

Drinking Water Surveillance Program

**FORT ERIE
(ROSEHILL)
WATER TREATMENT
PLANT**

Annual Report 1988



Ontario

Environment
Environnement

Jim Bradley, Minister/ministre

FORT ERIE (ROSEHILL)
WATER TREATMENT PLANT

DRINKING WATER SURVEILLANCE
PROGRAM

ANNUAL REPORT 1988

FEBRUARY 1990



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EXECUTIVE SUMMARY

DRINKING WATER SURVEILLANCE PROGRAM

FORT ERIE WATER TREATMENT PLANT
1988 ANNUAL REPORT

The Drinking Water Surveillance Program (DWSP) for Ontario is a monitoring program providing immediate, reliable, current information on drinking water quality. The DWSP officially began in April 1986 and is designed to eventually include all municipal supplies in Ontario. Currently, 52 plants are being monitored.

The Fort Erie (Rosehill) Water Treatment Plant is a conventional treatment plant which treats water from Lake Erie. The process consists of coagulation, flocculation, sedimentation, filtration and disinfection. This plant has a design capacity of 50 x 1000 m³/day and serves a population of approximately 25,000.

Water samples from the raw, treated and two distribution sites were taken on a monthly basis and analyzed for approximately 160 parameters. Parameters were divided into the following groups Bacteriological, Inorganic and Physical (Laboratory Chemistry, Field Chemistry and Metals) and Organics (Chloroaromatics, Chlorophenols, Pesticides and PCB, Phenolics, Polynuclear Aromatic Hydrocarbons, Specific Pesticides and Volatiles). Specific Pesticides and Chlorophenols were analysed in June and November only.

A summary of results is shown in Table 1.

Inorganic and Physical parameters (Laboratory Chemistry, Field Chemistry and Metals) were below any applicable health related ODWOs.

Of approximately 110 Organic parameters tested for on a monthly basis, none exceeded health related guidelines.

During 1988 the DWSP sampling results indicated that the Fort Erie (Rosehill) Water Treatment Plant produced good quality water at the plant and this quality was maintained in the distribution system.

DRINKING WATER SURVEILLANCE PROGRAM

FORT ERIE (ROSEHILL) WATER TREATMENT PLANT 1988 ANNUAL REPORT

INTRODUCTION

The Drinking Water Surveillance Program (DWSP) for Ontario is a monitoring program providing immediate, reliable, current information on drinking water quality. The DWSP officially began in April 1986 and is designed to eventually include all municipal supplies in Ontario. Currently, 52 plants are being monitored.

The DWSP was partially initiated at the Fort Erie (Rosehill) Water Treatment Plant in February of 1987; the full program began in June.

This report contains information and results for 1988.

PLANT DESCRIPTION

The Fort Erie (Rosehill) Water Treatment Plant is a conventional treatment plant which treats water from Lake Erie. The process consists of coagulation, flocculation, sedimentation, filtration and disinfection; powdered activated carbon is used for taste and odour control when necessary. This plant has a design capacity of 50 x 1000 m³/day and flows on day of sampling ranging from 12 x

FIGURE 1

DRINKING WATER SURVEILLANCE PROGRAM

SITE LOCATION MAP

FORT ERIE WATER TREATMENT PLANT

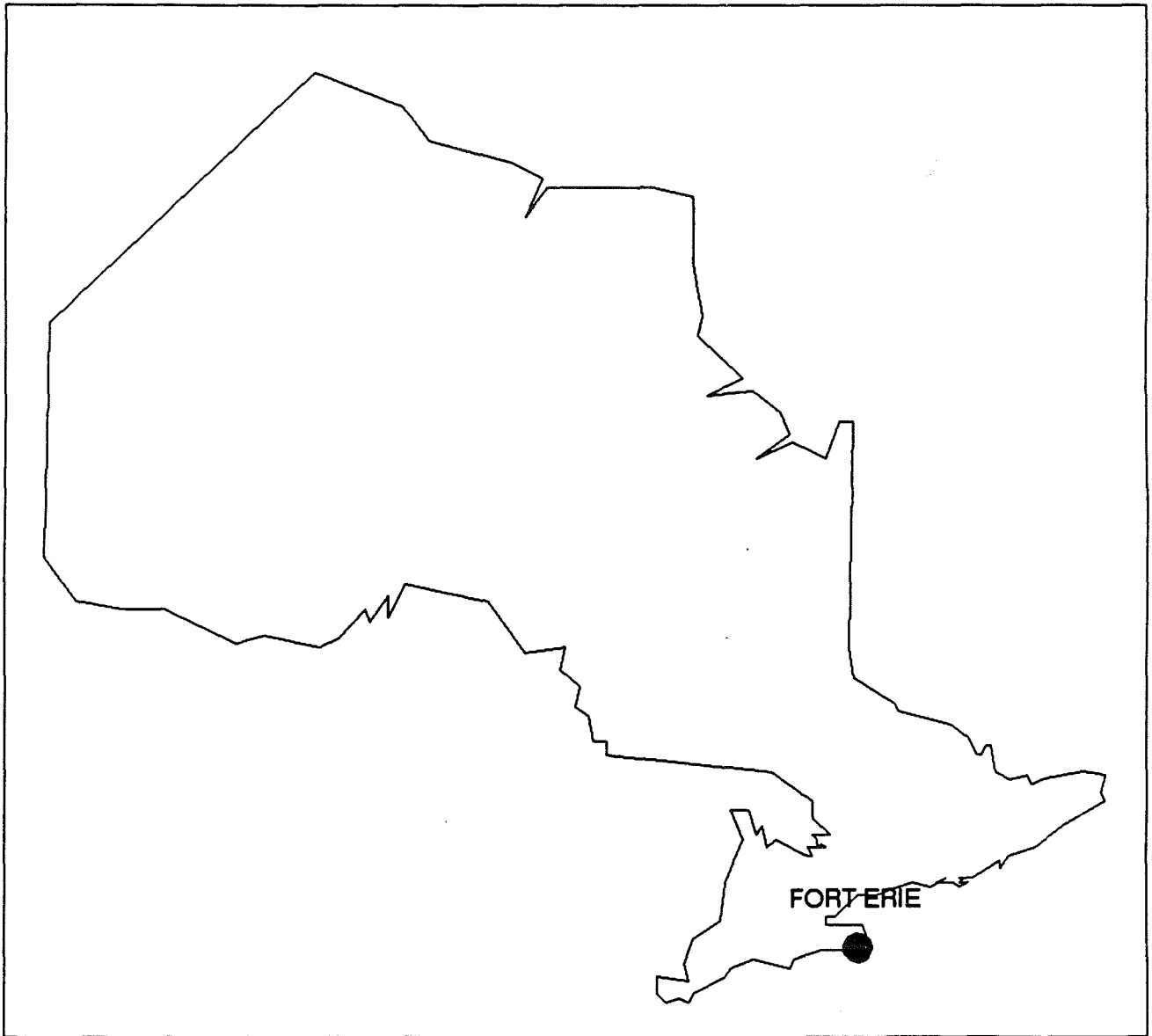


TABLE 2

DRINKING WATER SURVEILLANCE PROGRAM ANNUAL REPORT

GENERAL INFORMATION

Fort Erie (Rosehill) WATER SUPPLY SYSTEM

LOCATION: ROSEHILL ROAD
Fort Erie (Rosehill), ONTARIO
(416-871-3551)

SOURCE: RAW WATER SOURCE - LAKE ERIE

RATED CAPACITY: 50 (1000 M3/DAY)

OPERATION: MUNICIPAL

PLANT SUPERINTENDENT: MR. H. HODGSON

MINISTRY REGION: WEST CENTRAL

DISTRICT OFFICER: MR. J. MAYES

MUNICIPALITY
SERVED

POPULATION

Fort Erie (Rosehill)

25,000

would be sampled one day after the treated water from the plant.

Stringent DWSP sampling protocols were followed to ensure that all samples were taken in a uniform manner.

Sample day flow, treatment chemical dosages and Field Chemistry measurements were recorded on the day of sampling and were entered on the DWSP database as submitted.

RESULTS

Water at the Fort Erie (Rosehill) Water Treatment Plant was sampled for approximately 160 parameters. The Specific Pesticides and Chlorophenols scans were sampled in June and November only.

Polynuclear Aromatic Hydrocarbons and Phenolics are only analysed in the raw and treated water at the plant. As a result of an unforeseen emergency the laboratory capacity was exceeded and analysis for volatiles could not be carried out when the samples were received. Since analysis for volatiles is no longer valid after four weeks of storage, volatile results for January and February are not available.

Table 3 contains information on the sample day retention time, flow rate and treatment chemicals used and their associated dosages.

Table 4 is a summary break-down of the number of water samples

review. When an ODWO is not available guidelines/limits from other agencies are consulted. The Parameter Listing System (PALIS) recently initiated by the MOE catalogues and keeps current over 1750 guidelines for 650 parameters from agencies throughout the world.

Although some of the parameters measured on DWSP may be present in the raw and treated water as a result of pollution, many of the compounds detected are naturally occurring or are treatment by-products.

Plant operational personnel address occurrences of taste and odour or biological water quality parameters. The DWSP does not assess these aspects of the water supply.

As stated under Results, traces do not indicate quantifiable values, as defined by established MOE Laboratory analytical reporting protocols. While they can be useful in trend analysis or confirmation of the presence of a specific contaminant that is repeatedly detected at these levels, the occasional finding of a trace level of a contaminant is not considered to be significant. **DISCUSSION OF GUIDELINES AND LIMITS THEREFORE, IS ONLY CONDUCTED ON POSITIVE RESULTS.**

system and the fact that their enumeration is subject to considerable variation. For these reasons, the occasional finding of low numbers of coliform organisms is not unexpected. Routine bacteriological monitoring, as outlined in the ODWOs is carried out by the operating authority.

Inorganic and Physical Parameters

Laboratory and Field Chemistry

The results for Laboratory and Field Chemistry scans were below any applicable health related ODWOs.

There are ODWOs that are set for parameters which are related to the aesthetic quality rather than health.

The aesthetic ODWO of 5 True Colour Units (TCU) was exceeded in the February Site 2 free flow water (10 TCU) and the March Site 2 free flow water (5.5 TCU). Colour in drinking water may be due to the presence of natural and synthetic organic substances as well as certain metallic ions.

The ODWO indicate that a hardness level of between 80 and 100 mg/L as calcium carbonate for domestic waters provides an acceptable balance between corrosion and incrustation. Water supplies with a hardness greater than 200 mg/L are considered poor (Table X), and would possess a tendency to form scale deposits and result in

process. The addition of Alum as a coagulant to the raw water and the resulting coagulation/settling process has been shown to reduce the levels of most metals.

Elevated levels of Copper, Lead and Zinc were detected in the standing samples from the distribution system as compared to the free flow samples thus, indicating that these metals were leached from the household plumbing as the water stood overnight. Although the Langelier Index indicates minimal potential for corrosion some metals will be leached in standing samples in most supplies.

The levels of Iron in the Site 2 samples were much higher than those for the treated water at the plant as were both Iron and Manganese values for the Site 1 samples. These elevated levels may be due in part to cast iron distribution mains.

At present, there is no evidence that Aluminum is physiologically harmful and no health limit for drinking water has been specified. The measure of residual Aluminum in the treated water is important to indicate the efficiency of the treatment process. The ODWOs indicate that a useful guideline is to maintain a residual below 100 ug/L as Al in the water leaving the plant to avoid problems in the distribution system. Aluminum values exceeded the ODWO operational guideline eight times in the treated water.

and treated water.

Specific Pesticides

Results of the Specific Pesticide scan showed that no Specific Pesticides were detected.

Phenolics

The maximum desirable concentration of phenolic substances in drinking water is 2.0 ug/L. This limit has been set primarily to prevent the occurrence of undesirable tastes and odours, particularly in chlorinated water. Phenolics were detected in the raw water ranging from 1.2 ug/L to 2.0 ug/L and in the treated water ranging from 1.2 ug/L to 2.0 ug/L. Phenolics were also detected at trace levels, four times in the raw water and five times in the treated water. Phenolic compounds are present in the aquatic environment as a result of natural and/or industrial processes.

Polynuclear Aromatic Hydrocarbons (PAH)

Results of the PAH scan showed that no PAHs were detected.

Volatiles

Results of the Volatile scan showed that six parameters, other than Trihalomethanes (THMs), were detected:

Benzene

Toluene

at 0.90 ug/L. These levels are below the United States Environmental Protection Agency's proposed Maximum Contaminant Levels (MCL) for Styrene in drinking water of 140 ug/L.

Ethylbenzene was detected at a trace level, once in the raw water, twice in the treated water and twice in the Site 2 water.

The volatiles listed above are typically found on an occasional basis at other water supplies included on the DWSP usually at trace levels.

Carbon Tetrachloride was detected at a trace level, once in the Site 2 water.

Tetrachloroethylene (T-Chloroethylene) was detected at a trace level, once in the Site 2 water.

THMs are known to be produced during the water treatment process and will always occur in chlorinated surface waters. THMs are comprised of Chloroform, Chlorodibromomethane and Dichlorobromomethane. Bromoform occurs occasionally. Results are reported for the individual compounds as well as for total THMs.

Chloroform, Chlorodibromomethane, Dichlorobromomethane and Total THMs were detected in all treated waters. Bromoform was detected at trace levels, in most samples of treated water. All Total THM

TABLE 3

DRINKING WATER SURVEILLANCE PROGRAM FORT ERIE (ROSEHILL WTP) SAMPLE DAY CONDITIONS FOR 1988

SAMPLE DAY CONDITIONS			TREATMENT CHEMICAL DOSAGES (MG/L)			
DATE	RETENTION TIME(HRS)	FLOW (1000M3)	PRE-CHLORINATION	COAGULATION	POST-CHLORINATION	TASTE & ODOUR
			CHLORINE	ALUM LIQUID	CHLORINE	ACTIVATED CARBON POWDER
JAN 26	24.0	14.3	.75	5.00	.30	.
FEB 23	.	13.0	.80	5.00	.30	.
MAR 22	.2	13.0	.75	4.50	.35	.
APR 19	24.0	14.0	.75	4.50	.40	.
MAY 17	1.0	14.0	1.00	2.50	.45	.
JUN 14	.5	30.0	1.00	4.00	.45	.
JUL 12	.5	29.0	1.40	5.00	.45	1.50
AUG 09	.2	24.0	1.90	5.50	.45	1.00
SEP 07	2.3	14.0	1.70	6.00	.50	1.00
OCT 03	.3	14.0	1.40	4.00	.38	.
NOV 01	.6	14.0	1.20	5.00	.30	.
DEC 06	.7	12.0	1.10	6.00	.35	.

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM FORT ERIE

SUMMARY TABLE OF RESULTS (1988)

SCAN	PARAMETER	SITE											
		RAW			TREATED			SITE 1			SITE 2		
		TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE
CHEMISTRY (LAB)	CALCIUM	10	10	0	12	12	0	22	22	0	15	15	0
	CYANIDE	10	0	0	12	0	0	11	0	0	8	0	0
	CHLORIDE	10	10	0	12	12	0	22	22	0	16	16	0
	COLOUR	10	2	8	12	0	12	22	6	16	16	16	0
	CONDUCTIVITY	10	10	0	12	12	0	22	22	0	16	16	0
	FLUORIDE	10	10	0	12	12	0	22	22	0	15	15	0
	HARDNESS	10	10	0	12	12	0	22	22	0	15	15	0
	IONCAL	10	6	0	12	6	0	22	10	0	16	6	0
	LANGELIERS INDEX	10	10	0	12	12	0	22	22	0	15	15	0
	MAGNESIUM	10	10	0	12	12	0	22	22	0	15	15	0
	SODIUM	10	10	0	12	12	0	22	22	0	15	15	0
	AMMONIUM TOTAL	10	10	0	12	7	5	22	17	5	16	14	2
	NITRITE	10	6	4	12	4	7	22	9	13	16	4	12
	TOTAL NITRATES	10	7	3	12	9	3	22	20	2	16	16	0
	NITROGEN TOT KJELD	10	10	0	12	12	0	22	22	0	16	16	0
	PH	10	10	0	12	12	0	22	22	0	16	16	0
	PHOSPHORUS FIL REACT	10	4	5	12	0	10	.	.	.	.	.	.
	PHOSPHORUS TOTAL	10	7	2	12	1	9	.	.	.	.	.	.
	SULPHATE	6	6	0	6	6	0	10	10	0	6	6	0
	TURBIDITY	10	10	0	12	10	2	22	22	0	15	15	0
*TOTAL SCAN CHEMISTRY (LAB)		206	168	22	246	175	48	395	336	36	279	247	14
METALS	SILVER	9	0	1	12	0	5	22	0	10	16	3	6

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM FORT ERIE

SUMMARY TABLE OF RESULTS (1988)

SCAN	PARAMETER	SITE			SITE 1			SITE 2		
		RAW	TREATED	TOTAL POSITIVE TRACE	TOTAL POSITIVE TRACE	TOTAL POSITIVE TRACE	TOTAL POSITIVE TRACE	TOTAL POSITIVE TRACE	TOTAL POSITIVE TRACE	
PESTICIDES & PCB	BETA BHC	10	0 0	12	0 0	7	0 0	7	0 0	
	LINDANE	10	0 1	12	0 1	7	0 0	7	0 0	
	ALPHA CHLORDANE	10	0 0	12	0 0	7	0 0	7	0 0	
	GAMMA CHLORDANE	10	0 0	12	0 0	7	0 0	7	0 0	
	DIELDRIN	10	0 0	12	0 0	7	0 0	7	0 0	
	METHOXYCHLOR	10	0 0	12	0 0	7	0 0	7	0 0	
	ENDOSULFAN I	10	0 0	12	0 0	7	0 0	7	0 0	
	ENDOSULFAN II	10	0 0	12	0 0	7	0 0	7	0 0	
	ENDRIN	10	0 0	12	0 0	7	0 0	7	0 0	
	ENDOSULFAN SULPHATE	10	0 0	12	0 0	7	0 0	7	0 0	
	HEPTACHLOR EPOXIDE	10	0 0	12	0 0	7	0 0	7	0 0	
	HEPTACHLOR	10	0 0	12	0 0	7	0 0	7	0 0	
	HIREX	10	0 0	12	0 0	7	0 0	7	0 0	
	OXYCHLORDANE	10	0 0	12	0 0	7	0 0	7	0 0	
	OPDDT	10	0 0	12	0 0	7	0 0	7	0 0	
	PCB	10	0 0	12	0 0	7	0 0	7	0 0	
	DDD	10	0 0	12	0 0	7	0 0	7	0 0	
	PPDDE	10	0 0	12	0 0	7	0 0	7	0 0	
	PPDDT	10	0 0	12	0 0	7	0 0	7	0 0	
	AMETRINE	10	0 0	12	0 0	11	0 0	8	0 0	
	ATRAZINE	10	0 0	12	0 0	11	0 0	8	0 0	
	ATRATONE	10	0 0	12	0 0	11	0 0	8	0 0	
	CYANAZINE	10	0 0	12	0 0	11	0 0	8	0 0	
DES ETHYL ATRAZINE	6	0 0	6	0 0	5	0 0	3	0 0		
DES ETHYL SIMAZINE	6	0 0	6	0 0	5	0 0	3	0 0		

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM FORT ERIE

SUMMARY TABLE OF RESULTS (1988)

SCAN	PARAMETER	SITE		RAW		TREATED		SITE 1			SITE 2		
		TOTAL	POSITIVE TRACE	TOTAL	POSITIVE TRACE	TOTAL	POSITIVE TRACE	TOTAL	POSITIVE TRACE	TOTAL	POSITIVE TRACE	TOTAL	POSITIVE TRACE
VOLATILES	1,3 DICHLOROBENZENE	10	0 0	10	0 0	8	0 0	6	0 0	6	0 0		
	1,2 DICHLOROBENZENE	10	0 0	10	0 0	8	0 0	6	0 0	6	0 0		
	TRIFLUOROCHLOROTOLUE	4	0 0	4	0 0	3	0 0	3	0 0	3	0 0		
	ETHYLENE DIBROMIDE	10	0 0	10	0 0	8	0 0	6	0 0	6	0 0		
	TOTL TRIHALOMETHANES	10	0 2	10	10 0	8	8 0	6	6 0	6	6 0		
	*TOTAL SCAN VOLATILES	287	3 8	287	42 16	228	33 11	173	24 12	173	24 12		
	*TOTAL GROUP ORGANIC	990	7 19	1101	46 31	604	33 14	512	24 15	512	24 15		
TOTAL		1480	348 116	1743	421 195	1666	782 216	1257	543 151	1257	543 151		

LABORATORY RESULTS, REMARK DESCRIPTIONS

. No Sample Taken
BDL Below Minimum Measurable Amount
<T Greater Than Detection Limit But Not Confident
> Results Are Greater Than The Upper Limit
<=> Approximate Result
!AW No Data: Analysis Withdrawn
!CR No Data: Could Not Confirm By Reanalysis
!CS No Data: Contamination Suspected
!IL No Data: Sample Incorrectly Labelled
!IS No Data: Insufficient Sample
!LA No Data: Laboratory Accident
!LD No Data: Test Queued After Sample Discarded
!NA No Data: No Authorization To Perform Reanalysis
!NP No Data: No Procedure
!NR No Data: Sample Not Received
!OP No Data: Obscured Plate
!QU No Data: Quality Control Unacceptable
!PE No Data: Procedural Error - Sample Discarded
!PH No Data: Sample pH Outside Valid Range
!RO No Data: See Attached Report (no numeric results)
!SM No Data: Sample Missing
!SS No Data: Send Separate Sample Properly Preserved
!UI No Data: Indeterminant Interference
!TX No Data: Time Expired
A3C Approximate, Total Count Exceeded 300 Colonies
APL Additional Peak, Large, Not Priority Pollutant
APS Additional Peak, Less Than, Not Priority Pollutant
CIC Possible Contamination, Improper Cap
CRO Calculated Result Only

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM FORT ERIE (ROSEHILL WTP) 1988

WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
RAW	TREATED	SITE 1		SITE 2	
		STANDING	FREE FLOW	STANDING	FREE FLOW

BACTERIOLOGICAL					
AEROMONAS SP (0=ABSENT)		DET'N LIMIT = N/A		GUIDELINE = 0 (A1)	
MAR	.	.	.	.	0
JUL	.	.	1	.	.
AUG	.	.	0	.	.

E. COLI P/A (0=ABSENT)		DET'N LIMIT = N/A		GUIDELINE = N/A	
MAR	.	.	.	.	0
JUL	.	.	0	.	.
AUG	.	.	0	.	.

FECAL COLIFORM MF (CT/100ML)		DET'N LIMIT = 0		GUIDELINE = 0 (A1)	
MAR	0	.	.	.	.
APR	0	.	.	.	.
MAY	0	.	.	.	.
JUN	0	.	.	.	.
JUL	2	.	.	.	.
AUG	0	.	.	.	.
SEP	4	.	.	.	.
OCT	2 T48	.	.	.	.
NOV	1 T24	.	.	.	.
DEC	50 T48	.	.	.	.

FECAL COLIFORM (0=ABSENT)		DET'N LIMIT = N/A		GUIDELINE = 0 (A1)	
MAR	.	.	.	.	0
JUL	.	.	0	.	.
AUG	.	.	0	.	.

WATER TREATMENT PLANT

DISTRIBUTION SYSTEM

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
	RAW	TREATED	SITE 1		SITE 2	
			STANDING	FREE FLOW	STANDING	FREE FLOW
TOTAL COLIFORM MF (CT/100ML)			DET'N LIMIT = 0		GUIDELINE = 5/100ML(A1)	
JAN	.	0	.	0	.	0
FEB	.	0	.	0	.	0
MAR	8	0	.	0	.	0
APR	26	0	.	0	.	0
MAY	18	0	.	0	.	.
JUN	126 A3C	0	.	0	.	0
JUL	120	0	.	1	.	.
AUG	300	0	.	2	.	40 A3C
SEP	50	0	.	0	.	.
OCT	8 A3C	0 T48	.	0 T24	.	.
NOV	38 A3C	0 T24	.	0 T24	.	0 T24
DEC	480 A3C	BDL	.	.	.	0 T24
T COLIFORM BCKGRD MF (CT/100ML)			DET'N LIMIT = 0		GUIDELINE = N/A	
JAN	.	0	.	0	.	0
FEB	.	0	.	0	.	0
MAR	114	0	.	0	.	0
APR	156	0	.	0	.	0
MAY	202	0	.	0	.	.
JUN	2200	0	.	14	.	0
JUL	10900	0	.	114	.	.
AUG	10400	0	.	204	.	26000
SEP	28000	0	.	22	.	.
OCT	4800 >	1 T48	.	2 T24	.	.
NOV	4800 A3C	0 T24	.	2 T24	.	220 T24
DEC	7000 A3C	BDL	.	.	.	100 T24

WATER TREATMENT PLANT

DISTRIBUTION SYSTEM

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
	RAW	TREATED	SITE 1		SITE 2	
			STANDING	FREE FLOW	STANDING	FREE FLOW
<hr/>						
FLD CHLORINE (TOTAL) (MG/L)			DET'N LIMIT = N/A		GUIDELINE = N/A	
JAN	.	.	.300	.300	.	.100
FEB	.	.480	.300	.300	.	.150
MAR	.	.570	.300	.500	.100	.150
APR	.	.350	.300	.100	.	.100
MAY	.	.600	.300	.300	.	.
JUN	.	.420	.300	.100	.	.
JUL	.	.440	.100	.300	.	.
AUG	.	.450	.300	.100	.	.250
SEP	.	.450	.300	.300	.	.
OCT	.	.350	.300	.300	.	.
NOV	.	.600	.300	.300	.	.100
DEC	.	.430	.	.	.	.150
<hr/>						
FLD PH (DMSNLESS)			DET'N LIMIT = N/A		GUIDELINE = 6.5-8.5(A4)	
JAN	.	.	7.800	7.800	7.400	7.300
FEB	.	7.600	7.800	7.400	7.800	7.600
MAR	8.200	7.600	7.600	7.800	7.600	7.800
APR	7.900	7.600	7.800	7.600	7.600	7.600
MAY	8.000	7.600	7.800	7.600	.	.
JUN	7.800	7.600	7.800	7.800	7.800	7.650
JUL	8.000	7.600	7.800	7.600	.	.
AUG	8.000	7.600	7.800	7.800	7.600	7.800
SEP	7.800	7.500	7.800	7.800	.	.
OCT	7.800	7.500	7.800	7.400	.	.
NOV	7.800	7.600	7.400	7.600	7.600	7.500
DEC	7.800	7.600	.	.	7.600	7.900

WATER TREATMENT PLANT

DISTRIBUTION SYSTEM

	RAW	TREATED	SITE 1		SITE 2	
			STANDING	FREE FLOW	STANDING	FREE FLOW

CHEMISTRY (LAB)						
ALKALINITY (MG/L)			DET'N LIMIT = .200		GUIDELINE = 30-500 (A4)	
JAN	.	100.600	100.100	100.900	100.300	98.700
FEB	.	102.800	104.300	104.300	106.800	105.000
MAR	104.100	100.200	99.700	100.400	101.400	100.100
APR	99.500	94.800	95.900	96.500	95.700	97.600
MAY	99.700	97.900	98.800	99.000	.	.
JUN	103.500	99.300	99.700	99.600	99.700	100.200
JUL	100.100	89.500	91.300	92.200	.	.
AUG	100.400	96.200	98.800	96.500	98.400	98.700
SEP	98.200	94.200	93.600	94.400	.	.
OCT	102.000	98.800	99.400	99.600	.	.
NOV	103.100	100.900	101.300	101.800	102.300	103.400
DEC	110.000	104.000	.	.	104.300	103.600

CALCIUM (MG/L)			DET'N LIMIT = .100		GUIDELINE = 100 (F2)	
JAN	.	37.400	37.000	37.600	38.000	36.800
FEB	.	38.800	40.200	39.000	39.600	40.600
MAR	40.200	40.400	39.000	39.400	39.200	36.400
APR	32.400	34.000	34.000	34.600	35.400	34.400
MAY	36.600	36.800	36.200	37.000	.	.
JUN	36.400	37.000	37.200	37.600	37.400	115
JUL	37.000	39.000	38.600	38.200	.	.
AUG	35.800	36.700	37.400	36.200	36.800	37.100
SEP	36.200	37.800	37.800	38.400	.	.
OCT	37.600	37.400	38.400	39.200	.	.
NOV	37.400	36.200	36.200	37.000	36.800	36.600
DEC	39.000	38.600	.	.	38.200	38.600

WATER TREATMENT PLANT

DISTRIBUTION SYSTEM

	RAW	TREATED	SITE 1		SITE 2	
			STANDING	FREE FLOW	STANDING	FREE FLOW
CONDUCTIVITY (UMHO/CM)			DET'N LIMIT = 1		GUIDELINE = 400 (F2)	
JAN	.	302	304	302	304	298
FEB	.	312	316	314	322	313
MAR	294	295	297	295	296	292
APR	279	276	280	279	276	279
MAY	289	291	292	292	.	.
JUN	292	297	300	297	299	296
JUL	291	297	298	298	.	.
AUG	288	294	302	294	297	295
SEP	289	295	297	295	.	.
OCT	294	298	302	300	.	.
NOV	294	305	306	306	313	304
DEC	311	311	.	.	306	303
FLUORIDE (MG/L)			DET'N LIMIT = .01		GUIDELINE = 2.400 (A1)	
JAN	.	.100	.100	.120	.100	.100
FEB	.	.140	.140	.140	.120	.120
MAR	.140	.130	.110	.120	.110	.110
APR	.120	.090	.090	.090	.090	.090
MAY	.120	.110	.110	.110	.	.
JUN	.110	.110	.110	.110	.110	.110
JUL	.120	.120	.120	.110	.	.
AUG	.120	.120	.120	.120	.120	.120
SEP	.100	.100	.100	.120	.	.
OCT	.120	.120	.120	.120	.	.
NOV	.100	.100	.080	.080	.100	.100
DEC	.120	.120	.	.	.120	.120

WATER TREATMENT PLANT

DISTRIBUTION SYSTEM

	RAW	TREATED	SITE 1		SITE 2	
			STANDING	FREE FLOW	STANDING	FREE FLOW
LANGELIERS INDEX (UG/L)			DET'N LIMIT = N/A		GUIDELINE = N/A	
JAN	.	.136 NAF	.138 NAF	.139 NAF	.530 NAF	.102 NAF
FEB	.	.168 NAF	.290 NAF	.277 NAF	.283 NAF	.277 NAF
MAR	.445 NAF	.250 NAF	.212 NAF	.250 NAF	.312 NAF	.246 NAF
APR	.308 NAF	.239 NAF	.262 NAF	.273 NAF	.300 NAF	.325 NAF
MAY	.367 NAF	.271 NAF	.318 NAF	.408 NAF	.	.
JUN	.430 NAF	.317 NAF	.290 NAF	.316 NAF	.343 NAF	.
JUL	.463	.185	.289	.189	.	.
AUG	.441	.321	.268	.277	.311	.347
SEP	.346	.204	.261	.242	.	.
OCT	.477	.439	.442	.432	.	.
NOV	.439	.332	.323	.355	.373	.477
DEC	.490	.391	.	.	.409	.492
MAGNESIUM (MG/L)			DET'N LIMIT = .050		GUIDELINE = 30 (F2)	
JAN	.	8.500	8.700	8.600	8.500	8.300
FEB	.	8.700	8.900	8.600	8.900	9.000
MAR	9.050	8.950	8.750	8.750	8.650	8.300
APR	7.300	7.800	7.800	7.600	7.700	7.600
MAY	8.100	8.100	7.800	7.800	.	.
JUN	8.300	8.300	8.200	8.300	8.300	!IS
JUL	8.600	8.800	8.600	8.700	.	.
AUG	8.400	8.500	8.400	8.500	8.300	8.200
SEP	8.400	8.600	8.400	8.300	.	.
OCT	9.000	8.900	8.700	8.400	.	.
NOV	8.500	8.700	8.400	8.300	8.400	8.400
DEC	9.900	9.600	.	.	9.200	8.900

WATER TREATMENT PLANT

DISTRIBUTION SYSTEM

	RAW	TREATED	SITE 1		SITE 2	
			STANDING	FREE FLOW	STANDING	FREE FLOW
NITRITE (MG/L)			DET'N LIMIT = 0.001		GUIDELINE = 1.000 (A1)	
JAN	.	.002 <T	.002 <T	.002 <T	.002 <T	.002 <T
FEB	.	.001 <T	.001 <T	.001 <T	.001 <T	.001 <T
MAR	.005	.008	.023	.014	.008	.016
APR	.003 <T	.001 <T	.002 <T	.001 <T	.001 <T	.001 <T
MAY	.030	.006	.008	.006	.	.
JUN	.005	.001 <T	.001 <T	.001 <T	.001 <T	.002 <T
JUL	.004 <T	.001 <T	.002 <T	.002 <T	.	.
AUG	.006	.003 <T	.011	.003 <T	.003 <T	.004 <T
SEP	.002 <T	BDL	.001 <T	.001 <T	.	.
OCT	.005	.006	.007	.009	.	.
NOV	.002	.002	.005	.008	.007	.008
DEC	.004 <T	.002 <T	.	.	.002 <T	.002 <T
TOTAL NITRATES (MG/L)			DET'N LIMIT = .020		GUIDELINE = 10.000 (A1)	
JAN	.	.245	.620	.230	1.280	.300
FEB	.	.275	.435	.270	.695	.275
MAR	.190	.215	.445	.220	.255	.230
APR	.195	.200	.400	.195	.445	.200
MAY	.225	.190	.360	.190	.	.
JUN	.225	.210	.380	.195	.635	.220
JUL	.120	.125	.170	.135	.	.
AUG	.085 <T	.095 <T	.270	.105	.440	.135
SEP	.080 <T	.090 <T	.250	.095 <T	.	.
OCT	.085 <T	.090 <T	.280	.090 <T	.	.
NOV	.085	.130	.275	.140	1.320	.130
DEC	.305	.285	.	.	.320	.190

WATER TREATMENT PLANT

DISTRIBUTION SYSTEM

	RAW	TREATED	SITE 1		SITE 2	
			STANDING	FREE FLOW	STANDING	FREE FLOW
PHOSPHORUS FIL REACT (MG/L)			DET'N LIMIT = .0005		GUIDELINE = N/A	
JAN	.	.001 <T	.	.	.	.
FEB	.	BDL	.	.	.	.
MAR	.001 <T	.001 <T	.	.	.	.
APR	.002 <T	.000 <T	.	.	.	.
MAY	.003	.000 <T	.	.	.	.
JUN	.003	.002 <T	.	.	.	.
JUL	BDL	.000 <T	.	.	.	.
AUG	.002 <T	.002 <T	.	.	.	.
SEP	.000 <T	.000 <T	.	.	.	.
OCT	.001 <T	.001 <T	.	.	.	.
NOV	.001	.000	.	.	.	.
DEC	.005	.001 <T	.	.	.	.
PHOSPHORUS TOTAL (MG/L)			DET'N LIMIT = .002		GUIDELINE = .40 (F2)	
JAN	.	.003 <T	.	.	.	.
FEB	.	.004 <T	.	.	.	.
MAR	.008 <T	BDL	.	.	.	.
APR	.021	.005 <T	.	.	.	.
MAY	.011	.006 <T	.	.	.	.
JUN	.017	.005 <T	.	.	.	.
JUL	.011	.007 <T	.	.	.	.
AUG	.004 <T	.002 <T	.	.	.	.
SEP	BDL	BDL	.	.	.	.
OCT	.015	.007 <T	.	.	.	.
NOV	.013	.016	.	.	.	.
DEC	.047	.002 <T	.	.	.	.

WATER TREATMENT PLANT

DISTRIBUTION SYSTEM

	RAW	TREATED	SITE 1		SITE 2	
			STANDING	FREE FLOW	STANDING	FREE FLOW
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METALS						
SILVER (UG/L)			DET'N LIMIT = .020		GUIDELINE = 50. (A1)	
JAN	.	.030 <T	.030 <T	.020 <T	3.100	.040 <T
FEB	.	.050 <T	.030 <T	.020 <T	.580	.040 <T
MAR	BDL	.100 <T	.060 <T	.030 <T	.040 <T	BDL
APR	BDL	BDL	BDL	BDL	BDL	.090 <T
MAY	1 IS	BDL	BDL	BDL	.	.
JUN	BDL	BDL	BDL	BDL	.070 <T	.040 <T
JUL	BDL	BDL	.050 <T	BDL	.	.
AUG	BDL	BDL	.030 <T	BDL	2.600	BDL
SEP	.030 <T	.030 <T	BDL	.070 <T	.	.
OCT	BDL	BDL	BDL	.040 <T	.	.
NOV	BDL	.030 <T	BDL	BDL	BDL	BDL
DEC	BDL	BDL	.	.	BDL	BDL
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ALUMINUM (UG/L)			DET'N LIMIT = .050		GUIDELINE = 100. (A4)	
JAN	.	87.000	81.200	64.960	55.680	54.520
FEB	.	88.160	63.800	56.840	47.560	47.560
MAR	38.280	105.560	88.160	84.680	1.972	70.760
APR	93.960	90.480	80.040	76.560	63.800	73.080
MAY	1 IS	197.200	162.400	150.800	.	.
JUN	45.240	197.200	162.400	162.400	127.600	116.000
JUL	33.640	406.000	278.400	290.000	.	.
AUG	22.040	406.000	255.200	278.400	232.000	243.600
SEP	22.040	243.600	197.200	220.400	.	.
OCT	52.200	266.800	185.600	185.600	.	.
NOV	139.200	111.360	109.040	105.560	96.280	98.600
DEC	197.200	76.560	.	.	62.640	66.120
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WATER TREATMENT PLANT

DISTRIBUTION SYSTEM

	RAW	TREATED	SITE 1		SITE 2	
			STANDING	FREE FLOW	STANDING	FREE FLOW
BORON (UG/L)			DET'N LIMIT = 0.200		GUIDELINE = 5000. (A1)	
JAN	.	23.000	23.000	22.000	23.000	22.000
FEB	.	20.000	27.000	20.000	20.000	19.000 <T
MAR	21.000	22.000	22.000	21.000	17.000 <T	20.000
APR	21.000	20.000 <T	20.000 <T	23.000	18.000 <T	22.000
MAY	IIS	20.000 <T	24.000	19.000 <T	.	.
JUN	24.000	35.000	31.000	37.000	25.000	21.000
JUL	21.000	21.000	20.000 <T	20.000 <T	.	.
AUG	57.000	24.000	24.000	26.000	24.000	40.000
SEP	22.000	21.000	22.000	24.000	.	.
OCT	24.800	32.000	40.000	41.000	.	.
NOV	66.000	68.000	37.000	25.000	28.000	77.000
DEC	60.000	57.000	.	.	54.000	52.000

	RAW	TREATED	SITE 1		SITE 2	
			STANDING	FREE FLOW	STANDING	FREE FLOW
BERYLLIUM (UG/L)			DET'N LIMIT = 0.010		GUIDELINE = .20 (H)	
JAN	.	BDL	BDL	BDL	BDL	BDL
FEB	.	.020 <T	.010 <T	BDL	.030 <T	BDL
MAR	.010 <T	.030 <T	.030 <T	.010 <T	BDL	.010 <T
APR	BDL	.030 <T	BDL	.020 <T	.020 <T	.050 <T
MAY	IIS	BDL	BDL	BDL	.	.
JUN	.030 <T	.040 <T	BDL	.040 <T	.030 <T	BDL
JUL	BDL	BDL	BDL	BDL	.	.
AUG	.140 <T	BDL	BDL	.020 <T	BDL	BDL
SEP	.020 <T	.020 <T	BDL	.020 <T	.	.
OCT	BDL	.020 <T	.030 <T	.110 <T	.	.
NOV	.120 <T	.090 <T	BDL	.020 <T	.080 <T	.070 <T
DEC	.180 <T	.180 <T	.	.	.180 <T	.120 <T

WATER TREATMENT PLANT

DISTRIBUTION SYSTEM

	RAW	TREATED	SITE 1		SITE 2	
			STANDING	FREE FLOW	STANDING	FREE FLOW
CHROMIUM (UG/L)			DET'N LIMIT = 0.100		GUIDELINE = 50. (A1)	
JAN	.	.220 <T	.290 <T	.200 <T	4.800	.190 <T
FEB	.	.140 <T	.770 <T	.190 <T	1.200	.140 <T
MAR	.230 <T	.260 <T	.690 <T	.240 <T	.210 <T	.200 <T
APR	.580 <T	.380 <T	.930 <T	1.200	7.600	.110 <T
MAY	!IS	.550 <T	1.000 <T	.530 <T	.	.
JUN	.320 <T	1.600	1.100	1.600	2.900	.210 <T
JUL	.240 <T	.890 <T	.260 <T	.250 <T	.	.
AUG	2.300	.470 <T	.390 <T	.480 <T	1.000 <T	1.400
SEP	.180 <T	.220 <T	.130 <T	.320 <T	.	.
OCT	.180 <T	3.500	5.100	4.600	.	.
NOV	6.000	5.900	1.900	.360 <T	4.400	9.500
DEC	7.100	6.300	.	.	5.900	5.100
COPPER (UG/L)			DET'N LIMIT = .100		GUIDELINE = 1000 (A3)	
JAN	.	1.200	19.000	2.900	35.000	10.000
FEB	.	.950 <T	17.000	2.700	26.000	5.800
MAR	.870 <T	.670 <T	11.000	2.700	5.500	5.300
APR	1.100	.880 <T	12.000	2.700	35.000	7.000
MAY	!IS	1.100	14.000	3.200	.	.
JUN	1.100	.770 <T	15.000	3.800	44.000	8.500
JUL	1.100	1.100	14.000	3.500	.	.
AUG	1.100	.880 <T	15.000	3.800	41.000	8.500
SEP	1.100	2.000	15.000	4.100	.	.
OCT	1.750	.890 <T	16.000	5.200	.	.
NOV	1.700	1.000 <T	20.000	5.800	46.000	8.700
DEC	2.100	1.100	.	.	43.000	9.300

WATER TREATMENT PLANT

DISTRIBUTION SYSTEM

	RAW	TREATED	SITE 1		SITE 2	
			STANDING	FREE FLOW	STANDING	FREE FLOW
MANGANESE (UG/L)			DET'N LIMIT = .050		GUIDELINE = 50.0 (A3)	
JAN	.	.700	33.000	34.000	4.300	4.200
FEB	.	.690	16.000	19.000	3.000	3.300
MAR	2.100	1.000	21.000	21.000	.060 <T	4.700
APR	4.600	1.000	31.000	27.000	2.800	2.900
MAY	!IS	1.800	30.000	27.000	.	.
JUN	5.600	.450 <T	8.300	8.400	3.200	2.900
JUL	4.500	2.500	7.500	9.700	.	.
AUG	6.400	1.300	11.000	12.000	2.600	3.200
SEP	4.200	.600	11.000	16.000	.	.
OCT	11.000	1.500	12.000	14.000	.	.
NOV	16.000	.620	12.000	12.000	2.200	1.900
DEC	30.000	.690	.	.	1.900	1.700
MOLYBDENUM (UG/L)			DET'N LIMIT = 0.020		GUIDELINE = 500 (H)	
JAN	.	1.200	1.200	1.200	1.100	1.100
FEB	.	1.100	1.100	1.000	1.000	.950
MAR	1.100	1.200	1.100	1.100	.870	1.000
APR	.920	.970	1.000	.990	.850	1.100
MAY	!IS	1.100	1.200	1.100	.	.
JUN	1.000	1.200	1.100	1.000	1.100	1.100
JUL	1.200	1.200	1.200	1.200	.	.
AUG	1.200	1.200	1.300	1.100	1.000	1.100
SEP	1.200	1.300	1.100	1.200	.	.
OCT	1.100	1.200	1.000	1.200	.	.
NOV	1.000	1.200	1.100	1.100	1.100	1.100
DEC	.730	1.200	.	.	.940	1.100

WATER TREATMENT PLANT

DISTRIBUTION SYSTEM

	RAW	TREATED	SITE 1		SITE 2	
			STANDING	FREE FLOW	STANDING	FREE FLOW
ANTIMONY (UG/L)			DET'N LIMIT = .050		GUIDELINE = 146. (D4)	
JAN	.	.160 <T	.310	.430	.160 <T	.140 <T
FEB	.	.190 <T	.280	.280	.170 <T	.190 <T
MAR	.200	.230	.270	.260	.120 <T	.160 <T
APR	.180 <T	.180 <T	.280	.230	.180 <T	.220
MAY	!IS	.220	.360	.290	.	.
JUN	.180 <T	.200 <T	.240	.200 <T	.200 <T	.240
JUL	.210	.220	.250	.200 <T	.	.
AUG	.770	.740	.750	.730	.750	.650
SEP	.590	.590	.540	.600	.	.
OCT	.610	.550	.690	.590	.	.
NOV	.600	.810	.710	.580	.600	.600
DEC	.260	.420	.	.	.380	.380
SELENIUM (UG/L)			DET'N LIMIT = 0.200		GUIDELINE = 10. (A1)	
JAN	.	1.200 <T	.940 <T	1.600 <T	1.100 <T	.770 <T
FEB	.	.670 <T	1.100 <T	.920 <T	1.100 <T	1.100 <T
MAR	.470 <T	1.000 <T	.850 <T	.970 <T	.380 <T	.220 <T
APR	.410 <T	1.100 <T	1.700 <T	2.400 <T	1.100 <T	1.100 <T
MAY	!IS	2.400 <T	3.400 <T	2.300 <T	.	.
JUN	.730 <T	.920 <T	1.200 <T	BDL	1.400 <T	BDL
JUL	1.100 <T	1.800 <T	2.300 <T	2.400 <T	.	.
AUG	BDL	BDL	BDL	.890 <T	BDL	1.500 <T
SEP	BDL	.240 <T	.290 <T	2.100 <T	.	.
OCT	BDL	2.800 <T	5.100 <T	3.000 <T	.	.
NOV	.390 <T	2.600 <T	1.900 <T	2.300 <T	1.500 <T	4.900 <T
DEC	BDL	2.900 <T	.	.	1.000 <T	2.300 <T

WATER TREATMENT PLANT

DISTRIBUTION SYSTEM

	RAW	TREATED	SITE 1		SITE 2	
			STANDING	FREE FLOW	STANDING	FREE FLOW
THALLIUM (UG/L)			DET'N LIMIT = .010		GUIDELINE = 13. (D4)	
JAN	.	.020 <T	.010 <T	.010 <T	BDL	BDL
FEB	.	.020 <T	.030 <T	.010 <T	.020 <T	.010 <T
MAR	.020 <T	.010 <T	.020 <T	.020 <T	BDL	BDL
APR	BDL	BDL	BDL	BDL	BDL	BDL
MAY	!IS	BDL	BDL	BDL	.	.
JUN	BDL	BDL	.020 <T	BDL	BDL	.020 <T
JUL	.020 <T	BDL	BDL	.020 <T	.	.
AUG	.020 <T	BDL	.020 <T	BDL	BDL	BDL
SEP	.020 <T	BDL	BDL	.030 <T	.	.
OCT	BDL	BDL	BDL	BDL	.	.
NOV	BDL	BDL	BDL	BDL	BDL	BDL
DEC	BDL	BDL	.	.	BDL	BDL
URANIUM (UG/L)			DET'N LIMIT = .020		GUIDELINE = 20. (A2)	
JAN	.	.340	.360	.340	.310	.340
FEB	.	.400	.360	.380	.360	.350
MAR	.320	.360	.340	.350	.090 <T	.290
APR	.310	.320	.290	.320	.260	.360
MAY	!IS	.380	.360	.380	.	.
JUN	.370	.460	.340	.390	.330	.400
JUL	.350	.370	.360	.380	.	.
AUG	.380	.430	.370	.330	.380	.360
SEP	.350	.320	.310	.360	.	.
OCT	.390	.310	.360	.370	.	.
NOV	.320	.300	.290	.330	.280	.290
DEC	.360	.320	.	.	.290	.280

WATER TREATMENT PLANT

DISTRIBUTION SYSTEM

	RAW	TREATED	SITE 1		SITE 2	
			STANDING	FREE FLOW	STANDING	FREE FLOW
PESTICIDES & PCB						
ALPHA BHC (NG/L)			DET'N LIMIT = 1.000		GUIDELINE = 700 (G)	
JAN	.	2.000 <T	.	BDL	.	2.000 <T
FEB	.	1.000 <T	.	2.000 <T	.	1.000 <T
MAR	BDL	1.000 <T	.	!NR	.	BDL
APR	1.000 <T	1.000 <T	.	!SM	.	BDL
MAY	2.000 <T	1.000 <T	.	2.000 <T	.	.
JUN	2.000 <T	1.000 <T	.	1.000 <T	.	BDL
JUL	BDL	3.000 <T	.	BDL	.	.
AUG	1.000 <T	BDL	.	!LA	.	!LA
SEP	1.000 <T	BDL	.	!RE	.	.
OCT	BDL	BDL	.	BDL	.	.
NOV	BDL	1.000 <T	.	BDL	.	BDL
DEC	2.000 <T	2.000 <T	.	.	.	1.000 <T
LINDANE (NG/L)						
			DET'N LIMIT = 1.000		GUIDELINE = 4000 (A1)	
JAN	.	BDL	.	BDL	.	BDL
FEB	.	BDL	.	BDL	.	BDL
MAR	BDL	BDL	.	!NR	.	BDL
APR	BDL	BDL	.	!SM	.	BDL
MAY	BDL	BDL	.	BDL	.	.
JUN	BDL	BDL	.	BDL	.	BDL
JUL	BDL	BDL	.	BDL	.	.
AUG	BDL	BDL	.	!LA	.	!LA
SEP	BDL	BDL	.	!RE	.	.
OCT	BDL	BDL	.	BDL	.	.
NOV	BDL	BDL	.	BDL	.	BDL
DEC	1.000 <T	1.000 <T	.	.	.	BDL

WATER TREATMENT PLANT

DISTRIBUTION SYSTEM

	RAW	TREATED	SITE 1		SITE 2	
			STANDING	FREE FLOW	STANDING	FREE FLOW
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	VOLATILES					
BENZENE (UG/L)			DET'N LIMIT = .050		GUIDELINE = 5.0 (B1)	
MAR	BDL	BDL	.	1NR	.	BDL
APR	BDL	BDL	.	BDL	.	BDL
MAY	BDL	BDL	.	BDL	.	.
JUN	BDL	BDL	.	BDL	.	BDL
JUL	BDL	.050 <T	.	BDL	.	.
AUG	BDL	BDL	.	BDL	.	BDL
SEP	BDL	BDL	.	BDL	.	.
OCT	BDL	BDL	.	BDL	.	.
NOV	BDL	BDL	.	BDL	.	BDL
DEC	BDL	BDL	.	.	.	BDL
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TOLUENE (UG/L)			DET'N LIMIT = .050		GUIDELINE = 24.0 (B4)	
MAR	BDL	BDL	.	1NR	.	BDL
APR	BDL	.050 UCS	.	.050 UCS	.	BDL
MAY	BDL	BDL	.	BDL	.	.
JUN	BDL	BDL	.	.050 <T	.	BDL
JUL	BDL	.100 <T	.	BDL	.	.
AUG	BDL	BDL	.	BDL	.	BDL
SEP	BDL	BDL	.	BDL	.	.
OCT	BDL	BDL	.	BDL	.	.
NOV	BDL	BDL	.	BDL	.	BDL
DEC	BDL	.050 <T050 <T
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WATER TREATMENT PLANT

DISTRIBUTION SYSTEM

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
	RAW	TREATED	SITE 1		SITE 2	
			STANDING	FREE FLOW	STANDING	FREE FLOW
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CARBON TETRACHLORIDE (UG/L)		DET'N LIMIT = .200			GUIDELINE = 5.0 (D1)	
MAR	BDL	BDL	.	INR	.	BDL
APR	BDL	BDL	.	BDL	.	BDL
MAY	BDL	BDL	.	BDL	.	.
JUN	BDL	BDL	.	BDL	.	BDL
JUL	BDL	BDL	.	BDL	.	.
AUG	BDL	BDL	.	BDL	.	BDL
SEP	BDL	BDL	.	BDL	.	.
OCT	BDL	BDL	.	BDL	.	.
NOV	BDL	BDL	.	BDL	.	BDL
DEC	BDL	BDL400 <T
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DICHLOBROMOMETHANE (UG/L)		DET'N LIMIT = .050			GUIDELINE = 350 (A1+)	
MAR	BDL	14.200	.	INR	.	10.600
APR	BDL	11.850	.	9.550	.	8.050
MAY	BDL	11.350	.	9.900	.	.
JUN	BDL	12.550	.	9.500	.	8.400
JUL	BDL	18.100	.	13.650	.	.
AUG	BDL	15.900	.	13.800	.	11.300
SEP	BDL	13.500	.	11.350	.	.
OCT	.800	13.150	.	12.400	.	.
NOV	.100 <T	11.500	.	9.450	.	8.700
DEC	BDL	12.650	.	.	.	6.800
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WATER TREATMENT PLANT

DISTRIBUTION SYSTEM

	RAW	TREATED	SITE 1		SITE 2	
			STANDING	FREE FLOW	STANDING	FREE FLOW
TOTAL TRIHALOMETHANES (UG/L)			DET'N LIMIT = .500		GUIDELINE = 350 (A1)	
MAR	BDL	44.300	.	1NR	.	33.200
APR	BDL	37.850	.	30.350	.	24.750
MAY	BDL	33.550	.	29.600	.	.
JUN	BDL	41.150	.	29.800	.	27.800
JUL	BDL	56.600	.	39.050	.	.
AUG	BDL	55.600	.	45.200	.	42.100
SEP	BDL	42.800	.	35.750	.	.
OCT	2.700 <T	42.850	.	38.900	.	.
NOV	.500 <T	34.100	.	27.350	.	27.000
DEC	BDL	38.850	.	.	.	21.600

<u>SCAN/PARAMETER</u>	<u>UNIT</u>	<u>DETECTION</u>	
		<u>LIMIT</u>	<u>GUIDELINE</u>
NITRITE	MG/L	.001	1.0 (A1)
TOTAL NITRATES	MG/L	.02	10. (A1)
NITROGEN TOTAL KJELDAHL	MG/L	.02	N/A
PH	DMSNLESS	N/A	6.5-8.5(A4)
PHOSPHORUS FIL REACT	MG/L	.0005	N/A
PHOSPHORUS TOTAL	MG/L	.002	.40(F2)
TOTAL SOLIDS	MG/L	1.	500. (A3)
TURBIDITY	FTU	.02	1.0 (A1)

METALS

ALUMINUM	UG/L	.050	100. (A4)
ANTIMONY	UG/L	.050	146. (D4)
ARSENIC	UG/L	.050	50. (A1)
BARIUM	UG/L	.020	1000. (A1)
BORON	UG/L	.200	5000. (A1)
BERYLLIUM	UG/L	.010	0.20 (H)
CADMIUM	UG/L	.050	5.0 (A1)
COBALT	UG/L	.020	1000. (H)
CHROMIUM	UG/L	.100	50. (A1)
COPPER	UG/L	.100	1000. (A3)
IRON	UG/L	5.0	300. (A3)
MERCURY	UG/L	.01	1.0 (A1)
MANGANESE	UG/L	.050	50. (A3)
MOLYBDENUM	UG/L	.020	500. (H)
NICKEL	UG/L	.100	50. (F3)
LEAD	UG/L	.020	50. (A1)
SELENIUM	UG/L	.200	10. (A1)
SILVER	UG/L	.020	50. (A1)
STRONTIUM	UG/L	.100	2000. (H)
THALLIUM	UG/L	.010	13. (D4)
TITANIUM	UG/L	.100	N/A
URANIUM	UG/L	.020	20. (A2)
VANADIUM	UG/L	.020	100. (H)
ZINC	UG/L	.020	5000. (A3)

PHENOLICS

PHENOLICS (UNFILTERED REACTIVE)	UG/L	.2	2.0 (A3)
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PESTICIDES & PCB

ALDRIN	NG/L	1.0	700. (A1)
AMETRINE	NG/L	50.	300000. (D3)
ATRAZINE	NG/L	50.	60000. (B3)
ALPHA HEXACHLOROCYCLOHEXANE (BHC)	NG/L	1.0	700. (G)
BETA HEXACHLOROCYCLOHEXANE (BHC)	NG/L	1.0	300. (G)
GAMMA HEXACHLOROCYCLOHEXANE (LINDANE)	NG/L	1.0	4000. (A1)
ALPHA CHLORDANE	NG/L	2.0	7000. (A1)
GAMMA CHLORDANE	NG/L	2.0	7000. (A1)
BLADIX	NG/L	100.	10000. (B3)
DIELDRIN	NG/L	2.0	700. (A1)
METHOXYCHLOR	NG/L	5.0	100000. (A1)
ENDOSULFAN 1 (THIODAN I)	NG/L	2.0	74000. (D4)
ENDOSULFAN 2 (THIODAN II)	NG/L	4.0	74000. (D4)
ENDRIN	NG/L	4.0	200. (A1)
ENDOSULFAN SULPHATE (THIODAN SULPHATE)	NG/L	4.0	N/A
HEPTACHLOR EPOXIDE	NG/L	1.0	3000. (A1)

<u>SCAN/PARAMETER</u>	<u>UNIT</u>	<u>DETECTION</u>	
		<u>LIMIT</u>	<u>GUIDELINE</u>
PHORATE (THIMET)	NG/L	20.	35. (D2)
RELDAN	NG/L	20.	N/A
RONNEL	NG/L	20.	N/A
AMINOCARB	NG/L	N/A	N/A
BENONYL	NG/L	N/A	N/A
BUX (METALKAMATE)	NG/L	2000.	N/A
CARBOFURAN	NG/L	2000.	18000. (D3)
CICP (CHLORPROPHAM)	NG/L	2000.	350000. (G)
DIALLATE	NG/L	2000.	30000. (H)
EPTAM	NG/L	2000.	N/A
IPC	NG/L	2000.	N/A
PROPOXUR (BAYGON)	NG/L	2000.	90000. (G)
SEVIN (CARBARYL)	NG/L	200.	70000. (A1)
SUTAN (BUTYLATE)	NG/L	2000.	245000. (D3)

VOLATILES

BENZENE	UG/L	.050	5.0 (B1)
TOLUENE	UG/L	.050	24.0 (B4)
ETHYLBENZENE	UG/L	.050	2.4 (B4)
PARA-XYLENE	UG/L	.100	300. (B4)
META-XYLENE	UG/L	.100	300. (B4)
ORTHO-XYLENE	UG/L	.050	300. (B4)
1,1-DICHLOROETHYLENE	UG/L	.100	7.0 (D1)
ETHYLENE DIBROMIDE	UG/L	.05	50. (G)
METHYLENE CHLORIDE	UG/L	.500	1750. (D3)
TRANS-1,2-DICHLOROETHYLENE	UG/L	.100	350. (D3)
1,1-DICHLOROETHANE	UG/L	.100	N/A
CHLOROFORM	UG/L	.100	350. (A1+)
1,1,1-TRICHLOROETHANE	UG/L	.020	200. (D1)
1,2-DICHLOROETHANE	UG/L	.050	5.0 (D1)
CARBON TETRACHLORIDE	UG/L	.200	5.0 (D1)
1,2-DICHLOROPROPANE	UG/L	.050	10.0 (G)
TRICHLOROETHYLENE	UG/L	.100	5.0 (D1)
DICHLOROBROMOMETHANE	UG/L	.050	350. (A1+)
1,1,2-TRICHLOROETHANE	UG/L	.050	.60 (D4)
CHLORODIBROMOMETHANE	UG/L	.100	350. (A1+)
TETRACHLOROETHYLENE	UG/L	.050	10.0 (C2)
BROMOFORM	UG/L	.200	350. (A1+)
1,1,2,2-TETRACHLOROETHANE	UG/L	.050	0.17 (D4)
CHLOROBENZENE	UG/L	.100	1510. (D3)
1,4-DICHLOROBENZENE	UG/L	.100	5.0 (B1)
1,3-DICHLOROBENZENE	UG/L	.100	130. (G)
1,2-DICHLOROBENZENE	UG/L	.050	200. (B1)
TRIFLUOROCHLOROTOLUENE	UG/L	.100	N/A
TOTAL TRIHALOMETHANES	UG/L	.500	350. (A1)
STYRENE	UG/L	.05	46.5 (D2)