QUARTERLY REPORT ON DRINKING WATER QUALITY

JAN.-MAR. 2002. KINGSTON WEST WATER PLANT - SERVING AREAS WEST OF LITTLE CATARAQUI CREEK.

Cé rapport contient des information importantes concernant votre eau potable.
Veuillez traduire, ou parlez avec quelqu' un qui peut le comprendre.

Drinking Water Quality

Ontario Drinking Water Protection Regulations.

Utilities Kingston is proud to present this quarterly report on drinking water quality. This report has been prepared in response to Operation Clean Water, an initiative of Ontario's Ministry of the Environment to ensure high quality drinking water for the residents of Ontario. The new regulations put into law what was formerly the Ontario Drinking Water Objectives (ODWO), and sets requirements for public waterworks with regard to sampling and testing, levels of treatment, licensing of staff, and notification of authorities and the public about water quality.

Further information on the Drinking Water Regulations can be found on the Ministry of the Environment web site at www.ene.gov.on.ca.

For further information about this report please contact Randy Whan at *rwhan@utilitieskingston.com* or Philip Emon at *pemon@utilitieskingston.com* , or call 546-1181 ext. 2297. Free copies of this report are available at 211 Counter St. or City Hall.

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Inside This Report

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Plant Description & Treatment Processes

Raw Water Source.

The source of water treated by this plant is Lake Ontario at the mouth of the St. Lawrence River. The 1.2 m diameter intake extends about 570 m and is located directly south of the treatment plant, at a depth of approximately 18 m..

Zebra Mussel Control.

When the water temperature rises above 10 degrees Celcius, zebra mussels are active. Pre-chlorination takes place at the mouth of the intake which protects the intake from being encrusted with zebra mussels.

Screening.

A revolving screen and a coarse screen in the suction well of the low lift building remove any large debris such as weeds, fish, etc.

Low Lift Pumps.

There are four low lift pumps that lift the water from lake level to the main plant. There is one header from the low lift building directing the water to the flocculation tanks.

Floc Tanks.

Devices called floculators agitate the water in these tanks allowing proper mixing of the chlorine and Poly Aluminum Chloride (PAC) with the water. The dirt particles in water will join together with the PAC to form larger particles called floc.

Backwash.

Filters are washed regularly to remove the particulates they have collected over the previous hours. The filter is air scoured to break up any large particles, and clean water from the clearwell is pumped backwards through the filter to wash it.

Post Chlorination.

Chlorine gas is added to the water as it enters the clearwell to provide a chlorine residual which remains in the distribution system. This ensures protection to the customers' location.

Clearwell.

Filtered water is stored here before being pumped to the distribution system or used for filter washing.

High Lift Pumps.

Four high lift pumps move treated water from the clearwell into the distribution system, reservoir, and elevated tank.

Standby Equipment.

Two diesel driven pumps are maintained to provide a continuous supply of water during power failures. These provide enough capacity to meet fire-fighting requirements as well as normal flows during power outages. A diesel generator provides electricity to run the necessary operational components of the plant.

Reservoir.

There is a reservoir at the plant site that holds approximately 14.0 million litres (3.0 million gallons), and another located in the Industrial Park storing approximately 9.0 million litres (2.0 million gallons).

Elevated Tank.

There is approximately 1.0 million litres (250,000 gallons) of water in the elevated water tower located at Gardiners Road and Hwy # 2. The height of the water stored in the tower, as well as high lift and booster pumps, provides system pressure.

Distribution System.

Approximately 44,000 people are supplied with water from the Kingston West Water Treatment Plant. There are approximately 180 km of water mains, and over 1300 fire hydrants in the system.

Quality Control

This plant provides multiple barriers against bacteriological contamination. Three different chlorine application points are available, and the coagulation/flocculation process along with filtration provides additional barriers. Bacteriological testing is carried out on raw water, treated water and distribution samples on a regular basis. On-line analyzers for chlorine residuals and turbidity ensure safe, clean water leaving the plant. Chlorine levels in the distribution system are checked on a regular basis. More specialized testing occurs monthly and quarterly, and includes parameters such as pesticides, heavy metals, disinfection by-products, volatiles and organics.

Required Testing

The Ontario Drinking Water Regulations and our Certificates of Approval (COA) set sampling requirements for this plant. The COAs for the West Water Treatment Plant specify only that Trihalomethanes (THMs) be sampled on a monthly basis during the time the zebra mussel control system is in use. All other sampling conforms to the Drinking Water Protection Regulation schedule for sampling and analysis.

What is in your water?

Some parameters may be present in source water before it is treated. Here is a description of the various groups of parameters.

Microbiological parameters such as bacteria may come from wastewater treatment plants, livestock operations, septic systems and wildlife. Microbiological quality is the most important aspect of drinking water quality because of its association with dangerous water-borne diseases which can strike quickly.

Inorganic parameters such as salts and metals can be naturally occurring or as a result of urban storm runoff, industrial or domestic wastewater discharges, mining or agriculture. Some may be the result of the treatment and distribution of water (for example, lead from solder in plumbing).

DEFINITIONS & TERMS

^{o}C - *degrees Celsius*

^{o}F - *degrees Fahrenheit*

kg - *kilogram*

l - *litre*

m - *meter*

m^3 - *cubic meter, 1 m^3 =1000 litres.*

TCU - *True Colour Units*

$CaCO_3$-*Calcium carbonate*

mg - *milligram*

psi - *pounds per square inch*

mg/l - *Milligrams per litre. This is a measure of the concentration of a parameter in water, also called parts per million. (PPM)*

ug/l - *Micrograms per litre. This is a measure of the concentration of a parameter in water, also called parts per billion.*

ng/l - *Nanograms per litre. This is a measure of the concentration of a parameter in water, also called parts per trillion.*

pg/l - Pico*grams per litre. This is a measure of the concentration of a parameter in water, also called parts per quadrillion.*

NTU - *Nephelometric Turbidity Units - A measure of the amount of particles in water.*

MAC - *Maximum Acceptable Concentration. This is a health-related drinking water standard established for contaminants having known or suspected adverse health effects when above a certain concentration. The length of time the MAC can be exceeded without injury to health will depend on the nature and concentration of the parameter.*

IMAC - *Interim Maximum Acceptable Concentration. This is a health related drinking water standard established for contaminants when there is insufficient toxicological data to establish a MAC with reasonable certainty, or when it is not practical to establish a MAC at the desired level.*

AO-An *Aesthetic Objective is a guideline outside of which the pleasantness of drinking water is lessened.*

OG-*An Operational Guideline ensures efficient and effective treatment and distribution of drinking water.*

Parameter-*A substance that we sample and analyze for in the water.*

CHARACTERISTICS OF KINGSTON WATER

(Average values)

Turbidity -	0.08 NTU
Colour -	2.1 TCU
Alkalinity-	95 mg/l as $CaCO_3$
pH -	7.5 - 7.7
Hardness -	120 mg/l $CaCO_3$ or 7.3 grains per gal.
Fluoride -	0.15 mg/l of naturally occurring fluoride.

Organic parameters can be naturally occurring, but most organics of concern are synthetic. They originate from industrial discharges, urban storm runoff and other sources. Included in this group are pesticides that originate from both rural and urban areas. Some may originate from treatment of drinking water (for example, chlorination byproducts such as trihalomethanes). *Volatile organics* such as solvents and certain industrial chemicals are often the result of vehicle emissions or industrial discharges.

The Table below summarizes the results from monitoring we were required to do for this quarter. The presence of these substances in drinking water does not necessarily mean that the water poses a health risk.

The frequency for monitoring for different parameters varies, so some of the data in this table may be several months old. However, the sampling requirements have been set to ensure a representative picture of water quality. More than 75 different parameters were tested and have been listed below.

Did We Exceed the Standards?

We did not exceed any health-related Ontario Drinking Water Standards for this reporting period. This means that nothing was found to be outside acceptable levels for a health-related parameter, and that good quality water was produced by this treatment plant.

CHARACTERISTICS OF WATER.

Specific Gravity: 1.00 Water reaches its highest density at 4 degrees Celsius. It becomes less dense at higher and lower temperatures.

Water weighs: 1 kg/l, 1000 kg/m^3,
10 lb/imperial gallon,
62.4 lb/ft^3 at 4 ^{o} C.

Pressure: 1 psi = 2.31 ft of water,
1 ft of water = 0.433 psi,
1 m of water = 1.42 psi
1 psi = 6.895 KiloPascals

Water boils *at:* *100 ^{o} C / 212 ^{o} F,*
freezes *at :* *0 ^{o} C. / 32 ^{o} F*

Vulnerable Populations

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as those who may have cancer and are undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers.

Many homes built in Kingston prior to 1945 may have a lead service (the pipe that runs from the water-main in the street to your home). Although many of these have been replaced, some are still in use. It is possible that lead levels at your home may be higher than at other homes in the community as a result of this pipe or the materials used in your home's plumbing. Infants and young children are typically more vulnerable to lead in drinking water than the general population. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and/or flush your tap for 30 seconds to 2 minutes before using tap water.

Did We Exceed the Standards?

We did not exceed any health-related Ontario Drinking Water Standards for this reporting period. This means that nothing was found to be outside acceptable levels for a health-related parameter, and that good quality water was produced by this treatment plant.

Summary of Results

The data presented in the tables below lists the testing that was done to meet the regulations, as well some of the additional testing that was carried out during the reporting period. Our interpretation of these results is that good quality water which is safe to drink was produced by this plant during this reporting period. To review this information yourself, look in the Exceedance column to determine if there are any parameters to be concerned about. Then compare the result to the MAC/IMAC or AO/OG value. At that point you should investigate the particular parameters' potential health or aesthetic effects, and then, considering your own health situation, decide if there is cause for concern. Contact us at the numbers listed on page one if you have any questions, or talk to your health care provider if you have specific health concerns.

Questions and Answers

Q: Why did the report format change recently?

A: Utilities Kingston assumed operation of this plant in December of 2001, and we are currently trying to standardize reporting formats. The plant is still being operated by many of the same licensed operators as before, but who are now working for Utilities Kingston. Other treatment group staff are also being trained at this facility.

Q: What is and AO/OG Exceedance?

A: Aesthetic Objectives are set to ensure that drinking water is pleasant to taste and to look at, and Operational Guidelines are set to ensure efficient and effective treatment and distribution of drinking water. They are not typically set for health related reasons, but more to prevent minor effects of the individual parameters such as taste, colour or scaling. An example is chloride, which poses no health concern but may cause water to have a salty taste.

Q. How do I interpret my water test results?

A. If your water provider produces quarterly reports, a summary of the test results likely accompanies the report. If you are on a private well, the lab conducting the tests for you can help advise you on the test results and will notify you of any adverse results.

Water Quality Test Results for this Quarter are listed in the tables below

Symbols used below may include: (N/A) - Not Applicable; (N/D, <) - Not Detected or, less than the value shown - this typically means the parameter was below detectable levels.

Microbiological Parameters	MAC or IMAC	AO or OG	Number of Samples	Number of Positive Results	Sampling Dates			Range	Exceedance?	Typical Source of Contaminant
Total Coliform (counts/100ml)	*		232	0	1/2/02	-	3/28/02	N/A	No	Indicates possible presence of fecal matter.
Escherichia coliform (counts/100ml)	*		232	0	1/2/02	-	3/28/02	N/A	No	Definite indicator of fecal contamination.
Background (counts/100ml)	>200		69	0	1/2/02	-	3/28/02	N/A	No	Indicator of Deteriorating water quality.
heterotrophic plate count (counts/100ml)	>500		38	0	1/2/02	-	3/28/02	N/A	No	Indicator of Deteriorating water quality.

** Indicator of adverse water quality if detected*

Parameters Related to Microbiological Quality	MAC or IMAC	AO or OG	Number of Samples	Number of Detectable Results	Sampling Dates			Range	Exceedance?	Typical Source of Contaminant
Turbidity (NTU)	1		Continuous	Continuous	1/1/02	-	3/31/02	0.11 – 0.39	No	Turbidity is a measure of particles in water.
Free chlorine - Plant effluent (mg/l)	-		Continuous	Continuous	1/1/02	-	3/31/02	0.85 – 1.53	N/A	See below
Free chlorine - Distribution system (mg/l)	-		232	232	1/2/02	-	3/28/02	0.20 - 1.25	N/A	Recommended level of at least 0.20 mg/l in distribution system to maintain microbiological quality. Min. level of 0.05 mg/l

Table B - Volatile Organics (ug/l)	MAC or IMAC	AO or OG	Number of Samples	Number of Detectable Results	Sampling Dates			Max. Result *	Exceedance?	Typical Source of Contaminant
Benzene (ug/l)	5		2	0	1/2/02	-	3/4/02	<0.5	No	Discharge from plastics manufacturing, leaking fuel tanks
Carbon tetrachloride (ug/l)	5		2	0	1/2/02	-	3/4/02	<0.2	No	Discharge from chemical plants and other industrial activities
1,2-dichlorobenzene (ug/l)	200		2	0	1/2/02	-	3/4/02	<0.1	No	Discharge from industrial chemical factories
1,4-dichlorobenzene (ug/l)	5		2	0	1/2/02	-	3/4/02	<0.2	No	Discharge from industrial chemical factories
1,2-dichloroethane (ug/l)	5		2	0	1/2/02	-	3/4/02	<0.1	No	Discharge from industrial chemical factories
1,1-dichloroethene (ug/l)	14		2	0	1/2/02	-	3/4/02	<0.1	No	Discharge from industrial chemical factories
Dichloromethane (ug/l)	50		2	0	1/2/02	-	3/4/02	<3.0	No	Discharge from pharmaceutical and chemical factories; insecticide
Ethylbenzene (ug/l)	24		2	0	1/2/02	-	3/4/02	<0.5	No	Discharge from petroleum refineries; industrial chemical factories
Monochlorobenzene (ug/l)	80		2	0	1/2/02	-	3/4/02	<0.2	No	Discharge from industrial and agricultural chemical factories and dry cleaning facilities
Tetrachloroethylene (ug/l)	30		2	0	1/2/02	-	3/4/02	<0.2	No	Leaching from PVC pipes; discharge from factories, dry cleaners and auto shops (metal degreaser)
Toluene (ug/l)	24		2	0	1/2/02	-	3/4/02	<0.5	No	Discharge from petroleum and chemical factories, leaking fuel tanks

Table B - Volatile Organics (ug/l)	MAC or IMAC	AO or OG	Number of Samples	Number of Detectable Results	Sampling Dates			Max. Result *	Exceedance?	Typical Source of Contaminant
Trihalomethanes: Plant Effluent Annual average (ug/l)	100		12	12	3/1/01	-	3/4/02	28.02	No	By-product of chlorination
Trihalomethanes: Distribution System Annual Average (ug/l)	100		9	9	3/1/01	-	3/4/02	41.59	No	By-product of chlorination
Trichloroethylene (ug/l)	50		2	0	1/2/02	-	3/4/02	<0.1	No	Discharge from metal degreasing sites and other factories
Chloroethene (Vinyl chloride) (ug/l)	2		2	0	1/2/02	-	3/4/02	<0.3	No	Leaching from PVC pipes; discharge from plastics factories
Xylenes (ug/l)	300		2	0	1/2/02	-	3/4/02	<2.0	No	Discharge from petroleum and chemical factories; fuel solvent

** The MAC for THMs is based on a running annual average. The numbers listed are average results for data from the last 4 quarters.*

Table C - Inorganic Parameters	MAC or IMAC	AO or OG	Number of Samples	Number of Detectable Results	Sampling Dates			Max. Result	Exceedance?	Typical Source of Contaminant
Arsenic (ug/l)	25		1	0	1/8/02			<1	No	Naturally occurring in surface waters / mine drainage
Barium (ug/l)	1000		1	1	1/8/02			20.00	No	Erosion of natural deposits. Discharge from metal refineries, oil drilling wastes.
Boron (ug/l)	5000		1	1	1/8/02			20.00	No	Erosion of natural deposits, industrial waste effluents.
Cadmium (ug/l)	5		1	0	1/8/02			<5	No	Industrial discharge
Chromium (ug/l)	50		1	0	1/8/02			<10	No	Industrial residues
Copper (ug/l)	1000		1	0	1/8/02			<10	No	Domestic plumbing (Aesthetic objective)
Iron (ug/l)		300	1	0	1/8/02			<10	No	Leaching from natural deposits and plumbing materials, industrial wastes. (Aesthetic objective)
Lead (ug/l) Treated Water	10		1	0	1/8/02			<1	No	Leaching from domestic plumbing materials
Lead (ug/l) Distribution system	10		1	0	1/8/02			<1	No	Internal corrosion of household plumbing, erosion of natural deposits.
Manganese (ug/l)		50	1	0	1/8/02			<5	No	Erosion of natural deposits.
Mercury (ug/l)	0.1		1	0	1/8/02			<0.1	No	Erosion of natural deposits, industrial discharges.
Nitrogen, Nitrite (mg/l)	1		4	0	1/2/02	-	3/4/02	<0.05	No	Runoff from fertilizer use, erosion of natural deposits
Nitrate (mg/l)	10		4	4	1/2/02	-	3/4/02	0.35	No	A natural component of water at this level.
Selenium (ug/l)	10		1	0	1/8/02			<5	No	Discharge from refineries, mines, chemical manufacture
Uranium (ug/l)	100		1	1	1/8/02			2.00	No	Erosion of natural deposits.

Table D - Pesticides & PCB (ug/l)	MAC or IMAC	AO or OG	Number of Samples	Number of Detectable Results	Sampling Dates			Max. Result	Exceedance?	Typical Source of Contaminant
Alachlor (Lasso) (ug/l)	5		2	0	1/2/02	-	3/4/02	<1	No	Agricultural herbicide
Aldicarb (ug/l)	9		2	0	1/2/02	-	3/4/02	<5	No	Agricultural insecticide
Aldrin+dieldrin (ug/l)	0.7		2	0	1/2/02	-	3/4/02	<0.1	No	Residue from banned insecticide
Atrazine (ug/l)	5		2	0	1/2/02	-	3/4/02	<0.43	No	Agricultural herbicide
Azinphos-methyl (Guthion) (ug/l)	20		2	0	1/2/02	-	3/4/02	<2	No	Insecticide
Bendiocarb (ug/l)	40		2	0	1/2/02	-	3/4/02	<5	No	Insecticide

Table D - Pesticides & PCB (ug/l)	MAC or IMAC	AO or OG	Number of Samples	Number of Detectable Results	Sampling Dates			Max. Result	Exceedance?	Typical Source of Contaminant
Bromoxynil (ug/l)	5		2	0	1/2/02	-	3/4/02	<0.5	No	Agricultural herbicide
Carbaryl (ug/l)	90		2	0	1/2/02	-	3/4/02	<5	No	Agricultural/Forestry/ Household insecticide
Carbofuran (ug/l)	90		2	0	1/2/02	-	3/4/02	<10	No	Agricultural insecticide
Chlordane (Total) (ug/l)	7		2	0	1/2/02	-	3/4/02	<0.2	No	Residue from banned insecticide
Chlorpyrifos (Dursban) (ug/l)	90		2	0	1/2/02	-	3/4/02	<5	No	Agricultural/ Household insecticide
Cyanazine (Bladex) (ug/l)	10		2	0	1/2/02	-	3/4/02	<1	No	Agricultural/ Residential herbicide
Diazinon (ug/l)	20		2	0	1/2/02	-	3/4/02	<2	No	Agricultural/ Livestock Operation/ Residential insecticide
Dicamba (ug/l)	120		2	0	1/2/02	-	3/4/02	<10	No	Agricultural herbicide
2,4-dichlorophenol (ug/l)	900		2	0	1/2/02	-	3/4/02	<0.2	No	Industrial contamination/ reaction with chlorine
DDT (ug/l)	30		2	0	1/2/02	-	3/4/02	<0.46	No	Residue from banned insecticide
2,4-dichloro-phenoxyacetic acid (2,4-D) (ug/l)	100		2	0	1/2/02	-	3/4/02	<10	No	Agricultural/ Residential herbicide
Diclofop-methyl (ug/l)	9		2	0	1/2/02	-	3/4/02	<0.5	No	Agricultural herbicide
Dimethoate (ug/l)	20		2	0	1/2/02	-	3/4/02	<2	No	Agricultural/ Livestock Operation/ Forestry insecticide
Dinoseb (ug/l)	10		2	0	1/2/02	-	3/4/02	<1	No	Herbicide residue
Diquat (ug/l)	70		2	0	1/2/02	-	3/4/02	<5	No	Agricultural/ Aquatic herbicide
Diuron (ug/l)	150		2	0	1/2/02	-	3/4/02	<10	No	Agricultural/ Industrial/ herbicide
Glyphosate (ug/l)	280		2	0	1/2/02	-	3/4/02	<25	No	Agricultural/Forestry/ Household herbicide
Heptachlor+hepta-chlor epoxide (ug/l)	3		2	0	1/2/02	-	3/4/02	<0.2	No	Residue from banned insecticide
Lindane (Total) (g-BHC Hexachloro-cyclohexane) (ug/l)	4		2	0	1/2/02	-	3/4/02	<0.4	No	Agricultural/ Pharmaceutical insecticide
Malathion (ug/l)	190		2	0	1/2/02	-	3/4/02	<10	No	Fruit & Vegetable / pest control insecticide
Methoxychlor (ug/l)	900		2	0	1/2/02	-	3/4/02	<10	No	Agricultural/ Livestock Operation/ Residential insecticide
Metolachlor (ug/l)	50		2	0	1/2/02	-	3/4/02	<5	No	Agricultural herbicide
Metribuzin (Sencor) (ug/l)	80		2	0	1/2/02	-	3/4/02	<5	No	Agricultural herbicide
Paraquat (ug/l)	10		2	0	1/2/02	-	3/4/02	<1	No	Agricultural/ Aquatic herbicide
Parathion (ug/l)	50		2	0	1/2/02	-	3/4/02	<5	No	Agricultural insecticide
Pentachlorophenol (ug/l)	60		2	0	1/2/02	-	3/4/02	<0.2	No	Pesticide/ wood preservative residue
Phorate (Thimet) (ug/l)	2		2	0	1/2/02	-	3/4/02	<0.5	No	Agricultural insecticide
Picloram (ug/l)	190		2	0	1/2/02	-	3/4/02	<10	No	Industrial herbicide
PCB; total (ug/l)	3		2	0	1/2/02	-	3/4/02	<0.2	No	Residue from various industrial uses
Prometryne (ug/l)	1		2	0	1/2/02	-	3/4/02	<0.2	No	Agricultural herbicide
Simazine (ug/l)	10		2	0	1/2/02	-	3/4/02	<1	No	Agricultural herbicide or its residue
Temephos (ug/l)	280		2	0	1/2/02	-	3/4/02	<20	No	Insecticide for Mosquito/Blackfly control
Terbufos (ug/l)	1		2	0	1/2/02	-	3/4/02	<1	No	Agricultural insecticide
2,3,4,6-tetra-chlorophenol (ug/l)	100		2	0	1/2/02	-	3/4/02	<0.2	No	Wood preservative
Triallate (ug/l)	230		2	0	1/2/02	-	3/4/02	<20	No	Agricultural herbicide

Table D - Pesticides & PCB (ug/l)	MAC or IMAC	AO or OG	Number of Samples	Number of Detectable Results	Sampling Dates			Max. Result	Exceedance?	Typical Source of Contaminant
2,4,6-trichlorophenol (ug/l)	5		2	0	1/2/02	-	3/4/02	<0.2	No	Pesticide manufacturing
Trifluralin (ug/l)	45		2	0	1/2/02	-	3/4/02	<2	No	Agricultural herbicide
2,4,5-trichloro-phenoxyacetic acid (2,4,5-T) (ug/l)	280		2	0	1/2/02	-	3/4/02	<20	No	Industrial herbicide residue

(Bg/l) - Becquerel per litre. This is a unit of radioactivity which expresses the rate of disintegration of a radionuclide.

(Pg/l) – Picograms per litre. This is a unit of radioactivity which expresses the rate of disintegration of a radionuclide 10^{-12}.

Chemical/ Physical Parameters Non Health Related	MAC or IMAC	AO or OG	Number of Samples	Number of Detectable Results	Sampling Dates			Max. Result	Exceedance?	Parameter Description
Alkalinity (mg/l as $CaCO_3$)	500		2	2	1/2/02			88.0	No	A measure of the resistance of the water to the effects of acids. Expressed as calcium carbonate.
Aluminum (mg/l)		100	4	2	1/2/02	-	3/4/02	80	No	May be naturally present or a residual from the coagulation process.
Ammonia N (mg/l)			1	0	1/8/02			<0.05	No	Occurs naturally from organic nitrogen containing compounds.
Benzo(a)pyrene (ug/l)	0.01		1	0	1/8/02			<0.01	No	Formed from the incomplete burning of organic matter.
Calcium (mg/l)			0	0	1/8/02			N/A	No	Naturally occurring.
Chloride (mg/l)	250		1	1	1/8/02			21.9	No	A common naturally occurring non-toxic material that may produce a salty taste in water.
Colour (TCU)	5		4	4	1/2/02	-	3/4/02	3	No	Typically the result of organic matter in surface waters.
Conductivity (Us/cm)			1	1	1/8/02			308	N/A	A measure of ability of water to carry an electric current due to the presence of ions.
Cyanide (mg/l)	0.2		1	1	1/8/02			0	No	Industrial discharge
Dioxin and Furan (pg/l)	15		1	0	1/8/02			<6.4	No	Formed in very small amounts in combustion processes
Dissolved Organic Carbon (mg/l)	5		1	1	1/8/02			3.0	No	High DOC is an indicator of potential chlorination by-product problems.
Fluoride (mg/l)	1.5		1	1	1/8/02			0.10	No	* Added to prevent tooth decay, but may be naturally occurring.
Gross Alpha (Bq/l)			1	0	1/8/02			<0.1	No	Decay of natural deposits.
Gross Beta (Bq/l)			1	0	1/8/02			<0.1	No	Decay of natural deposits.
Hardness (mg/l)		100	2	2	1/2/02			103	AO Exceedance	Naturally occurring from dissolved calcium and magnesium.
Nitrilitriacetic acid - NTA (ug/l)	400		1	0	1/8/02			<20	No	Used in laundry detergents.
Nitrosodimethylamine -NDMA (ug/l)	0.009		1	1	1/8/02			0	No	Rarely used industrially but has been used as an antioxidant, and an additive for lubricants
Orthophosphate (mg/l)			1	1	1/8/02			0.02	N/A	From agricultural runoff or as a result of residential use.
pH	8.5		4	4	1/2/02	-	3/4/02	7.67 - 7.72	No	An indicator of the acidity of water.
Silica (mg/l)			1	1	1/8/02			0.80	N/A	Naturally occurring.
Sodium (mg/l)		200	3	3	1/8/02	-	3/4/02	11.6	No	Occurs naturally in the earth's crust.
Sulphate (mg/l)	500		1	1	1/8/02			24.1	No	An inorganic constituent that may cause tastes at high levels.
Tritium (Bq/l)	7000		1	1	1/8/02			0.2	No	Decay of Natural & man made deposits.
Total Kjeldahl Nitrogen (mg/l)			1	1	1/8/02			0.20	N/A	Indicator of organic contamination or the potential for taste and odour problems.
Zinc (ug/l)	5000		1	0	1/8/02			<0.02	No	An inorganic constituent that may cause tastes.