L	No	Insecticide.
Metolachlor	IMAC 50 ug/L	0.1 ug/L	1	February 26 / 03	<0.1 ug/L	No	Herbicide.
Metribuzin	MAC 80 ug/L	1 ug/L	1	February 26 / 03	<1.0 ug/L	No	Herbicide.
Paraquat	10 ug/L 10 ug/L	1 ug/L	1	February 26 / 03	<1 ug/L	No	Herbicide.
Parathion	MAC 50 ug/L	0.1 ug/L	1	February 26 / 03	<0.1 ug/L	No	Insecticide.
Pentachlorophenol	MAC 60 ug/L	0.5 ug/L	1	February 26 / 03	<0.5 ug/L	No	Pesticides and wood preservatives.
Phorate	IMAC 2 ug/L	0.1 ug/L	1	February 26 / 03	<0.1 ug/L	No	Insecticide.
Picloram	IMAC 190 ug/L	0.2 ug/L	1	February 26 / 03	<0.2 ug/L	No	Herbicide.
PCBs	IMAC 3 ug/L	0.06 ug/L	1	February 26 / 03	<0.06 ug/L	No	Transformers.
Prometryne	IMAC 1 ug/L	0.1 ug/L	1	February 26 / 03	<0.1 ug/L	No	Herbicide.
Simazine	IMAC 10 ug/L	0.1 ug/L	1	February 26 / 03	<0.1 ug/L	No	Herbicide.
Temephos	IMAC 280 ug/L	0.1 ug/L	1	February 26 / 03	<0.1 ug/L	No	Insecticide.
Terbufos	IMAC 1 ug/L	0.1 ug/L	1	November 12 / 02	<0.1 ug/L	No	Insecticide.
2,3,4,6-Tetrachlorophenol	MAC 1 ug/L	0.5 ug/L	1	February 26 / 03	<0.5 ug/L	No	Wood preservative.
Triallate	MAC 230 ug/L	0.1 ug/L	1	November 12 / 02	<0.1 ug/L	No	Herbicide.
2,4,6-Trichlorophenol	MAC 5 ug/L	0.5 ug/L	1	February 26 / 03	<0.5 ug/L	No	Used in the manufacture of pesticides.
Trifluralin	IMAC 45 ug/L	0.1 ug/L	1	November 12 / 02	<0.1 ug/L	No	Herbicide.
2,4,5-T (2,4,5-Trichlorophenoxy acetic acid)	28 ug/L	0.2 ug/L	1	February 26 / 03	<0.2 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 12 / 02	<1 ug/L	No	Mine drainage waters and leachates, also occurrs naturally.
Barium	MAC 1000 ug/L	10 ug/L	1	November 12 / 02	10 ug/L	No	Limestone and dolomite.
Boron	IMAC 5000 ug/L	50 ug/L	1	November 12 / 02	<50ug/L	No	Antiseptic agents.
Cadmium	MAC 5 ug/L	0.1 ug/L	1	November 12 / 02	<0.1 ug/L	No	Electroplating wastes.
Chromium	MAC 50 ug/L	1 ug/L	1	November 12 / 02	<1 ug/L	No	Chlorination, older yellow paints, and water cooling systems.
Copper	Aesthetic Objective 1000 ug/L	1 ug/L	1	November 12 / 02	3 ug/L	No	Plumbing.
Fluoride	Optimum Level 0.5 mg/L-0.8 mg/L		90	January 1/03-March 31/03	range .50-.67 mg/L	See summary.	Natural or added to prevent tooth decay
Iron	Aesthetic Objective 300 ug/L	50 ug/L	1	November 12 / 02	<50 ug/L	No	Anaerobic decay in sediments and complex formations.
Lead	MAC 10 ug/L	1 ug/L	2	November 12 / 02	<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 12 / 02	<1 ug/L	No	Anaerobic decay processes in sediments.
Mercury	MAC 1 ug/L	0.1 ug/L	1	November 12 / 02	<0.1 ug/L	No	Air pollution, metal refining, and natural mineral deposits.
Nitrate	MAC 10 mg/L	0.03 mg/L	1	February 26 / 03	0.28 mg/L	No	Decayed plants or animals or from sewage,geological formations.
Nitrite	MAC 1.0 mg/L	0.02 mg/L	1	February 26 / 03	<0.02 mg/L	No	Unoxidized nitrate.
Selenium	MAC 10 ug/L	5 ug/L	1	November 12 / 02	<5 ug/L	No	Occurs naturally eg.weathering of rocks.
Sodium	Aesthetic Obj. 200.0 mg/L	0.005 mg/L	1	November 12 / 02	15.5 mg/L	No	Natually ocurring or through the addition of water treatment process
Uranium	MAC 20 ug/L	5 ug/L	1	November 12 / 02	<5 ug/L	No	Naturally occuring.