October - December 2001 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	October 1/01- December 31/01	0.035-0.214 NTU	No	Indicates presence of particles in water due to process difficulties.
Filter # 2		Continuous	Continuous		0.032-0.185 NTU	No	
Filter # 3		Continuous	Continuous		0.033-0.228 NTU	No	
Filter # 4		Continuous	Continuous		0.043-2.028 NTU	Yes. See summary.	
Plant Effluent Online		Continuous	Continuous		0.027-2.007 NTU	Yes. See summary.	
Plant Effluent Lab.		92	92		0.027-0.061 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	October 1/01- December 31/01	1.126-2.063 mg/L	No	
Plant Effluent Lab.		92	92		1.21-2.06 mg/L	No	
Free Chlorine @ Sites Throughout Distribution System	Indicator of adverse water quality if below 0.05mg/L	445	445	October 1/01- December 31/01	0.03-1.90 mg/L	Yes. See summary.	
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	107	0	October 1/01- December 31/01	N/A	No	Inadequate filtration/disinfection.
Fecal Coliforms	MAC = 0 *See Note		0	October 1/01- December 31/01	N/A	No	Sewage Contamination.
E . Coli	MAC = 0 *See Note		0	October 1/01- December 31/01	N/A	No	Sewage Contamination.
Deterioration Indicators	MAC = 0 *See Note		0	October 1/01- December 31/01	N/A	No	Inadequate filtration/disinfection.
Heterotrophic Plate Count Colonies / mL	MAC 500 Colonies/mL	20	14	October 1/01- December 31/01	0-3 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	November 28/01	<0.5 ug/L	No	Petroleum products, vehicle emissions, cigarette smoke.
CarbonTetrachloride	MAC 5 ug/L	0.5 ug/L	1	November 28/01	<0.5 ug/L	No	Industrial waste.
1,2-Dichlorobenzene	MAC 200 ug/L	1.0 ug/L	1	November 28/01	<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	November 28/01	<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	November 28/01	<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	November 28/01	<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	November 28/01	<1.0 ug/L	No	Industrial paint stripper and degreasing agent.
Ethylbenzene	Aesthetic Objective 2.4 ug/L	1.0 ug/L	1	November 28/01	<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	November 28/01	<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	November 28/01	<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	November 28/01	<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	November 28/01	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	Nov.28/01 Aug. 15/01 May 30/01 Feb. 21/01 Nov.21/00	155 ug/L	Yes. See summary.	
Trichloroethylene (Trichloroethene)	MAC 50 ug/L	1.0 ug/L	1	November 28/01	<1.0 ug/L	No	Dry cleaning, metal degreasing, tetrachloroethylene production.
Vinyl Chloride	MAC 2 ug/L	0.2 ug/L	1	November 28/01	<0.2 ug/L	No	Used in making PVC.
m+p-Xylene	Aesthetic Objective 300 ug/L	1.0 ug/L	1	November 28/01	<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	November 28/01	<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	November 28/01	<0.1 ug/L	No	Herbicide when growing corn and soybeans/banned in 1985.
Aldicarb	MAC 9 ug/L	0.9 ug/L	1	November 28/01	<0.9 ug/L	No	Insecticide.
Aldrin + Dieldrin	MAC .7 ug/L	0.04 ug/L	1	November 28/01	<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	November 28/01	<0.2 ug/L	No	Herbicide.
Azinphos - methyl	MAC 20 ug/L	0.1 ug/L	1	November 28/01	<0.1 ug/L	No	Insecticide.
Bendiocarb	MAC 40 ug/L	0.1 ug/L	1	November 28/01	<0.1 ug/L	No	Insecticide.
Bromoxynil	IMAC 5 ug/L	0.2 ug/l	1	November 28/01	<0.2 ug/l	No	Herbicide.
Carbaryl	MAC 90 ug/L	0.1 ug/L	1	November 28/01	<0.1 ug/L	No	Insecticide.
Carbofuran	MAC 90 ug/L	0.1 ug/L	1	November 28/01	<0.1 ug/L	No	Insecticide.
Chlordane (Total)	MAC 7 ug/L	0.3 ug/L	1	November 28/01	<0.3 ug/L	No	Insecticide.
Clorpyrifos	MAC 90 ug/L	0.1 ug/L	1	November 28/01	<0.1 ug/L	No	Insecticide.
Cyanazine	IMAC 10 ug/l	0.1 ug/L	1	November 28/01	<0.1 ug/L	No	Herbicide.
Diazinon	MAC 20 ug/L	0.1ug/L	1	November 28/01	<0.1 ug/L	No	Insecticide.
Dicamba	MAC 120 ug/L	0.2 ug/L	1	November 28/01	<0.2 ug/L	No	Herbicide.
2,4-Dichlorophenol	MAC 900 ug/L	0.5 ug/L	1	November 28/01	<0.5 ug/L	No	The action of chlorine on phenolic precursers.
DDT & Metabolites	MAC 30 ug/L	0.4 ug/L	1	November 28/01	<0.4 ug/L	No	Insecticide.
2,4-D	IMAC 100 ug/L	0.2 ug/L	1	November 28/01	<0.2 ug/L	No	Herbicide.
Diclofop - methyl	MAC 9 ug/L	0.1 ug/L	1	November 28/01	<0.1 ug/L	No	Herbicide.
Dimethoate	IMAC 20 ug/L	0.1 ug/L	1	November 28/01	<0.1 ug/L	No	Insecticide.
Dinoseb	MAC 10 ug/L	0.2 ug/L	1	November 28/01	<0.2 ug/L	No	Herbicide.
Diquat	MAC 70 ug/L	7 ug/L	1	November 28/01	<7 ug/L	No	Herbicide.
Diuron	MAC 150 ug/L	15 ug/L	1	November 28/01	<15 ug/L	No	Herbicide.
Glyphosate	IMAC 280 ug/L	28 ug/L	1	November 28/01	<28 ug/L	No	Herbicide.
Heptachlor	MAC 3 ug/L	0.1 ug/L	1	November 28/01	<0.1 ug/L	No	Insecticide.
Heptachlor Epoxide	MAC 3 ug/L	0.1 ug/L	1	November 28/01	<0.1 ug/L	No	Insecticide.
Lindane (Total)	MAC 4 ug/L	0.1 ug/L	1	November 28/01	<0.1 ug/L	No	Insecticide.
Malathion	MAC 190 ug/L	0.1 ug/L	1	November 28/01	<0.1 ug/L	No	Insecticide.
Methoxychlor	MAC 900 ug/L	0.1 ug/L	1	November 28/01	<0.1 ug/L	No	Insecticide.
Metolachlor	IMAC 50 ug/L	0.1 ug/L	1	November 28/01	<01. ug/L	No	Herbicide.
Metribuzin	MAC 80 ug/L	0.1 ug/L	1	November 28/01	<0.1 ug/L	No	Herbicide.
Paraquat	10 ug/L 10 ug/L	1 ug/L	1	November 28/01	<1 ug/L	No	Herbicide.
Parathion	MAC 50 ug/L	0.1 ug/L	1	November 28/01	<0.1 ug/L	No	Insecticide.
Pentachlorophenol	MAC 60 ug/L	0.5 ug/L	1	November 28/01	<0.5 ug/L	No	Pesticides and wood preservatives.
Phorate	IMAC 2 ug/L	0.1 ug/L	1	November 28/01	<0.1 ug/L	No	Insecticide.
Picloram	IMAC 190 ug/L	0.2 ug/L	1	November 28/01	<0.2 ug/L	No	Herbicide.
PCBs	IMAC 3 ug/L	0.02 ug/L	1	November 28/01	<0.02 ug/L	No	Transformers.
Prometryne	IMAC 1 ug/L	0.1 ug/L	1	November 28/01	<0.1 ug/L	No	Herbicide.
Simazine	IMAC 10 ug/L	0.1 ug/L	1	November 28/01	<0.1 ug/L	No	Herbicide.
Temephos	IMAC 280 ug/L	0.1 ug/L	1	November 28/01	<0.1 ug/L	No	Insecticide.
Terbufos	IMAC 1 ug/L	0.1 ug/L	1	November 28/01	<0.1 ug/L	No	Insecticide.
2,3,4,6-Tetrachlorophenol	MAC 1 ug/L	0.5 ug/L	1	November 28/01	<0.5 ug/L	No	Wood preservative.
Triallate	MAC 230 ug/L	0.1 ug/L	1	November 28/01	<0.1 ug/L	No	Herbicide.
2,4,6-Trichlorophenol	MAC 5 ug/L	0.5 ug/L	1	November 28/01	<0.5 ug/L	No	Used in the manufacture of pesticides.
Trifluralin	IMAC 45 ug/L	0.1 ug/L	1	November 28/01	<0.1 ug/L	No	Herbicide.
2,4,5-T (2,4,5-Trichlorophenoxy acetic acid)	28 ug/L	0.2 ug/L	1	November 28/01	<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 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	<50 ug/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	0.02 mg/L	1	November 28/01	0.04 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	November 28/01	0.25 mg/L	No	Decayed plants or animals or from sewage,geological formations.
Nitrite	MAC 1.0 mg/L	0.03 mg/L	1	November 28/01	<0.03 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.