



Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Alfred Hub
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Tel: (613)679-4631 / Fax: (613) 679-4735

March 27, 2002

Mr. Brian R. Ward
Regional Director
Ministry of Environment
Eastern Region
133 Dalton Avenue, Box 820
Kingston, On K7L 4X6



Réunion Conseil
Council Mtg

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Clerk
Greffier

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RE: Fournier Wastewater Works
2001 Groundwater Monitoring Report

Dear Mr. Ward:

The attached 2001 Groundwater Monitoring Report completed by Golder Associated Ltd. is being submitted in accordance with Conditions 5.2 of the Certificate of Approval (C of A) No. 3-0436-99-006 for the Fournier Wastewater Works located in Nation Township.

In their report Golder made the recommendation to reduce the groundwater monitoring program from monthly sampling to two sampling sessions per year, to be completed in the spring (April/May) and in the fall (October/November). The reason for this reduction is due to the relatively low horizontal groundwater flow velocities of 1 to 4 metres per year at the site. Also monitoring well MW99-1 is the only groundwater monitoring well to be potentially impacted as a result of the sewage system and the low velocity indicating that sewage- impacted groundwater will reach the next downgradient groundwater monitoring wells MW99-2 and MW99-3 in approximately 5 years. It is further anticipated that downgradient wells MW99-4 and MW99-5, the nearest trigger locations to MW99-2 and MW99-3 are not expected to show evidence of sewage impact for approximately 30 years. Sewage impact is not expected to appear at monitoring well MW99-8 for approximately 60 years.

Therefore Golder recommended that monitoring frequency of wells MW99-1, MW99-2 and MW99-3 be reduced to two monitoring sessions per year and wells MW99-4, MW99-5 and MW99-8 be reduced to one monitoring session per year.

According to Condition 3.2 of the C of A approval from the MOE District Manager is required to implement the proposed change in sampling frequency. OCWA is requesting on behalf of Nation Township that MOE approve the proposed revised ground water monitoring frequency as per Golder's recommendation.



Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Should you have any questions with the above information please contact me at this office.

Yours truly,

A handwritten signature in cursive script that reads "Jacques Breen".

Jacques Breen
Operations Manger
Alfred Hub

Attachment: 2001 Groundwater Monitoring Report

c.c.: ~~Mr. Mary McCuaig, Nation Township (attachment previously submitted)~~
Compliance Advisor OCWA Eastern Area



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RE: St. Isidore de Prescott Water Works
2001 Annual Report

Dear Mr. Ward:

The following summary is being compiled based on Conditions 17(a) through 17(d) of the Certificate of Approval # 7-1536-91-936 for the St. Isidore de Prescott Water Works in the Nation Township for 2001.

Design Information

The St. Isidore de Prescott Water Works has been in operation since June of 1996. The facility consists of five (5) Communal Wells. Wells No.1 to No.4 supply raw water to the Water Treatment Plant (WTP) while Well No. 5 also known as the Village Well supplies water directly to the distribution system and operates independently. The Facility Design Information can be summarized as follows:

Design Parameter	Value
Population (present)	940
Population (design)	1,344
Average Consumption	281 L/cap/day
Average Demand	$1344 \times 281 \text{ L/cap/day} = 298,000 \text{ L/day} = 3.5 \text{ L/s}$
Maximum Day Demand	5.4 L/s
Peak Demand	15.7 L/s
Note	Commercial and Industrial uses are included in the equivalent design population of 1344 persons



a) Water Flows:

The 2001 water flows compare to the design values as follows:

ITEM	Design	2001	Percent
Avg. Day Flow m ³ /day	363	242	66.7
Max. Day Flow m ³ /day	907	707	77.9
Population	1,344	940	69.9
Per Capita Flow m ³ /cap/day	0.450	0.257	57.1

The above table shows that St. Isidore de Prescott Water Works was at 77.9% of its Design Capacity of 907 m³/day Maximum Day Flow (MDF) in 2001. The month of August recorded the highest average day flows during the year, due to hot and arid weather conditions. The Water Treatment Facility includes an aeration tower, potassium permanganate and sodium hypochlorite chemical feed systems and dual media (anthracite and green sand) filters, as well as associated appurtenances, piping, valves and instrumentation. Please refer to Appendix I: 2001 Performance Assessment Report for a tabulation of the monthly flows recorded.

As per Condition 4 of the Certificate of Approval, three new water laterals were added to the distribution system in 2001 at 6 de L'Arena St., 11 Gauthier St. and 16 Gauthier St.

b) Analytical Results:

Two treated water quality exceedences were reported for turbidity in 2001: 1.4 NTU on January 23rd and 1.7 NTU on February 23rd. Remedial action included oral and written notification to MOE and MOH, increased chlorination and removal and cleaning of the aeration tower packing material. No additional turbidity exceedences were reported. There was also one microbiological adverse exceedence notification reported during the year at well #5, recording a total coliform of 13 counts/100ml. Chlorine levels were increased and resampling indicated no presence of total coliform. Refer to Appendix II: 2001 Quarterly Water Regulation Sampling.

In accordance with Condition No. 14 of the Certificate of Approval and as illustrated the 2001 Performance Assessment Report (PAR), a minimum of 0.2 mg/L of total chlorine residual was maintained at all times in the treated water after a minimum 15 minutes contact time. Included in the 2001 PAR is a summary of the analytical results during the year. Well No. 4 remained out of service during 2001 due to the risk of bacteriological contamination and high Iron content.



No Clostridium Perfringens, indicator of Cryptosporidium was detected in either the raw or treated water during 2001. The running four quarter Total Trihalomethane average concentration for 2001 was 0.054 mg/l, within the MAC of .100 mg/l. Refer to Appendix III: 2001 Tabulation of Analytical Results and Appendix IV: 2001 C of A Annual & Quarterly Sampling Analysis.

c) Emergency Conditions:

As mentioned above treated water quality exceeded 1.0 NTU on two occasions in 2001. In effort to prevent this in the future Nation Council approved the purchase of a second set of Aeration Tower packing material (Flexrings). No other emergency conditions or plant upset occurred in 2001.

d) Water Treatment Chemicals:

Chemicals utilized in the treatment process for 2001 were Sodium Hypochlorite. Hydrofluosilic Acid was used in January only. In light of the reduction in the recommended optimal fluoride concentration in drinking water by the Province and the naturally occurring fluoride in the ground water (averaging 0.6 mg/l), the addition of hydrofluosilic acid was discontinued on January 22, 2001. Refer to Appendix V: 2001 Annual Chemical Usage, for monthly usage and dosages.

If you have any questions with the above information please contact me at this office.

Yours truly,

Jacques Breen
Operations Manager
Alfred Hub

Attachment: Appendix I: 2001 Performance Assessment Report
Appendix II: 2001 Quarterly Water Regulation Sampling
Appendix III: 2001 Tabulation of Analytical Results
Appendix IV: 2001 Cof A Annual & Quarterly Sampling Analysis
Appendix V: 2001 Annual Chemical Usage

c.c.: ~~M. [redacted] [redacted]~~, Nation Township
Compliance Advisor OCWA Eastern Area

APPENDIX I

2001 Performance Assessment Report



Ontario Clean Water Agency
Performance Assessment Report - Ground Water Supply

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Municipality: St-Isidore de Prescott
 Project: [6915] - St. Isidore de Prescott Water Treatment Plant
 Project Number: 7153691936
 Works Number: 220003573
 Description: A Five Well Facility System

Year: 2001
 Water Source: Groundwater
 Design Avg Day Flow(m³): 907.0
 Effluent Group Selected:

Month	<<< -- Flows Treated -->>>			<<< -- Effluent Physical/Chemical Parameters -->>>						<<< -- Disinfection -->>>				<<< -- Bact. (# of Samples) -->>>			
	Total Flow m³	Avg Day m³	Max Day m³	Avg Turb. (NTU)	Avg Colour (TCU)	THM (ug/L)	Avg Iron (ug/L)	Avg Sodium (mg/L)	Avg Nitrate mg/L	Avg Free Cl2 Resid. Treat (mg/L)	Avg Total Cl2 Resid. Treat (mg/L)	Min Free Cl2 Resid. Dist. (mg/L)	Min Total Cl2 Resid. Dist. (mg/L)	<---- Safe ---->	<---- Adverse ---->	Treat	Dist
JAN	8.203	265	707	0.60	4.00					1.25	1.99		1.00	5	13		
FEB	6.716	240	299	0.20	1.00	4.000	0.02	131.00	0.10	1.75	2.16		1.10	4	10		
MAR	6.879	222	227	0.11	1.50					2.04	2.49		1.70	4	12		
APR	7.060	235	279	0.11	3.25					1.34	1.67		0.40	4	12		
MAY	7.047	227	284	0.15	1.30	55.000	0.02	123.00	0.20	1.55	1.86		0.50	5	15		
JUN	7.221	241	283	0.12	1.78					1.44	1.85		1.00	4	12		
JUL	7.690	248	293	0.13	2.00					1.16	2.05		0.50	5	15		
AUG	8.437	272	461	0.15	2.20	3.000	20.00	130.00	0.10	1.49	2.19		0.85	4	12		
SEP	7.036	235	253	0.12	2.00					1.76	2.32		0.50	4	13		
OCT	7.729	249	374	0.14	2.10					1.90	2.20		0.55	5	15		
NOV	7.045	235	255	0.11	2.11	140.000	-1.00	155.00	0.10	1.74	2.14		0.60	4	12		
DEC	7.118	230	255	0.14	2.29					1.85	2.23		0.55	4	12		
Total:	88.181													52	153	0	0
AVG:		242		0.17	2.13	50.500	4.76	134.75	0.13	1.61	2.09		0.77	4	13		
MAX:			707	0.60	4.00	140.000	20.00	155.00	0.20	2.04	2.49		1.70	5	15		
Criteria:				1.00	5.00	100.000											

LEGEND:

Effluent Group Selected:

NOTE: -1 Analysis result less than detectable limit

APPENDIX II

2001 Quarterly Water Regulation Sampling

QUARTERLY REPORT ON DRINKING WATER QUALITY

January - March 2001, St. Isidore Waterworks (Waterworks No. 220003573)

St. Isidore Water Quality Test Results

Microbiological Parameters	MAC or IMAC (mg/l)	# of Samples	# of Detectable Results	Sampling Dates	Range	Exceedence?	Typical Source of Containment
Total Coliform, Treated (counts/100ml)	0	22	0	weekly	n/a	no	Indicate possible presence of fecal matter
Fecal Coliform, Treated (counts/100 ml)	0	22	0	weekly	n/a	no	Definite indicator of fecal contamination
HPC, Treated (Hetrotrophic Plate Count) (count/100 ml)	500	22	0	weekly	n/a	no	Indicator of adverse water quality
Total Coliform, Dist. (counts/100 ml)	0	35	0	weekly	n/a	no	Indicate possible presence of fecal matter
Fecal Coliform, Dist. (counts/100 ml)	0	35	0	weekly	n/a	no	Definite indicator of fecal contamination
HPC, Dist. (Hetrotrophic Plate Count) (counts/100 ml)	500	35	8	weekly	0 - 466	no	Indicator of adverse water quality

Parameters related to Microbiological Quality	MAC or IMAC (mg/l)	# of Samples	# of Detectable Results	Sampling Dates	Range	Exceedence?	Typical Source of Containment
Turbidity (NTU)	1	Continuous daily	180	01/01-03/31	0.04 - 1.7	yes	Turbidity is a measure of particles in water
Free Chlorine -- Treated (mg/l)	-	Continuous daily	180	01/01-03/31	0.50 - 2.2	no	Chlorine added for disinfection
Total Chlorine - Treated (mg/l)	-	Continuous daily	180	01/01-03/31	1.0 - 2.4	no	
Free Chlorine- Dist. (min 0.05 mg/l & max. 4.0 mg/l)	-	35	35	01/01-03/31	0.5 - 1.9	no	0.05 mg/l required in the distribution system
Total Chlorine - Dist. (mg/l)	-	35	35	01/01-03/31	1.1 - 2.2	no	
Inorganic Parameters (mg/l)	MAC or IMAC (mg/l)	# of Samples	# of Detectable Results	Sampling Dates	Range	Exceedence?	Typical Source of Contaminant
Lead - Distribution	0.01	0	0				Lead may leach from plumbing fixtures
Nitrate	10	2	1	02/21	0.1	no	Natural component of water
Nitrite	1	2	0	02/21	nd	no	
Arsenic	0.03	0					
Barium	1	0					
Boron	5	0					
Cadmium	0.005	0					
Chromium (Total)	0.05	0					
Cyanide (Total)	0.2	0					
Selenium	0.01	0					
Uranium	0.1	0					
Mercury	0.001	0					
Volatile Organics (mg/l)	MAC or IMAC (mg/l)	# of Samples	# of Detectable Results	Sampling Dates	Range	Exceedence?	Typical Source of Contaminant
Trihalomethanes - Dist	0.1	1	1	02/21	0.009	no	Based on running four quarter avg.
Benzene	0.005	2	0	02/21	nd	no	
Carbon Tetrachloride	0.005	2	0	02/21	nd	no	

QUARTERLY REPORT ON DRINKING WATER QUALITY

January - March 2001, St. Isidore Waterworks (Waterworks No. 220003573)

Dichloromethane (Methylene chloride)	0.05	2	0	02/21	nd	no	
1,2 - Dichlorobenzene	0.2	2	0	02/21	nd	no	
1,4 - Dichlorobenzene	0.005	2	0	02/21	nd	no	
1,2 - Dichloroethane	0.005	2	0	02/21	nd	no	
1,1 - Dichloroethylene	0.014	2	0	02/21	nd	no	
Ethylbenzene	0.0024	2	0	02/21	nd	no	
Monochlorobenzene (Chlorobenzene)	0.08	2	0	02/21	nd	no	
Tetrachloroethylene	0.03	2	0	02/21	nd	no	
Toluene	0.0024	2	0	02/21	nd	no	
Trichloroethylene	0.05	2	0	02/21	nd	no	
Vinyl chloride	0.002	2	0	02/21	nd	no	
Xylene	0.3	2	0	02/21	nd	no	
Bromodichloromethane	n/a	2	1	02/21	0.0004	n/a	
Bromoform	n/a	2	0	02/21	nd	n/a	
Chloroform	n/a	2	0	02/21	nd	n/a	
Dibromochloromethane	n/a	2	0	02/21	nd	n/a	

Pesticides & PCB (mg/L)	MAC or IMAC (mg/l)	# of Samples	# of Detectable Results	Sampling Dates	Range	Exceedence?	Typical Source of Contaminant
Alachlor	0.005	2	0	02/21	nd	no	
Aldicarb	0.009	2	0	02/21	nd	no	
Aldrin+Dieldrin	0.007	2	0	02/21	nd	no	
Atrazine	0.005	2	0	02/21	nd	no	
Azinphos-methyl (Guthion)	0.02	2	0	02/21	nd	no	
Bendiocarb	0.04	2	0	02/21	nd	no	
Benzo(a)pyrene	0.00001	0					
Bromoxynil	0.005	2	0	02/21	nd	no	
Carbaryl	0.09	2	0	02/21	nd	no	
Carbofuran	0.09	2	0	02/21	nd	no	
Chlordane	0.007	2	0	02/21	nd	no	
Chlorpyrifus	0.09	2	0	02/21	nd	no	
Cyanazine	0.01	2	0	02/21	nd	no	
Diazinon	0.02	2	0	02/21	nd	no	
Dicamba	0.12	2	0	02/21	nd	no	
2,4 Dichlorophenol	0.9	2	0	02/21	nd	no	
DDT + Metabolites	0.03	2	0	02/21	nd	no	
2,4 - Dichlorophenoxy acid (2,4 -D)	0.1	2	0	02/21	nd	no	
Diclofop-methyl	0.009	2	0	02/21	nd	no	
Dimethoate	0.02	2	0	02/21	nd	no	
Dinoseb	0.01	2	0	02/21	nd	no	
Dioxin and Furan	0.000000015	0					Results are in ppq. IMAC is in mg/l
Diquat	0.07	2	0	02/21	nd	no	
Diuron	0.15	2	0	02/21	nd	no	
Glyphosate	0.28	2	0	02/21	nd	no	
Heptachlor + Heptachlor epoxide	0.003	2	0	02/21	nd	no	
Lindane	0.004	2	0	02/21	nd	no	
Malathion	0.19	2	0	02/21	nd	no	
Methane	n/a	0					Aesthetic objective
Methoxychlor	0.9	2	0	02/21	nd	no	
Metolachlor	0.05	2	0	02/21	nd	no	
Metolachlor	0.08	0					
Metribuzin (Sencor)	0.08	2	0	02/21	nd	no	
NTA	0.4	0					
NDMA	0.000009	0					Recorded values are

QUARTERLY REPORT ON DRINKING WATER QUALITY

January - March 2001, St. Isidore Waterworks (Waterworks No. 220003573)

Paraquat	0.01	2	0	02/21	nd	no	
Parathion	0.05	2	0	02/21	nd	no	
Pentachlorophenol	0.06	2	0	02/21	nd	no	
Phorate	0.002	2	0	02/21	nd	no	
Picloram	0.19	2	0	02/21	nd	no	
Polychlorinated Biphenyls (PCB's)	0.003	2	0	02/21	nd	no	
Prometryne	0.001	2	0	02/21	nd	no	
Simazine	0.01	2	0	02/21	nd	no	
Temephos	0.28	2	0	02/21	nd	no	
Terbufos	0.001	2	0	02/21	nd	no	
2,3,4,6 Tetrachlorophenol	0.1	2	0	02/21	nd	no	
Trallate	0.23	2	0	02/21	nd	no	
2,4,5 - trichlorophenoxy acetic acid	0.28	2	0	02/21	nd	no	
Trifluralin	0.045	2	0		nd	no	
2,4,6-Trichlorophenol	0.002	2	0		nd	no	

Note: nd is non detectable or less than the detectable limit

QUARTERLY REPORT ON DRINKING WATER QUALITY

April - June 2001, St. Isidore Waterworks (Waterworks No. 220003573)

St. Isidore Water Quality Test Results

Microbiological Parameters	MAC or IMAC (mg/l)	# of Samples	# of Detectable Results	Sampling Dates	Range	Exceedence?	Typical Source of Containment
Total Coliform, Treated (counts/100ml)	0	26	0	weekly	n/a	no	Indicate possible presence of fecal matter
Fecal Coliform, Treated (counts/100 ml)	0	26	0	weekly	n/a	no	Definite indicator of fecal contamination
HPC, Treated (Hetrotrophic Plate Count) (count/100 ml)	500	26	2	weekly	0 - 10	no	Indicator of adverse water quality
Total Coliform, Dist. (counts/100 ml)	0	39	0	weekly	n/a	no	Indicate possible presence of fecal matter
Fecal Coliform, Dist. (counts/100 ml)	0	39	0	weekly	n/a	no	Definite indicator of fecal contamination
HPC, Dist. (Hetrotrophic Plate Count) (counts/100 ml)	500	39	22	weekly	0 - 400	no	Indicator of adverse water quality
Parameters related to Microbiological Quality	MAC or IMAC (mg/l)	# of Samples	# of Detectable Results	Sampling Dates	Range	Exceedence?	Typical Source of Containment
Turbidity (NTU)	1	Continuous	182	04/01-06/30	0.10 - 0.35	no	Turbidity is a measure of particles in water
Free Chlorine - Treated (mg/l)	-	Continuous	182	04/01-06/30	0.25 - 2.2	no	Chlorine added for disinfection
Total Chlorine - Treated (mg/l)	-	Continuous	182	04/01-06/30	0.6 - 2.4	no	
Free Chlorine- Dist. (min 0.05 mg/l & max. 4.0 mg/l)	-	39	39	04/01-06/30	0.2 - 1.8	no	0.05 mg/l required in the distribution system
Total Chlorine - Dist. (mg/l)	-	39	39	04/01-06/30	0.4 - 2.2	no	
Inorganic Parameters (mg/l)	MAC or IMAC (mg/l)	# of Samples	# of Detectable Results	Sampling Dates	Range	Exceedence?	Typical Source of Contaminant
Lead - Distribution	0.01	0					Lead may leach from plumbing fixtures
Nitrate	10	2	1	04/08	nd-0.1	no	Natural component of water
Nitrite	1	2	0	04/08	nd	no	
Arsenic	0.03	0					
Barium	1	0					
Boron	5	0					
Cadmium	0.005	0					
Chromium (Total)	0.05	0					
Cyanide (Total)	0.2	0					
Selenium	0.01	0					
Uranium	0.1	0					
Mercury	0.001	0					
Volatile Organics (mg/l)	MAC or IMAC (mg/l)	# of Samples	# of Detectable Results	Sampling Dates	Range	Exceedence?	Typical Source of Contaminant
Trihalomethanes - Dist	0.1	1	1	04/08	0.064	no	Based on running four quarter avg.
Benzene	0.005	2	0	04/08	nd	no	
Carbon Tetrachloride	0.005	2	0	04/08	nd	no	
Dichloromethane (Methylene chloride)	0.05	2	0	04/08	nd	no	

QUARTERLY REPORT ON DRINKING WATER QUALITY

April - June 2001, St. Isidore Waterworks (Waterworks No. 220003573)

1,2 - Dichlorobenzene	0.2	2	0	04/08	nd	no	
1,4 - Dichlorobenzene	0.005	2	0	04/08	nd	no	
1,2 - Dichloroethane	0.005	2	0	04/08	nd	no	
1,1 - Dichloroethylene	0.014	2	0	04/08	nd	no	
Ethylbenzene	0.0024	2	0	04/08	nd	no	
Monochlorobenzene (Chlorobenzene)	0.08	2	0	04/08	nd	no	
Tetrachloroethylene	0.03	2	0	04/08	nd	no	
Toluene	0.0024	2	0	04/08	nd	no	
Trichloroethylene	0.05	2	0	04/08	nd	no	
Vinyl chloride	0.002	2	0	04/08	nd	no	
Xylene	0.3	2	0	04/08	nd	no	
Bromodichloromethane	n/a	2	1	04/08	nd-0.0160	n/a	
Bromoform	n/a	2	1	04/08	nd-0.0048	n/a	
Chloroform	n/a	2	1	04/08	nd-0.0130	n/a	
Dibromochloromethane	n/a	2	1	04/08	nd-0.0210	n/a	
Pesticides & PCB (mg/L)	MAC or IMAC (mg/l)	# of Samples	# of Detectable Results	Sampling Dates	Range	Exceedence?	Typical Source of Contaminant
Alachlor	0.005	2	0	04/08	nd	no	
Aldicarb	0.009	2	0	04/08	nd	no	
Aldrin+Dieldrin	0.007	2	0	04/08	nd	no	
Atrazine	0.005	2	0	04/08	nd	no	
Azinphos-methyl (Guthion)	0.02	2	0	04/08	nd	no	
Bendiocarb	0.04	2	0	04/08	nd	no	
Benzo(a)pyrene	0.00001	0		04/08			
Bromoxynil	0.005	2	0	04/08	nd	no	
Carbaryl	0.09	2	0	04/08	nd	no	
Carbofuran	0.09	2	0	04/08	nd	no	
Chlordane	0.007	2	0	04/08	nd	no	
Chlorpyrifos	0.09	2	0	04/08	nd	no	
Cyanazine	0.01	2	0	04/08	nd	no	
Diazinon	0.02	2	0	04/08	nd	no	
Dicamba	0.12	2	0	04/08	nd	no	
2,4 Dichlorophenol	0.9	2	0	04/08	nd	no	
DDT + Metabolites	0.03	2	0	04/08	nd	no	
2,4 - Dichlorophenoxy acid (2,4 -D)	0.1	2	0	04/08	nd	no	
Diclofop-methyl	0.009	2	0	04/08	nd	no	
Dimethoate	0.02	2	0	04/08	nd	no	
Dinoseb	0.01	2	0	04/08	nd	no	
Dioxin and Furan	0.000000015	0		04/08			Results are in ppq. IMAC is in mg/l
Diquat	0.07	2	0	04/08	nd	no	
Diuron	0.15	2	0	04/08	nd	no	
Glyphosate	0.28	2	0	04/08	nd	no	
Heptachlor + Heptachlor epoxide	0.003	2	0	04/08	nd	no	
Lindane	0.004	2	0	04/08	nd	no	
Malathion	0.19	2	0	04/08	nd	no	
Methane	n/a	0		04/08			Aesthetic objective
Methoxychlor	0.9	2	0	04/08	nd	no	
Metolachlor	0.05	2	0	04/08	nd	no	
Metolachlor	0.08	0		04/08			
Metribuzin (Sencor)	0.08	2	0	04/08	nd	no	
NTA	0.4	0		04/08			
NDMA	0.000009	0		04/08			Recorded values are
Paraquat	0.01	2	0	04/08	nd	no	
Parathion	0.05	2	0	04/08	nd	no	
Pentachlorophenol	0.06	2	0	04/08	nd	no	
Phorate	0.002	2	0	04/08	nd	no	

QUARTERLY REPORT ON DRINKING WATER QUALITY

April - June 2001, St. Isidore Waterworks (Waterworks No. 220003573)

Picloram	0.19	2	0	04/08	nd	no	
Polychlorinated Biphenyls (PCB's)	0.003	2	0	04/08	nd	no	
Prometryne	0.001	2	0	04/08	nd	no	
Simazine	0.01	2	0	04/08	nd	no	
Temephos	0.28	2	0	04/08	nd	no	
Terbufos	0.001	2	0	04/08	nd	no	
2,3,4,6 Tetrachlorophenol	0.1	2	0	04/08	nd	no	
Traillate	0.23	2	0	04/08	nd	no	
2,4,5 - trichlorophenoxy acedic acid	0.28	2	0	04/08	nd	no	
Trifluralin	0.045	2	0	04/08	nd	no	
2,4,6-Trichlorophenol	0.002	2	0	04/08	nd	no	

Note: nd is non detectable or less than the detectable limit

QUARTERLY REPORT ON DRINKING WATER QUALITY

July - September 2001, St. Isidore Waterworks (Waterworks No. 220003573)

St. Isidore Water Quality Test Results

Microbiological Parameters	MAC or IMAC (mg/l)	# of Samples	# of Detectable Results	Sampling Dates	Range	Exceedence?	Typical Source of Containment
Total Coliform, Treated (counts/100ml)	0	27	1	weekly	13	yes	Indicate possible presence of fecal matter
Fecal Coliform, Treated (counts/100 ml)	0	27	0	weekly	n/a	no	Definite indicator of fecal contamination
HPC, Treated (Heterotrophic Plate Count) (count/100 ml)	500	27	6	weekly	0 - 12	no	Indicator of adverse water quality
Clostridium Perfringens, Treated (count/Litre)	0	3	0	monthly	0	no	Indicate possible presence of cryptosporidium bacteria
Total Coliform, Dist. (counts/100 ml)	0	40	0	weekly	n/a	no	Indicate possible presence of fecal matter
Fecal Coliform, Dist. (counts/100 ml)	0	40	0	weekly	n/a	no	Definite indicator of fecal contamination
HPC, Dist. (Heterotrophic Plate Count) (counts/100 ml)	500	40	18	weekly	0 - 496	no	Indicator of adverse water quality

Parameters related to Microbiological Quality	MAC or IMAC (mg/l)	# of Samples	# of Detectable Results	Sampling Dates	Range	Exceedence?	Typical Source of Containment
Turbidity (NTU)	1	Continuous	184	07/01-09/30	0.08 - 0.26	no	Turbidity is a measure of particles in water
Free Chlorine - Treated (mg/l)	-	Continuous	184	07/01-09/30	0.30 - 2.2	no	Chlorine added for disinfection
Total Chlorine - Treated (mg/l)	-	Continuous	184	07/01-09/30	0.73 - 2.5	no	
Free Chlorine - Dist. (min 0.05 mg/l & max. 4.0 mg/l)	-	40	40	07/01-09/30	0.2 - 1.1	no	0.05 mg/l required in the distribution system
Total Chlorine - Dist. (mg/l)	-	40	40	07/01-09/30	0.50 - 2.0	no	
Inorganic Parameters (mg/l)	MAC or IMAC (mg/l)	# of Samples	# of Detectable Results	Sampling Dates	Range	Exceedence?	Typical Source of Contaminant
Lead - Distribution	0.01	1	1	08/07	0.0006		Lead may leach from plumbing fixtures
Nitrate	10	2	1	08/07	nd-0.1	no	Natural component of water
Nitrite	1	2	0	08/07	nd	no	
Arsenic	0.03	1	0	08/07	nd	no	
Barium	1	2	2	08/07	0.155-0.360	no	
Boron	5	2	2	08/07	0.15 - 0.36	no	
Cadmium	0.005	2	0	08/07	nd	no	
Chromium (Total)	0.05	2	0	08/07	nd	no	
Copper	1	2	1	08/07	nd - 0.05	no	
Fluoride	1.5	3	3	08/07	0.4 - 0.6	no	
Iron	0.3	3	3	08/07	0.02 - 0.20	no	
Lead	0.01	2	1	08/07	nd - 0.0005	no	
Manganese	0.05	3	3	08/07	nd - 0.02	no	
Mercury	0.001	2	0	08/07	nd	no	
Selenium	0.01	2	0	08/07	nd	no	
Uranium	0.1	2	0	08/07	nd	no	

QUARTERLY REPORT ON DRINKING WATER QUALITY

July - September 2001, St. Isidore Waterworks (Waterworks No. 220003573)

Sodium	200	3	3	08/07	70.2 - 145	no	
Volatile Organics (mg/l)	MAC or IMAC (mg/l)	# of Samples	# of Detectable Results	Sampling Dates	Range	Exceedence?	Typical Source of Contaminant
Trihalomethanes - Dist	0.1	1	1	08/07	0.020	no	Based on running four quarter avg.
Trihalomethanes - Treated	0.1	2	1	08/07	nd - 0.003	no	
Benzene	0.005	2	0	08/07	nd	no	
Carbon Tetrachloride	0.005	2	0	08/07	nd	no	
Dichloromethane (Methylene chloride)	0.05	2	0	08/07	nd	no	
1,2 - Dichlorobenzene	0.2	2	0	08/07	nd	no	
1,4 - Dichlorobenzene	0.005	2	0	08/07	nd	no	
1,2 - Dichloroethane	0.005	2	0	08/07	nd	no	
1,1 - Dichloroethylene	0.014	2	0	08/07	nd	no	
Ethylbenzene	0.0024	2	0	08/07	nd	no	
Monochlorobenzene (Chlorobenzene)	0.08	2	0	08/07	nd	no	
Tetrachloroethylene	0.03	2	0	08/07	nd	no	
Toluene	0.0024	2	0	08/07	nd	no	
Trichloroethylene	0.05	2	0	08/07	nd	no	
Vinyl chloride	0.002	2	0	08/07	nd	no	
Xylene	0.3	2	0	08/07	nd	no	
Bromodichloromethane	n/a	2	0	08/07	nd	n/a	
Bromoform	n/a	2	0	08/07	nd	n/a	
Chloroform	n/a	2	1	08/07	nd-0.017	n/a	
Dibromochloromethane	n/a	2	0	08/07	nd	n/a	
Pesticides & PCB (mg/L)	MAC or IMAC (mg/l)	# of Samples	# of Detectable Results	Sampling Dates	Range	Exceedence?	Typical Source of Contaminant
Alachlor	0.005	2	0	08/07	nd	no	
Aldicarb	0.009	2	0	08/07	nd	no	
Aldrin+Dieldrin	0.007	2	0	08/07	nd	no	
Atrazine	0.005	2	0	08/07	nd	no	
Azinphos-methyl (Guthion)	0.02	2	0	08/07	nd	no	
Bendiocarb	0.04	2	0	08/07	nd	no	
Benzo(a)pyrene	0.00001	0					
Bromoxynil	0.005	2	0	08/07	nd	no	
Carbaryl	0.09	2	0	08/07	nd	no	
Carbofuran	0.09	2	0	08/07	nd	no	
Chlordane	0.007	2	0	08/07	nd	no	
Chlorpyrifos	0.09	2	0	08/07	nd	no	
Cyanazine	0.01	2	0	08/07	nd	no	
Diazinon	0.02	2	0	08/07	nd	no	
Dicamba	0.12	2	0	08/07	nd	no	
2,4 Dichlorophenol	0.9	2	0	08/07	nd	no	
DDT + Metabolites	0.03	2	0	08/07	nd	no	
2,4 - Dichlorophenoxy acid (2,4 -D)	0.1	2	0	08/07	nd	no	
Diclofop-methyl	0.009	2	0	08/07	nd	no	
Dimethoate	0.02	2	0	08/07	nd	no	
Dinoseb	0.01	2	0	08/07	nd	no	
Dioxin and Furan	0.000000015	0		08/07			Results are in ppq, IMAC is in mg/l
Diquat	0.07	2	0	08/07	nd	no	
Diuron	0.15	2	0	08/07	nd	no	
Glyphosate	0.28	2	0	08/07	nd	no	
Heptachlor + Heptachlor epoxide	0.003	2	0	08/07	nd	no	
Lindane	0.004	2	0	08/07	nd	no	

QUARTERLY REPORT ON DRINKING WATER QUALITY

July - September 2001, St. Isidore Waterworks (Waterworks No. 220003573)

Malathion	0.19	2	0	08/07	nd	no	
Methoxychlor	0.9	2	0	08/07	nd	no	
Metolachlor	0.05	2	0	08/07	nd	no	
Metribuzin (Sencor)	0.08	2	0	08/07	nd	no	
NTA	0.4	0					
NDMA	0.000009	0					Recorded values are
Paraquat	0.01	2	0	08/07	nd	no	
Parathion	0.05	2	0	08/07	nd	no	
Pentachlorophenol	0.06	2	0	08/07	nd	no	
Phorate	0.002	2	0	08/07	nd	no	
Picloram	0.19	2	0	08/07	nd	no	
Polychlorinated Biphenyls (PCB's)	0.003	2	0	08/07	nd	no	
Prometryne	0.001	2	0	08/07	nd	no	
Simazine	0.01	2	0	08/07	nd	no	
Temephos	0.28	2	0	08/07	nd	no	
Terbufos	0.001	2	0	08/07	nd	no	
2,3,4,6 Tetrachlorophenol	0.1	2	0	08/07	nd	no	
Trailate	0.23	2	0	08/07	nd	no	
2,4,5 - trichlorophenoxy acedie acid	0.28	2	0	08/07	nd	no	
Trifurallin	0.045	2	0	08/07	nd	no	
2,4,6-Trichlororphenol	0.002	2	0	08/07	nd	no	

Additional C of A Parameters	MAC or IMAC (mg/l)	# of Samples	# of Detectable Results	Sampling Dates	Range	Exceedence?	Typical Source of Contaminant
Chloride	250	1	1	08/07	78.1	no	Aesthetic Objective only
Hardness	80 - 100	1	1	08/07	154	n/a	Operational Objective only
Total Kjeldahl Nitrogen (TKN)		1	1	08/07	0.52	n/a	
Total Ammonia Nitrogen	10	1	1	08/07	0.58	no	
pH	6.5 - 8.5	1	1	08/07	8.36	no	Operational Objective only
Dissolved Organic Nitrogen	5	1	1	08/07	1.8	no	
Total Organic Carbon		1	1	08/07	1.9	n/a	
Colour	5	1	1	08/07	1	no	Aesthetic Objective only
Conductivity		1	1	08/07	831	n/a	

Note: nd is non detectable or less than the detectable limit

QUARTERLY REPORT ON DRINKING WATER QUALITY

October - December 2001, St. Isidore Waterworks (Waterworks No. 220003573)

St. Isidore Water Quality Test Results

Microbiological Parameters	MAC or IMAC (mg/l)	# of Samples	# of Detectable Results	Sampling Dates	Range	Exceedence?	Typical Source of Contaminant
Total Coliform, Treated (counts/100ml)	0	26	0	weekly	n/a	no	Indicate possible presence of fecal matter
Fecal Coliform, Treated (counts/100 ml)	0	26	0	weekly	n/a	no	Definite indicator of fecal contamination
HPC, Treated (Heterotrophic Plate Count) (count/100 ml)	500	26	2	weekly	0 - 4	no	Indicator of adverse water quality
Clostridium Perfringens, Treated (count/Litre)	0	6	0	monthly	0	no	Indicate possible presence of cryptosporidium bacteria
Total Coliform, Dist. (counts/100 ml)	0	39	0	weekly	n/a	no	Indicate possible presence of fecal matter
Fecal Coliform, Dist. (counts/100 ml)	0	39	0	weekly	n/a	no	Definite indicator of fecal contamination
HPC, Dist. (Heterotrophic Plate Count) (counts/100 ml)	500	39	10	weekly	0 - 48	no	Indicator of adverse water quality
Parameters related to Microbiological Quality	MAC or IMAC (mg/l)	# of Samples	# of Detectable Results	Sampling Dates	Range	Exceedence?	Typical Source of Contaminant
Turbidity (NTU)	1	Continuous	184	10/01-12/31	0.05 - 0.33	no	Turbidity is a measure of particles in water
Free Chlorine - Treated (mg/l)	-	Continuous	184	10/01-12/31	0.45 - 2.8	no	Chlorine added for disinfection
Total Chlorine - Treated (mg/l)	-	Continuous	184	10/01-12/31	0.75 - 3.6	no	
Free Chlorine - Dist. (min 0.05 mg/l & max. 4.0 mg/l)	-	39	39	10/01-12/31	0.22 - 1.8	no	0.05 mg/l required in the distribution system
Total Chlorine - Dist. (mg/l)	-	39	39	10/01-12/31	0.55 - 2.1	no	
Inorganic Parameters (mg/l)	MAC or IMAC (mg/l)	# of Samples	# of Detectable Results	Sampling Dates	Range	Exceedence?	Typical Source of Contaminant
Lead - Distribution	0.01	0					Lead may leach from plumbing fixtures
Nitrate	10	2	1	11/06	nd-0.2	no	Natural component of water
Nitrite	1	2					
Arsenic	0.03	0					
Barium	1	0					
Boron	5	0					
Cadmium	0.005	0					
Chromium (Total)	0.05	0					
Copper	1	0					
Fluoride	1.5	0					
Iron	0.3	0					
Lead	0.01	0					
Manganese	0.05	0					
Mercury	0.001	0					
Selenium	0.01	0					
Uranium	0.1	0					
Sodium	200	0					
Volatile Organics (mg/l)	MAC or	# of Samples	# of Detectable	Sampling Dates	Range	Exceedence?	Typical Source of Contaminant

QUARTERLY REPORT ON DRINKING WATER QUALITY

October - December 2001, St. Isidore Waterworks (Waterworks No. 220003573)

	IMAC (mg/l)		Results				
Trihalomethanes - Dist	0.1	1	1	11/06	0.140	no	Running four quarter average: 0.054 mg/l
Trihalomethanes - Treated	0.1	2	1	11/06	nd - 0.015	no	
Benzene	0.005	2	0	11/06	nd	no	
Carbon Tetrachloride	0.005	2	0	11/06	nd	no	
Dichloromethane (Methylene chloride)	0.05	2	0	11/06	nd	no	
1,2 - Dichlorobenzene	0.2	2	0	11/06	nd	no	
1,4 - Dichlorobenzene	0.005	2	0	11/06	nd	no	
1,2 - Dichloroethane	0.005	2	0	11/06	nd	no	
1,1 - Dichloroethylene	0.014	2	0	11/06	nd	no	
Ethylbenzene	0.0024	2	0	11/06	nd	no	
Monochlorobenzene (Chlorobenzene)	0.08	2	0	11/06	nd	no	
Tetrachloroethylene	0.03	2	0	11/06	nd	no	
Toluene	0.0024	2	0	11/06	nd	no	
Trichloroethylene	0.05	2	0	11/06	nd	no	
Vinyl chloride	0.002	2	0	11/06	nd	no	
Xylene	0.3	2	0	11/06	nd	no	
Bromodichloromethane	n/a	2	1	11/06	nd-0.0053	n/a	
Bromoform	n/a	2	0	11/06	nd	n/a	
Chloroform	n/a	2	1	11/06	nd-0.052	n/a	
Dibromochloromethane	n/a	2	1	11/06	nd-0.0047	n/a	
Pesticides & PCB (mg/L)	MAC or IMAC (mg/l)	# of Samples	# of Detectable Results	Sampling Dates	Range	Exceedence?	Typical Source of Contaminant
Alachlor	0.005	2	0	11/06	nd	no	
Aldicarb	0.009	2	0	11/06	nd	no	
Aldrin+Dieldrin	0.007	2	0	11/06	nd	no	
Atrazine	0.005	2	0	11/06	nd	no	
Azinphos-methyl (Guthion)	0.02	2	0	11/06	nd	no	
Bendiocarb	0.04	2	0	11/06	nd	no	
Benzo(a)pyrene	0.00001	0					
Bromoxynil	0.005	2	0	11/06	nd	no	
Carbaryl	0.09	2	0	11/06	nd	no	
Carbofuran	0.09	2	0	11/06	nd	no	
Chlordane	0.007	2	0	11/06	nd	no	
Chlorpyrifos	0.09	2	0	11/06	nd	no	
Cyanazine	0.01	2	0	11/06	nd	no	
Diazinon	0.02	2	0	11/06	nd	no	
Dicamba	0.12	2	0	11/06	nd	no	
2,4 Dichlorophenol	0.9	2	0	11/06	nd	no	
DDT + Metabolites	0.03	2	0	11/06	nd	no	
2,4 - Dichlorophenoxy acid (2,4 -D)	0.1	2	0	11/06	nd	no	
Dicofolop-methyl	0.009	2	0	11/06	nd	no	
Dimethoate	0.02	2	0	11/06	nd	no	
Dinoseb	0.01	2	0	11/06	nd	no	
Dioxin and Furan	0.000000015	0					Results are in ppq, IMAC is in mg/l
Diquat	0.07	2	0	11/06	nd	no	
Diuron	0.15	2	0	11/06	nd	no	
Glyphosate	0.28	2	0	11/06	nd	no	
Heptachlor + Heptachlor epoxide	0.003	2	0	11/06	nd	no	
Lindane	0.004	2	0	11/06	nd	no	
Malathion	0.19	2	0	11/06	nd	no	
Methoxychlor	0.9	2	0	11/06	nd	no	
Metolachlor	0.05	2	0	11/06	nd	no	

QUARTERLY REPORT ON DRINKING WATER QUALITY

October - December 2001, St. Isidore Waterworks (Waterworks No. 220003573)

Metribuzin (Sencor)	0.08	2	0	11/06	nd	no	
NTA	0.4	0					
NDMA	0.000009	0					Recorded values are
Paraquat	0.01	2	0	11/06	nd	no	
Parathion	0.05	2	0	11/06	nd	no	
Pentachlorophenol	0.06	2	0	11/06	nd	no	
Phorate	0.002	2	0	11/06	nd	no	
Picloram	0.19	2	0	11/06	nd	no	
Polychlorinated Biphenyls (PCB's)	0.003	2	0	11/06	nd	no	
Prometryne	0.001	2	0	11/06	nd	no	
Simazine	0.01	2	0	11/06	nd	no	
Temephos	0.28	2	0	11/06	nd	no	
Terbufos	0.001	2	0	11/06	nd	no	
2,3,4,6 Tetrachlorophenol	0.1	2	0	11/06	nd	no	
Trailate	0.23	2	0	11/06	nd	no	
2,4,5 - trichlorophenoxy acedic acid	0.28	2	0	11/06	nd	no	
Trifurallin	0.045	2	0	11/06	nd	no	
2,4,6-Trichlororphenol	0.002	2	0	11/06	nd	no	
Additional C of A Parameters	MAC or IMAC (mg/l)	# of Samples	# of Detectable Results	Sampling Dates	Range	Exceedence?	Typical Source of Contaminant
Chloride	250	1	1	11/06	82.9	no	Aesthetic Objective only
Hardness	80 - 100	1	1	11/06	139	n/a	Operational Objective only
Total Kjeldahl Nitrogen (TKN)		1	1	11/06	0.25	n/a	
Total Ammonia Nitrogen	10	0					
Dissolved Organic Nitrogen	5	1	1	11/06	1.4	no	
Total Organic Carbon		1	1	11/06	1.8	n/a	
Conductivity		1	1	11/06	818	n/a	

Note: nd is non detectable or less than the detectable limit

APPENDIX III

2001 Tabulation of Analytical Results



Ontario Clean Water Agency
Monthly Process Data Report

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Municipality: St-Isidore de Prescott
Project: [6915] - St. Isidore de Prescott Water Treatment Plant
Project Number: 7153691936
Work Number: 220003573
Description: A Five Well Facility System

Year: 2001
Water Source/Receiver: Groundwater
Design Avg Day Flow(m³): 907

Parameter	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Summary
Raw Water/ODWS-Table 1													
Turbidity: Average (NTU)													
Avg:	.393	.173	.315	.416	.305	.237	.235	.246	.245	.195	.188	.205	.263
Min:	.12	.12	.3	.34	.16	.19	.2	.22	.23	.16	.16	.18	.12
Max:	.54	.24	.33	.46	.48	.28	.26	.27	.26	.22	.24	.22	.54
Fluoride Conc. (mg/L)													
Avg:	1.	.617	.6	.572	.55	.593	.608	.58	.55	.588	.558	.538	.613
Min:	.6	.6	.6	.5	.5	.5	.6	.55	.5	.55	.5	.5	.5
Max:	1.2	.66	.6	.66	.6	.65	.65	.6	.6	.6	.6	.55	1.2
Raw Water/ODWS-Table 4													
Temperature (C)													
Avg:	7.875	7.767	8.8	7.98	7.567	8.514	10.783	11.4	11.525	10.675	10.4	9.55	9.403
Min:	7.5	6.8	8.6	7.6	7.1	8.1	10.1	10.9	11.1	10.	9.8	9.2	6.8
Max:	8.	8.7	9.	8.8	8.1	9.2	11.1	12.1	11.8	11.1	11.2	9.8	12.1
pH: Avg.													
Avg:	7.3	8.	7.85	7.54	7.817	7.85	7.878	7.98	8.075	7.838	7.833	7.588	7.796
Min:	7.1	7.7	7.8	7.4	7.5	7.65	7.5	7.95	8.	7.65	7.6	7.3	7.1
Max:	7.6	8.6	7.9	7.8	8.	8.	8.1	8.	8.15	8.	8.	7.85	8.6
Colour (TCU)													
Avg:	1.5				3.833	3.571	4.	4.	4.	3.75	3.429	3.5	3.509
Min:	.				3.	3.	3.	4.	3.	3.	3.	3.	.
Max:	3.				5.	4.	5.	4.	5.	4.	4.	4.	5.
Sulphide (mg/L)													
Avg:	1.06	1.217	.	1.033	.975	1.16	1.297	1.22	1.283	1.35	1.344	1.2	1.095
Min:	.8	1.1	.	1.	.85	1.	1.2	1.	1.25	1.2	1.2	1.1	.
Max:	1.8	1.4	.	1.1	1.	1.3	1.5	1.35	1.3	1.5	1.5	1.25	1.8
Treated Water/ODWS-Table 1													
Turbidity (NTU)													
Avg:	.597	.201	.112	.114	.151	.123	.128	.147	.119	.141	.111	.144	.174
Min:	.15	.09	.1	.1	.11	.11	.11	.12	.11	.1	.09	.12	.09
Max:	1.4	.44	.12	.13	.24	.13	.15	.26	.14	.23	.15	.16	1.4



Ontario Clean Water Agency
Monthly Process Data Report

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Municipality: St-Isidore de Prescott
Project: [6915] - St. Isidore de Prescott Water Treatment Plant
Project Number: 7153691936
Work Number: 220003573
Description: A Five Well Facility System

Year: 2001
Water Source/Receiver: Groundwater
Design Avg Day Flow(m³): 907

Parameter	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Summary
Treated Water/ODWS-Table 1													
Fluoride Conc. Avg.(mg/L)													
Avg:	.8	.572	.55	.583	.585	.571	.585	.543	.567	.588	.58	.543	.589
Min:	.6	.5	.5	.5	.5	.5	.55	.4	.55	.55	.51	.5	.4
Max:	1.2	.62	.6	.7	.65	.6	.6	.8	.6	.6	.7	.55	1.2
Nitrate-N (mg/L)													
Avg:		.1			.2			.1			.1		.125
Min:		.1			.2			.1			.1		.1
Max:		.1			.2			.1			.1		.2
Nitrite-N (mg/L)													
Avg:		-1.			.1			-1.			-1.		-.725
Min:		-1.			.1			-1.			-1.		-1.
Max:		-1.			.1			-1.			-1.		.1
Total Trihalomethane (ug/L)													
Avg:		4.			55.			3.			140.		50.5
Min:		4.			55.			3.			140.		3.
Max:		4.			55.			3.			140.		140.
Treated Water/ODWS-Table 4													
Temperature (C)													
Avg:	8.267	8.243	8.863	8.214	7.622	8.744	10.64	11.38	11.778	11.01	10.39	9.942	9.591
Min:	7.7	7.2	8.6	7.8	7.	7.9	9.6	11.1	11.4	10.	9.8	9.3	7.
Max:	8.8	9.4	9.2	9.4	9.3	9.8	11.4	11.8	12.	11.7	11.1	10.6	12.
pH: Avg.													
Avg:	7.817	7.938	7.775	7.814	7.939	7.889	8.055	8.015	8.08	7.826	7.789	7.745	7.89
Min:	7.7	7.4	7.3	7.7	7.8	7.8	7.9	7.8	8.	7.75	7.6	7.6	7.3
Max:	8.	8.75	7.9	7.9	8.39	8.	8.4	8.25	8.1	8.	8.45	7.9	8.75
Colour (TCU)													
Avg:	4.	1.	1.5	3.25	1.3	1.778	2.	2.2	2.	2.1	2.111	2.286	2.127
Min:	4.	1.	1.	2.	.	1.	1.	2.	2.	.	1.	2.	.
Max:	4.	1.	2.	4.	2.	2.	3.	3.	2.	3.	3.	3.	4.



Municipality: St-Isidore de Prescott
Project: [6915] - St Isidore de Prescott Water Treatment Plant
Project Number: 7153691936
Work Number: 220003573
Description: A Five Well Facility System

Ontario Clean Water Agency Monthly Process Data Report

Page 3 of 5
3/12/2002
d_monthlyprocessrep

Year: 2001
Water Source/Receiver: Groundwater
Design Avg Day Flow(m³): 907

Parameter	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Summary
Treated Water/ODWS-Table 4													
Sulphide (mg/L)													
Avg:													
Min:													
Max:													
Chloride (mg/L)													
Avg:		91.1						78.1			82.9		75.625
Min:		91.1						78.1			82.9		50.4
Max:		91.1						78.1			82.9		91.1
Treated Water/ODWS-Table 1													
Manganese (ug/L)													
Avg:		.01			.01		.022	-1.	.02		-1.	.018	-1.202
Min:		.01			.01		.022	-1.	.02		-1.	.018	-1.
Max:		.01			.01		.022	-1.	.02		.019	.018	.022
Treated Water/ODWS-Table 4													
Sodium (mg/L)													
Avg:		131.			123.			130.			155.		134.75
Min:		131.			123.			130.			155.		123.
Max:		131.			123.			130.			155.		155.
Total hardness (as CaCO3) (mg/L)													
Avg:		168.			184.			154.			139.		161.25
Min:		168.			184.			154.			139.		139.
Max:		168.			184.			154.			139.		184.
Treated Water/ODWS-Table 1													
Iron (ug/L)													
Avg:		.02			.02			20.			-1.		4.76
Min:		.02			.02			20.			-1.		-1.
Max:		.02			.02			20.			-1.		20.
Treated Water/ODWS-Table 4													
Dissolved Organic Carbon (DOC) (mg/L)													
Avg:		1.5			1.3			1.8			1.4		1.5



Municipality: St-Isidore de Prescott
Project: [6915] - St. Isidore de Prescott Water Treatment Plant
Project Number: 7153691936
Work Number: 220003573
Description: A Five Well Facility System

Ontario Clean Water Agency Monthly Process Data Report

Page 4 of 5
3/12/2002
d_monthlyprocessrep

Year: 2001
Water Source/Receiver: Groundwater
Design Avg Day Flow(m³): 907

Parameter	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Summary
Treated Water/ODWS-Table 4													
Dissolved Organic Carbon (DOC) (mg/L)													
Min:		1.5			1.3			1.8			1.4		1.3
Max:		1.5			1.3			1.8			1.4		1.8
Treated Water/Other													
Total Organic Carbon (mg/L)													
Avg:		1.9			1.7			1.9			1.8		1.825
Min:		1.9			1.7			1.9			1.8		1.7
Max:		1.9			1.7			1.9			1.8		1.9
Total kjeldahl Nitrogen (mg/L)													
Avg:		.55			.14			.52			.25		.365
Min:		.55			.14			.52			.25		.14
Max:		.55			.14			.52			.25		.55
Conductivity (uohm/m)													
Avg:								831.			818.		824.5
Min:								831.			818.		818.
Max:								831.			818.		831.
Ammonia - NH3 (mg/L)													
Avg:		.5			.01			.58			.18		.318
Min:		.5			.01			.58			.18		.01
Max:		.5			.01			.58			.18		.58
Treated Water/Microbiological Table A													
TC Samples (#)													
Sum:	5.	4.	4.	4.	5.	4.	5.	4.	4.	4.	4.	4.	51.
TC Safe (#)													
Sum:	5.	4.	4.	4.	5.	4.	5.	4.	4.	5.	4.	4.	52.
FC Samples (#)													
Sum:	5.	4.	4.	4.	5.	4.	5.	4.	4.	5.	4.	4.	52.
FC Safe (#)													
Sum:	5.	4.	4.	4.	5.	4.	5.	4.	4.	5.	4.	4.	52.



Ontario Clean Water Agency
Monthly Process Data Report

Page 5 of 5
3/12/2002
d_monthlyprocessrep

Municipality: St-Isidore de Prescott
Project: [6915] - St. Isidore de Prescott Water Treatment Plant
Project Number: 7153691936
Work Number: 220003573
Description: A Five Well Facility System

Year: 2001
Water Source/Receiver: Groundwater
Design Avg Day Flow(m³): 907

<u>Parameter</u>	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>	<u>Summary</u>
Treated Water/Microbiological Table A													
HPC or MF Samples (#)													
Sum:	5.	4.	4.	4.	5.	4.	5.	4.	4.	5.	4.	4.	52.
HPC of MF Safe (#)													
Sum:	5.	4.	4.	4.	5.	4.	5.	4.	4.	5.	4.	4.	52.

APPENDIX “IV”

2001 C of A Annual & Quarterly Sampling Analysis

Certificate of Analysis

Client:

Ontario Clean Water Agency
P.O.Box 70, 209 Limoges Rd.
Limoges, ON
K0A 2M0

Attention: Daniel Lafleche

Report:

210001080

Project:

St-Isidore WTP

Date Sampled:

February 21, 2001

Date Received:

February 22, 2001

Date Printed:

March 05, 2001

Matrix:

Drinking Water

Parameter	Unit	MDL	Sample Identification				
			Raw Water Well #1	Raw Water Well #2	Raw Water Well #3	Raw Water Well #5	Treated Water WTP
Chloride	mg/L	0.5	28.3	56.4	94.5	91.1	54.8
Fluoride	mg/L	0.1	0.4	0.8	0.3	0.4	0.6
Nitrite- Nitrogen	mg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrate- Nitrogen	mg/L	0.1	<0.1	<0.1	<0.1	<0.1	0.1
Hardness as CaCO3	mg/L	1	317	30	265	260	168
Turbidity	NTU	0.1	0.3	<0.1	0.3	0.5	0.1
Total Kjeldahl Nitrogen	mg/L	0.05	0.78	0.65	0.75	1.25	0.55
Total Ammonia Nitrogen	mg/L	0.01	0.59	0.53	0.62	1.05	0.50
Iron	mg/L	0.02	0.87	0.12	0.38	0.18	<0.02
Manganese	mg/L	0.01	0.05	<0.01	<0.01	0.02	<0.01
Sodium	mg/L	0.2	52.5	196	71.0	77.8	131
pH	units	0.10	8.71	8.81	8.57	8.61	8.75
Dissolved Organic Carbon	mg/L	0.2	2.0	1.7	0.5	0.7	1.5
Total Organic Carbon	mg/L	0.3	2.2	2.1	0.9	1.0	1.9
Colour	TCU	1	1	<1	<1	<1	<1



Certificate of Analysis

Client:
Ontario Clean Water Agency
P.O.Box 70, 209 Limoges Rd.
Limoges, ON
K0A 2M0

Attention: Daniel Lafleche

Report: 210001080
Project: St-Isidore WTP
Date Sampled: February 21, 2001
Date Received: February 22, 2001
Date Printed: March 05, 2001
Matrix: Drinking Water

Parameter	Unit	MDL	Sample Identification				
			Raw Water Well #1	Raw Water Well #2	Raw Water Well #3	Raw Water Well #5	Treated Water WTP
Conductivity	µMho/cm	1	744	798	731	792	792

Dave Becker, Lab Director

Certificate of Analysis

Client:
Ontario Clean Water Agency
P.O.Box 70, 209 Limoges Rd.
Limoges, ON
N0A 2M0

Attention: Daniel Lafleche

Report: 210002945
Project: St. Isidore WTP
Date Sampled: May 8, 2001
Date Received: May 9, 2001
Date Printed: May 22, 2001
Matrix: Drinking Water

Parameter	Unit	MDL	Sample Identification				
			Raw Water Well #1	Raw Water Well #2	Raw Water Well #3	Raw Water Well #5	Treated Water at WTP
Chloride	mg/L	0.5	16.4	57.2	89.6	93.0	60.4
Fluoride	mg/L	0.1	0.4	0.9	0.4	0.4	0.6
Nitrite- Nitrogen	mg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrate- Nitrogen	mg/L	0.1	<0.1	<0.1	<0.1	<0.1	0.1
Hardness as CaCO3	mg/L	1	320	28	260	294	184
Turbidity	NTU	0.1	2.3	0.4	0.7	2.0	0.2
Total Kjeldahl Nitrogen	mg/L	0.05	0.68	0.64	0.68	1.20	0.14
Total Ammonia Nitrogen	mg/L	0.01	0.53	0.50	0.63	1.05	<0.01
Copper	mg/L	0.02	0.39	0.09	0.34	0.50	<0.02
Manganese	mg/L	0.01	0.04	<0.01	<0.01	0.03	<0.01
Sodium	mg/L	0.2	52.3	186	69.0	79.8	123
	units	0.10	7.88	8.70	8.19	8.09	8.39
Dissolved Organic Carbon	mg/L	0.2	1.6	1.5	0.5	0.6	1.3
Total Organic Carbon	mg/L	0.3	1.9	1.9	0.9	1.0	1.7
Chlorine	TCU	1	3	5	1	1	<1



Certificate of Analysis

Client:
Ontario Clean Water Agency
P.O.Box 70, 209 Limoges Rd.
Limoges, ON
N0A 2M0

Report: **210002945**
Project: St. Isidore WTP
Date Sampled: May 8, 2001
Date Received: May 9, 2001
Date Printed: May 22, 2001
Matrix: Drinking Water

Attention: Daniel Lafleche

Parameter	Unit	MDL	Sample Identification				
			Raw Water Well #1	Raw Water Well #2	Raw Water Well #3	Raw Water Well #5	Treated Water at WTP
Conductivity	µMho/cm	1	680	788	699	779	766

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Environmental Laboratory

Certificate of Analysis

Client:
 Ontario Clean Water Agency
 P.O.Box 70, 209 Limoges Rd.
 Limoges, ON
 K0A 2M0

Attention: J.P. Gelinas

Report: **210005496**
 Project: St Isidore WTP
 Date Sampled: August 7, 2001
 Date Received: August 8, 2001
 Date Printed: August 20, 2001
 Matrix: Drinking Water

Parameter	Unit	MDL	Sample Identification				
			Raw Water Well #1	Raw Water Well #2	Raw Water Well #3	Raw Water Well #5	Treated Water
Chloride	mg/L	0.5	96.4	54.3	89.0	81.7	78.1
Fluoride	mg/L	0.1	0.5	0.8	0.3	0.3	0.6
Nitrite- Nitrogen	mg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrate- Nitrogen	mg/L	0.1	<0.1	<0.1	<0.1	<0.1	0.1
Hardness as CaCO3	mg/L	1	217	29	247	282	154
Turbidity	NTU	0.1	0.6	0.4	0.7	0.2	0.3
Total Kjeldahl Nitrogen	mg/L	0.05	0.87	0.61	0.64	1.27	0.52
Total Ammonia Nitrogen	mg/L	0.01	0.81	0.51	0.67	1.27	0.58
Iron	mg/L	0.02	0.16	0.12	0.30	0.18	0.02
Manganese	mg/L	0.01	0.02	<0.01	<0.01	0.02	<0.01
Sodium	mg/L	0.2	150	184	69.5	71.0	145
pH	units	0.10	8.24	8.44	8.16	8.18	8.36
Dissolved Organic Carbon	mg/L	0.2	2.5	1.9	0.9	0.8	1.8
Total Organic Carbon	mg/L	0.3	2.5	1.9	0.9	0.9	1.9
Colour	TCU	1	6	4	2	1	1

Caduceon Enterprises Inc.
Environmental Laboratory

Certificate of Analysis

Client:
Ontario Clean Water Agency
P.O.Box 70, 209 Limoges Rd.
Limoges, ON
K0A 2M0

Attention: J.P. Gelin

Report: 210005496
Project: St Isidore WTP
Date Sampled: August 7, 2001
Date Received: August 8, 2001
Date Printed: August 20, 2001
Matrix: Drinking Water

Parameter	Unit	MDL	Sample Identification				
			Raw Water Well #1	Raw Water Well #2	Raw Water Well #3	Raw Water Well #5	Treated Water
Conductivity	µMho/cm	1	950	786	715	776	831

Caduceon Enterprises Inc. Environmental Laboratory

Client:
Ontario Clean Water Agency
P.O.Box 70, 209 Limoges Rd.
Limoges, ON
K0A 2M0

Attention: J.P. Gelinas

Certificate of Analysis

Report: 210007925
Project: St-Isidore WTP
Date Sampled: November 6, 2001
Date Received: November 7, 2001
Date Printed: November 26, 2001
Matrix: Drinking Water

Parameter	Unit	MDL	Sample Identification				
			Raw Water Well #1	Raw Water Well #2	Raw Water Well #3	Raw Water Well #5	TRT H2O W.T.P
Chloride	mg/L	0.5	103	53.3	112	88.8	82.9
Fluoride	mg/L	0.1	0.5	0.8	0.3	0.3	0.7
Nitrite- Nitrogen	mg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrate- Nitrogen	mg/L	0.1	<0.1	<0.1	<0.1	<0.1	0.1
Hardness as CaCO3	mg/L	1	209	31	225	273	139
Turbidity	NTU	0.1	0.4	0.6	2.8	0.7	0.3
Total Kjeldahl Nitrogen	mg/L	0.05	0.88	0.60	0.68	1.10	0.25
Total Ammonia Nitrogen	mg/L	0.01	0.81	0.53	0.72	1.19	0.18
Iron	mg/L	0.02	0.09	0.06	0.38	0.14	<0.02
Manganese	mg/L	0.01	0.02	<0.01	0.01	0.02	<0.01
Sodium	mg/L	0.2	154	191	73.7	77.8	155
pH	units	0.10	8.17	8.66	8.19	8.19	8.45
Dissolved Organic Carbon	mg/L	0.2	2.4	1.4	0.6	0.6	1.4
Total Organic Carbon	mg/L	0.3	2.6	1.7	0.7	0.8	1.8
Colour	TCU	1	6	3	<1	<1	1

Caduceon Enterprises Inc. Environmental Laboratory

Certificate of Analysis

Client:

Ontario Clean Water Agency
P.O.Box 70, 209 Limoges Rd.
Limoges, ON
K0A 2M0

Attention: J.P. Gelin

Report:**210007925****Project:**

St-Isidore WTP

Date Sampled:

November 6, 2001

Date Received:

November 7, 2001

Date Printed:

November 26, 2001

Matrix:

Drinking Water

Parameter	Unit	MDL	Sample Identification				
			Raw Water Well #1	Raw Water Well #2	Raw Water Well #3	Raw Water Well #5	TRT H2O W.T.P
Conductivity	µMho/cm	1	951	1360	2080	1900	818

Caduceon Enterprises Inc.
Environmental Laboratory

Certificate of Analysis

Client:

Ontario Clean Water Agency
P.O.Box 70, 209 Limoges Rd.
Limoges, ON
K0A 2M0

Report:

210009026

Project:

St. Isidore -22000357

Date Sampled:

December 13, 2001

Date Received:

December 14, 2001

Date Printed:

January 29, 2002

Attention: J.P. Gelinas

Matrix:

Drinking Water

Parameter	Unit	MDL	Sample Identification	
			Raw Water , Well #1	Raw Water , Well #2
Fluoride	mg/L	0.1	<0.1	0.6
Nitrite- Nitrogen	mg/L	0.1	<0.1	<0.1
Nitrate- Nitrogen	mg/L	0.1	<0.1	<0.1
Turbidity	NTU	0.1	1.8	0.3
Mercury	mg/L	0.0001	<0.0001	<0.0001
Cadmium	mg/L	0.0001	<0.0001	<0.0001
Lead	mg/L	0.0002	<0.0002	<0.0002
Arsenic	mg/L	0.001	<0.001	0.001
Selenium	mg/L	0.001	<0.001	<0.001
Total Cyanide	mg/L	0.005	<0.005	<0.005
Total Uranium	mg/L	0.001	0.001	0.006
Boron	mg/L	0.01	0.15	0.46
Barium	mg/L	0.005	0.775	0.150
Chromium	mg/L	0.01	<0.01	<0.01
Benzo (a) pyrene	mg/L	0.01	<0.01	<0.01
2,3,4,6-Tetrachlorophenol	µg/L	2	<2	<2
2,4,5-T	µg/L	20	<20	<20
2,4,6-Trichlorophenol	µg/L	0.2	<0.2	<0.2
2,4-D	µg/L	10	<10	<10
2,4-Dichlorophenol	µg/L	2	<2	<2
Alachlor	µg/L	1	<1	<1
Aldicarb	µg/L	5	<5	<5
drin	µg/L	0.1	<0.1	<0.1

Caduceon Enterprises Inc. Environmental Laboratory

2378 Holly Lane, Ottawa, Ontario, K1V 7P1, Canada

Tel: (613)526-0123, Fax: (613)526-1244

Caduceon Enterprises Inc.
Environmental Laboratory

Certificate of Analysis

Client:
 Ontario Clean Water Agency
 P.O.Box 70, 209 Limoges Rd.
 Limoges, ON
 K0A 2M0

Report: **210009026**
 Project: St. Isidore -22000357
 Date Sampled: December 13, 2001
 Date Received: December 14, 2001
 Date Printed: January 29, 2002

Attention: J.P. Gelinas

Matrix: Drinking Water

Parameter	Unit	MDL	Sample Identification	
			Raw Water , Well #1	Raw Water , Well #2
Atrazine	µg/L	3	<3	<3
Bendiocarb	µg/L	5	<5	<5
Bromoxynil	µg/L	0.5	<0.5	<0.5
Carbaryl	µg/L	5	<5	<5
Carbofuran	µg/L	10	<10	<10
Chlordane	µg/L	0.5	<0.5	<0.5
Chlorpyrifos (Dursban)	µg/L	5	<5	<5
Cyanazine (Bladex)	µg/L	1	<1	<1
DDT	µg/L	1	<1	<1
Diazinon	µg/L	2	<2	<2
Dicamba	µg/L	10	<10	<10
Diclofop-methyl	µg/L	0.5	<0.5	<0.5
Dieldrin	µg/L	0.1	<0.1	<0.1
Dimethoate	µg/L	2	<2	<2
Dinoseb	µg/L	1	<1	<1
Diuron	µg/L	10	<10	<10
Guthion (Azinphos-methyl)	µg/L	2	<2	<2
Heptachlor	µg/L	0.2	<0.2	<0.2
Heptachlor epoxide	µg/L	0.2	<0.2	<0.2
Lindane	µg/L	0.4	<0.4	<0.4
Malathion	µg/L	10	<10	<10
Methoxychlor	µg/L	10	<10	<10
Permethrin	µg/L	5	<5	<5

Caduceon Enterprises Inc. Environmental Laboratory

2378 Holly Lane, Ottawa, Ontario, K1V 7P1, Canada

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Caduceon Enterprises Inc.
Environmental Laboratory

Certificate of Analysis

Client:
Ontario Clean Water Agency
P.O.Box 70, 209 Limoges Rd.
Limoges, ON
K0A 2M0

Report: **210009026**
Project: St. Isidore -22000357
Date Sampled: December 13, 2001
Date Received: December 14, 2001
Date Printed: January 29, 2002
Matrix: Drinking Water

Attention: J.P. Gelinas

Parameter	Unit	MDL	Sample Identification	
			Raw Water , Well #1	Raw Water , Well #2
Metribuzin (Sencor)	µg/L	5	<5	<5
Parathion	µg/L	5	<5	<5
Pentachlorophenol	µg/L	0.2	<0.2	<0.2
Phorate	µg/L	0.5	<0.5	<0.5
Picloram	µg/L	10	<10	<10
Prometryn	µg/L	0.2	<0.2	<0.2
Simazine	µg/L	1	<1	<1
Temephos	µg/L	20	<20	<20
Terbufos	µg/L	1	<1	<1
Total PCB	µg/L	0.2	<0.2	<0.2
Triallate	µg/L	20	<20	<20
Trifluralin	µg/L	2	<2	<2
Glyphosate	µg/L	25	<25	<25
1,1-Dichloroethylene	mg/L	0.0001	<0.0001	<0.0001
1,2-Dichlorobenzene	mg/L	0.0001	<0.0001	<0.0001
1,2-Dichloroethane	mg/L	0.0001	<0.0001	<0.0001
1,4-Dichlorobenzene	mg/L	0.0002	<0.0002	<0.0002
Benzene	mg/L	0.0005	<0.0005	<0.0005
Bromodichloromethane	mg/L	0.0001	<0.0001	<0.0001
Bromoform	mg/L	0.0001	<0.0001	<0.0001
Carbon Tetrachloride	mg/L	0.0002	<0.0002	<0.0002
Chlorobenzene	mg/L	0.0002	<0.0002	<0.0002
Chloroform	mg/L	0.0003	<0.0003	<0.0003

Caduceon Enterprises Inc. Environmental Laboratory

2378 Holly Lane, Ottawa, Ontario, K1V 7P1, Canada

Tel: (613)526-0123, Fax: (613)526-1244

Caduceon Enterprises Inc.
Environmental Laboratory

Certificate of Analysis

Client:
 Ontario Clean Water Agency
 P.O.Box 70, 209 Limoges Rd.
 Limoges, ON
 K0A 2M0

Report: **210009026**
 Project: St.Isidore -22000357
 Date Sampled: December 13, 2001
 Date Received: December 14, 2001
 Date Printed: January 29, 2002
 Matrix: Drinking Water

Attention: J.P. Gelinas

Parameter	Unit	MDL	Sample Identification	
			Raw Water , Well #1	Raw Water , Well #2
Dibromochloromethane	mg/L	0.0001	<0.0001	<0.0001
Methylene Chloride	mg/L	0.003	<0.003	<0.003
Tetrachloroethylene	mg/L	0.0002	<0.0002	<0.0002
Total Trihalomethanes	mg/L	0.001	<0.001	<0.001
Trichloroethylene	mg/L	0.0001	<0.0001	<0.0001
Vinyl Chloride	mg/L	0.0003	<0.0003	<0.0003
Diquat	µg/L	5	<5	<5
Paraquat	µg/L	1	<1	<1
1234678-HpCDD (Dioxins)	ppq	1	<1	<1
1234678-HpCDF (Furans)	ppq	1	<1	<1
1234789-HpCDF (Furans)	ppq	1	<1	<1
123478-HxCDD (Dioxins)	ppq	1	<1	<1
123478-HxCDF (Furans)	ppq	1	<1	<1
123678-HxCDD (Dioxins)	ppq	1	<1	<1
123678-HxCDF (Furans)	ppq	1	<1	<1
123789-HxCDD (Dioxins)	ppq	1	<1	<1
123789-HxCDF (Furans)	ppq	1	<1	<1
12378-PeCDD (Dioxins)	ppq	1	<1	<1
12378-PeCDF (Furans)	ppq	1	<1	<1
234678-HxCDF (Furans)	ppq	1	<1	<1
23478-PeCDF (Furans)	ppq	1	<1	<1
2378-TCDD (Dioxins)	ppq	1	<1	<1
178-TCDF (Furans)	ppq	1	<1	<1

Caduceon Enterprises Inc. Environmental Laboratory

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Environmental Laboratory

Certificate of Analysis

Client:
Ontario Clean Water Agency
P.O.Box 70, 209 Limoges Rd.
Limoges, ON
K0A 2M0

Report: **210009026**
Project: St.Isidore -22000357
Date Sampled: December 13, 2001
Date Received: December 14, 2001
Date Printed: January 29, 2002
Matrix: Drinking Water

Attention: J.P. Gelinas

Parameter	Unit	MDL	Sample Identification	
			Raw Water , Well #1	Raw Water , Well #2
OCDD (Dioxins)	ppq	2	<2	<2
OCDF (Furans)	ppq	1	<1	<1
Total HpCDDs (Dioxins)	ppq	1	<1	<1
Total HpCDFs (Furans)	ppq	1	<1	<1
Total HxCDDs (Dioxins)	ppq	1	<1	<1
Total HxCDFs (Furans)	ppq	1	<1	<1
Total PeCDDs (Dioxins)	ppq	1	<1	<1
Total PeCDFs (Furans)	ppq	1	<1	<1
Total TCDDs (Dioxins)	ppq	1	<1	<1
Total TCDFs (Furans)	ppq	1	<1	<1
Toxic Equivalent (TEQ)	ppq		0	0
NTA	mg/L	0.05	<0.05	<0.05
N-Nitrosodimethylamine	µg/L	0.0004	<0.0004	<0.0004

Caduceon Enterprises Inc.
Environmental Laboratory

Certificate of Analysis

Client:
Ontario Clean Water Agency
P.O.Box 70, 209 Limoges Rd.
Limoges, ON
K0A 2M0

Report: **210009014**
Project: WTP- St. Isidore
Date Sampled: December 13, 2001
Date Received: December 14, 2001
Date Printed: January 31, 2002

Attention: J.P. Gelinas

Matrix: Drinking Water

Parameter	Unit	MDL	Sample Identification	
			Raw Water Well #3	Raw Water Well #5
Fluoride	mg/L	0.1	0.3	0.3
Nitrite- Nitrogen	mg/L	0.1	<0.1	<0.1
Nitrate- Nitrogen	mg/L	0.1	<0.1	<0.1
Turbidity	NTU	0.1	0.3	3.2
Mercury	mg/L	0.0001	<0.0001	<0.0001
Cadmium	mg/L	0.0001	<0.0001	<0.0001
Lead	mg/L	0.0002	<0.0002	<0.0002
Arsenic	mg/L	0.001	<0.001	<0.001
Selenium	mg/L	0.001	<0.001	<0.001
Total Cyanide	mg/L	0.005	<0.005	<0.005
Total Uranium	mg/L	0.001	<0.001	<0.001
Boron	mg/L	0.01	0.21	0.14
Barium	mg/L	0.005	0.525	0.165
Chromium	mg/L	0.01	<0.01	<0.01
Benzo (a) pyrene	mg/L	0.01	<0.01	<0.01
2,3,4,6-Tetrachlorophenol	µg/L	2	<2	<2
2,4,5-T	µg/L	20	<20	<20
2,4,6-Trichlorophenol	µg/L	0.2	<0.2	<0.2
2,4-D	µg/L	10	<10	<10
2,4-Dichlorophenol	µg/L	2	<2	<2
Alachlor	µg/L	1	<1	<1
Aldicarb	µg/L	5	<5	<5
drin	µg/L	0.1	<0.1	<0.1

Caduceon Enterprises Inc. Environmental Laboratory

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Caduceon Enterprises Inc.
Environmental Laboratory

Certificate of Analysis

Client:

Ontario Clean Water Agency
P.O.Box 70, 209 Limoges Rd.
Limoges, ON
K0A 2M0

Attention: J.P. Gelinas

Report:

210009014

Project:

WTP- St. Isidore

Date Sampled:

December 13, 2001

Date Received:

December 14, 2001

Date Printed:

January 31, 2002

Matrix:

Drinking Water

Parameter	Unit	MDL	Sample Identification	
			Raw Water Well #3	Raw Water Well #5
Atrazine	µg/L	3	<3	<3
Bendiocarb	µg/L	5	<5	<5
Bromoxynil	µg/L	0.5	<0.5	<0.5
Carbaryl	µg/L	5	<5	<5
Carbofuran	µg/L	10	<10	<10
Chlordane	µg/L	0.5	<0.5	<0.5
Chlorpyrifos (Dursban)	µg/L	5	<5	<5
Cyanazine (Bladex)	µg/L	1	<1	<1
DT	µg/L	1	<1	<1
Diazinon	µg/L	2	<2	<2
Dicamba	µg/L	10	<10	<10
Diclofop-methyl	µg/L	0.5	<0.5	<0.5
Dieldrin	µg/L	0.1	<0.1	<0.1
Dimethoate	µg/L	2	<2	<2
Dinoseb	µg/L	1	<1	<1
Diuron	µg/L	10	<10	<10
Guthion (Azinphos-methyl)	µg/L	2	<2	<2
Heptachlor	µg/L	0.2	<0.2	<0.2
Heptachlor epoxide	µg/L	0.2	<0.2	<0.2
Lindane	µg/L	0.4	<0.4	<0.4
Malathion	µg/L	10	<10	<10
Methoxychlor	µg/L	10	<10	<10
Metolachlor	µg/L	5	<5	<5

Caduceon Enterprises Inc. Environmental Laboratory

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Michael Ziebell, General Manager

Caduceon Enterprises Inc.
Environmental Laboratory

Certificate of Analysis

Client:
Ontario Clean Water Agency
P.O.Box 70, 209 Limoges Rd.
Limoges, ON
K0A 2M0

Attention: J.P. Gelinas

Report: **210009014**
Project: WTP- St. Isidore
Date Sampled: December 13, 2001
Date Received: December 14, 2001
Date Printed: January 31, 2002
Matrix: Drinking Water

Parameter	Unit	MDL	Sample Identification	
			Raw Water Well #3	Raw Water Well #5
Metribuzin (Sencor)	µg/L	5	<5	<5
Parathion	µg/L	5	<5	<5
Pentachlorophenol	µg/L	0.2	<0.2	<0.2
Phorate	µg/L	0.5	<0.5	<0.5
Picloram	µg/L	10	<10	<10
Prometryn	µg/L	0.2	<0.2	<0.2
Simazine	µg/L	1	<1	<1
Temephos	µg/L	20	<20	<20
Terbufos	µg/L	1	<1	<1
Total PCB	µg/L	0.2	<0.2	<0.2
Triallate	µg/L	20	<20	<20
Trifluralin	µg/L	2	<2	<2
Glyphosate	µg/L	25	<25	<25
1,1-Dichloroethylene	mg/L	0.0001	<0.0001	<0.0001
1,2-Dichlorobenzene	mg/L	0.0001	<0.0001	<0.0001
1,2-Dichloroethane	mg/L	0.0001	<0.0001	<0.0001
1,4-Dichlorobenzene	mg/L	0.0002	<0.0002	<0.0002
Benzene	mg/L	0.0005	<0.0005	<0.0005
Bromodichloromethane	mg/L	0.0001	<0.0001	<0.0001
Bromoform	mg/L	0.0001	<0.0001	<0.0001
Carbon Tetrachloride	mg/L	0.0002	<0.0002	<0.0002
Chlorobenzene	mg/L	0.0002	<0.0002	<0.0002
Chloroform	mg/L	0.0003	<0.0003	<0.0003

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Certificate of Analysis

Client:
 Ontario Clean Water Agency
 P.O.Box 70, 209 Limoges Rd.
 Limoges, ON
 K0A 2M0

Attention: J.P. Gelinas

Report: **210009014**
 Project: WTP- St. Isidore
 Date Sampled: December 13, 2001
 Date Received: December 14, 2001
 Date Printed: January 31, 2002
 Matrix: Drinking Water

Parameter	Unit	MDL	Sample Identification	
			Raw Water Well #3	Raw Water Well #5
Dibromochloromethane	mg/L	0.0001	<0.0001	<0.0001
Methylene Chloride	mg/L	0.003	<0.003	<0.003
Tetrachloroethylene	mg/L	0.0002	<0.0002	<0.0002
Total Trihalomethanes	mg/L	0.001	<0.001	<0.001
Trichloroethylene	mg/L	0.0001	<0.0001	<0.0001
Vinyl Chloride	mg/L	0.0003	<0.0003	<0.0003
Diquat	µg/L	5	<5	<5
Paraquat	µg/L	1	<1	<1
234678-HpCDD (Dioxins)	ppq	1	<1	<1
1234678-HpCDF (Furans)	ppq	1	<1	<1
1234789-HpCDF (Furans)	ppq	1	<1	<1
123478-HxCDD (Dioxins)	ppq	1	<1	<1
123478-HxCDF (Furans)	ppq	1	<1	<1
123678-HxCDD (Dioxins)	ppq	1	<1	<1
123678-HxCDF (Furans)	ppq	1	<1	<1
123789-HxCDD (Dioxins)	ppq	1	<1	<1
123789-HxCDF (Furans)	ppq	1	<1	<1
12378-PeCDD (Dioxins)	ppq	1	<1	<1
12378-PeCDF (Furans)	ppq	1	<1	<1
234678-HxCDF (Furans)	ppq	1	<1	<1
23478-PeCDF (Furans)	ppq	1	<1	<1
2378-TCDD (Dioxins)	ppq	1	<1	<1
2378-TCDF (Furans)	ppq	1	<1	<1

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Caduceon Enterprises Inc.
Environmental Laboratory

Certificate of Analysis

Client:
Ontario Clean Water Agency
P.O.Box 70, 209 Limoges Rd.
Limoges, ON
K0A 2M0

Report: **210009014**
Project: WTP- St. Isidore
Date Sampled: December 13, 2001
Date Received: December 14, 2001
Date Printed: January 31, 2002
Matrix: Drinking Water

Attention: J.P. Gelinas

Parameter	Unit	MDL	Sample Identification	
			Raw Water Well #3	Raw Water Well #5
OCDD (Dioxins)	ppq	2		<2
OCDD (Dioxins)	ppq	3	<3	
OCDF (Furans)	ppq	1	<1	<1
Total HpCDDs (Dioxins)	ppq	1	<1	<1
Total HpCDFs (Furans)	ppq	1	<1	<1
Total HxCDDs (Dioxins)	ppq	1	<1	<1
Total HxCDFs (Furans)	ppq	1	<1	<1
Total PeCDDs (Dioxins)	ppq	1	<1	<1
Total PeCDFs (Furans)	ppq	1	<1	<1
Total TCDDs (Dioxins)	ppq	1	<1	<1
Total TCDFs (Furans)	ppq	1	<1	<1
Toxic Equivalent (TEQ)	ppq		0	0
NTA	mg/L	0.05	<0.05	<0.05
N-Nitrosodimethylamine	µg/L	0.0004	<0.0004	<0.0004

This is a correction certificate and supercedes all previous reports of this number. Turbidity on well # 3 was corrected.

Caduceon Enterprises Inc.
Environmental Laboratory

Certificate of Analysis

Client:
Ontario Clean Water Agency
P.O.Box 70, 209 Limoges Rd.
Limoges, ON
K0A 2M0

Report: **210009025**
Project: WW# 220003573
Date Sampled: December 13, 2001
Date Received: December 14, 2001
Date Printed: February 19, 2002
Matrix: Drinking Water

Attention: J.P. Gelinas

ODWS Table 1

Parameter	Unit	MDL	Sample Identification
			TRT Water - WTP (St.Isidore)
Fluoride	mg/L	0.1	0.3
Nitrite- Nitrogen	mg/L	0.1	<0.1
Nitrate- Nitrogen	mg/L	0.1	<0.1
Turbidity	NTU	0.1	0.2
Mercury	mg/L	0.0001	<0.0001
Cadmium	mg/L	0.0001	<0.0001
Lead	mg/L	0.0002	<0.0002
Arsenic	mg/L	0.001	<0.001
Selenium	mg/L	0.001	<0.001
Total Cyanide	mg/L	0.005	<0.005
Total Uranium	mg/L	0.001	0.003
Boron	mg/L	0.01	0.30
Barium	mg/L	0.005	0.490
Chromium	mg/L	0.01	<0.01
2,3,4,6-Tetrachlorophenol	µg/L	0.5	<0.5
2,4,5-T	µg/L	1	<1
2,4,6-Trichlorophenol	µg/L	0.5	<0.5
2,4-D	µg/L	1	<1
2,4-Dichlorophenol	µg/L	0.5	<0.5
Alachlor	µg/L	0.5	<0.5
Aldicarb	µg/L	5	<5
Aldrin	µg/L	0.02	<0.02
Atrazine	µg/L	0.5	<0.5

Caduceon Enterprises Inc. Environmental Laboratory

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Caduceon Enterprises Inc.
Environmental Laboratory

Certificate of Analysis

Client:
Ontario Clean Water Agency
P.O.Box 70, 209 Limoges Rd.
Limoges, ON
K0A 2M0

Attention: J.P. Gelinas

Report: **210009025**
Project: WW# 220003573
Date Sampled: December 13, 2001
Date Received: December 14, 2001
Date Printed: February 19, 2002
Matrix: Drinking Water

Parameter	Unit	MDL	Sample Identification
			TRT Water - WTP (St.Isidore)
Bendiocarb	µg/L	2	<2
Bromoxynil	µg/L	0.5	<0.5
Carbaryl	µg/L	5	<5
Carbofuran	µg/L	5	<5
Chlordane	µg/L	0.7	<0.7
Chlorpyrifos (Dursban)	µg/L	1	<1
Cyanazine (Bladex)	µg/L	1	<1
DDT	µg/L	3	<3
Diazinon	µg/L	1	<1
Dicamba	µg/L	1	<1
Diclofop-methyl	µg/L	0.9	<0.9
Dieldrin	µg/L	0.05	<0.05
Dimethoate	µg/L	3	<2.5
Dinoseb	µg/L	1	<1
Diuron	µg/L	10	<10
Guthion (Azinphos-methyl)	µg/L	2	<2
Heptachlor	µg/L	0.1	<0.1
Heptachlor epoxide	µg/L	0.2	<0.2
Lindane	µg/L	0.4	<0.4
Malathion	µg/L	5	<5
Methoxychlor	µg/L	90	<90
Metolachlor	µg/L	0.5	<0.5
Metribuzin (Sencor)	µg/L	5	<5

Caduceon Enterprises Inc. Environmental Laboratory

2378 Holly Lane, Orlawa, Ontario, K1V 7P1, Canada

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Caduceon Enterprises Inc.
Environmental Laboratory

Certificate of Analysis

Client:
 Ontario Clean Water Agency
 P.O.Box 70, 209 Limoges Rd.
 Limoges, ON
 KOA 2M0

Attention: J.P. Gelinas

Report: **210009025**
 Project: WW# 220003573
 Date Sampled: December 13, 2001
 Date Received: December 14, 2001
 Date Printed: February 19, 2002
 Matrix: Drinking Water

Parameter	Unit	MDL	Sample Identification
			TRT Water - WTP (St.Isidore)
Parathion	µg/L	1	<1
Pentachlorophenol	µg/L	0.5	<0.5
Phorate	µg/L	0.5	<0.5
Picloram	µg/L	5	<5
Prometryn	µg/L	0.3	<0.25
Simazine	µg/L	1	<1
Temephos	µg/L	10	<10
Terbufos	µg/L	0.7	<0.7
Total PCB	µg/L	0.3	<0.3
Triallate	µg/L	1	<1
Trifluralin	µg/L	1	<1
Glyphosate	µg/L	10	<10
1,1-Dichloroethylene	mg/L	0.0001	<0.0001
1,2-Dichlorobenzene	mg/L	0.0001	<0.0001
1,2-Dichloroethane	mg/L	0.0001	<0.0001
1,4-Dichlorobenzene	mg/L	0.0002	<0.0002
Benzene	mg/L	0.0005	<0.0005
Bromodichloromethane	mg/L	0.0001	0.0425
Bromoform	mg/L	0.0001	0.0115
Carbon Tetrachloride	mg/L	0.0002	<0.0002
Chlorobenzene	mg/L	0.0002	<0.0002
Chloroform	mg/L	0.0003	0.0400
Dibromochloromethane	mg/L	0.0001	0.0476

Caduceon Enterprises Inc.
Environmental Laboratory

Certificate of Analysis

Client:
 Ontario Clean Water Agency
 P.O.Box 70, 209 Limoges Rd.
 Limoges, ON
 K0A 2M0

Report: **210009025**
 Project: WW# 220003573
 Date Sampled: December 13, 2001
 Date Received: December 14, 2001
 Date Printed: February 19, 2002
 Matrix: Drinking Water

Attention: J.P. Gelinas

Parameter	Unit	MDL	Sample Identification
			TRT Water - WTP (St.Isidore)
Methylene Chloride	mg/L	0.003	<0.003
Tetrachloroethylene	mg/L	0.0002	<0.0002
Total Trihalomethanes	mg/L	0.001	0.142
Trichloroethylene	mg/L	0.0001	<0.0001
Vinyl Chloride	mg/L	0.0003	<0.0003
Diquat	µg/L	7	<7
Paraquat	µg/L	1	<1
1234678-HpCDD (Dioxins)	ppq	1	<1
1234678-HpCDF (Furans)	ppq	1	<1
1234789-HpCDF (Furans)	ppq	1	<1
123478-HxCDD (Dioxins)	ppq	1	<1
123478-HxCDF (Furans)	ppq	1	<1
123678-HxCDD (Dioxins)	ppq	1	<1
123678-HxCDF (Furans)	ppq	1	<1
123789-HxCDD (Dioxins)	ppq	1	<1
123789-HxCDF (Furans)	ppq	1	<1
12378-PeCDD (Dioxins)	ppq	1	<1
12378-PeCDF (Furans)	ppq	1	<1
234678-HxCDF (Furans)	ppq	1	<1
23478-PeCDF (Furans)	ppq	1	<1
2378-TCDD (Dioxins)	ppq	1	<1
2378-TCDF (Furans)	ppq	1	<1
OCDD (Dioxins)	ppq	2	<2

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Limoges, ON
K0A 2M0

Report: **210009025**
Project: WW# 220003573
Date Sampled: December 13, 2001
Date Received: December 14, 2001
Date Printed: February 19, 2002
Matrix: Drinking Water

Attention: J.P. Gelinas

Parameter	Unit	MDL	Sample Identification
			TRT Water - WTP (St.Isidore)
OCDF (Furans)	ppq	1	<1
Total HpCDDs (Dioxins)	ppq	1	<1
Total HpCDFs (Furans)	ppq	1	<1
Total HxCDDs (Dioxins)	ppq	1	<1
Total HxCDFs (Furans)	ppq	1	<1
Total PeCDDs (Dioxins)	ppq	1	<1
Total PeCDFs (Furans)	ppq	1	<1
Total TCDDs (Dioxins)	ppq	1	<1
Total TCDFs (Furans)	ppq	1	<1
Toxic Equivalent (TEQ)	ppq		0
NTA	mg/L	0.05	<0.05
N-Nitrosodimethylamine	µg/L	0.0009	<0.0009

APPENDIX IV
2001 Annual Chemical Usage

[illegible]

TRANSMITTAL LETTER

Golder Associates Ltd.

1796 Courtwood Crescent
Ottawa, ON, Canada K2C 2B5



Telephone: 613-224-5864
Fax Access: 613-224-9928

TO: Nation Municipality
958 West Route 500
Casselman, Ontario
K0A 1M0

DATE: January 29, 2002

JOB NO.: 001-2772-1



ATTENTION: Mary McCuaig

Sent by: ☐ Mail ☐ Under Separate Cover
☒ Courier ☒ Enclosed
☐ Hand Carried ☐ Picked Up

Quantity	Item	Description
2	Reports	2001 Groundwater Monitoring Program Communal Sewage System Nation Municipality Fournier, Ontario
Remarks:		

If enclosures are not as noted, kindly notify us.

ACKNOWLEDGEMENT REQUIRED: Yes ☐ (Please mail/fax to Golder Associates)
No ☒

SENDER: M.A. Venhuis, M.Sc.
EMAIL: mvenhuis@golder.com

Per: ml

