

Drinking-Water Systems Regulation O. Reg. 170/03

Part III Form 2

Section 11. ANNUAL REPORT.

Drinking-Water System Number:

220006026

Drinking-Water System Name:

Killaloe Water Treatment Plant including Distribution System

Drinking-Water System Owner:

Township of Killaloe, Hagarty and Richards

Drinking-Water System Category:

Large, Municipal, Residential,

Period being reported:

January 1, 2004 to December 31, 2004

Complete if your Category is Large Municipal Residential or Small Municipal Residential

Does your Drinking-Water System serve more than 10,000 people? Yes [] No [X]

Is your annual report available to the public at no charge on a web site on the Internet? Yes [X] No []

Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.

Township of Killaloe, Hagarty & Richards
1 John St.
Killaloe, ON
K0J 2A0

Complete for all other Categories.

Number of Designated Facilities served:

Did you provide a copy of your annual report to all Designated Facilities you serve? Yes [] No []

Number of Interested Authorities you report to:

Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility? Yes [] No []

List Drinking-Water Systems, which receive all of their drinking water from your system:

No other system receives water from this system

Did you provide a copy of your annual report to all Drinking-Water System owners that are connected to you and to whom you provide all of its drinking water?

Yes [X] No []

Indicate how you notified system users that your annual report is available, and is free of charge.

- Public access/notice via the web
- Public access/notice via Government Office
- Public access/notice via a newspaper
- Public access/notice via Public Request

Public access/notice via a Public Library

Public access/notice via other method _____

Describe your Drinking-Water System

The Killaloe Water Treatment Plant is a single well, ground water system equipped with greensand contactors providing iron and manganese removal. Disinfection is provided using sodium hypochlorite. pH adjustment equipment is installed but not required or in service.

List all water treatment chemicals used over this reporting period

Sodium Hypochlorite
Potassium Permanganate

Were any significant expenses incurred to?

- Install required equipment
- Repair required equipment
- Replace required equipment

Describe

- Sinper Valve parts on water system
- Cl₂ pump parts
- Verify integrity of backwash PLC and controls uncluding programming s/w (file b/u)
- Verify operations and integrity of autocon control system
- Motor starter and contacts
- Filter control system modification and retrofit
- Valves for Cl₂ transfer lines
- Emergency lighting
- Raw water flow meter – repair and retrofit
- Overloads and starter contacts for pumps
- Pocket Colorimeter

Provide details on the notices submitted in accordance with subsection 18(1) of the Safe Drinking-Water Act or section 16-4 of Schedule 16 of O.Reg.170/03 and reported to Spills Action Centre

Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
01/21/04	Distribution THM's	Avg. - 108	ug/L	-provided in April when annual average was below 100 ug/L	01/21/04
01/21/04	Treated THM's	110	ug/L	-provided in April when annual average was below 100 ug/L	01/21/04

07/23/04	Distribution HPC	>500		Resample	07/23/04
08/05/04	PWWT exceedance			PWWT ammended	
08/06/04	Distribution HPC	>500		Resample	08/06/04
08/13/04	Distribution HPC	>500		Resample	08/13/04
10/08/04	Distribution THM's	115	ug/L	-no action required -annual running average = 92.6 ug/L	10/08/04

Microbiological testing done under section 8-2 during this reporting period

	Number of Samples	Range of E.Coli Or Fecal Results (#-#)	Range of Total Coliform Results (#-#)	Number of HPC Samples Or Background Colony Counts	Range of HPC Results (#-#) Or Background Colony Counts
Raw	52	0-<1	0-<1	52	0->500
Treated	52	0-<1	0-<1	52	0->500
Distribution	111	0-<1	0-<1	111	0->500

Operational testing done under Schedule 7, 8 or 9 during the period covered by this Annual Report.

	Number of Grab Samples	Range of Results (#-#)
Turbidity	251	0.06-0.37 NTU
Free Chlorine	251	0.42 – 1.91mg/L
Free Chlorine Residual Distribution System	111	0.38 – 1.36 mg/L
Fluoride (If the DWS provides fluoridation)	Not Provided at this facility	

	Continius Sampling	Range of Results (#-#)
Turbidity	8760	0 – 4.999 NTU*
Chlorine	8760	0 – 2.006mg/L*
FreeChlorine Residual Distribution System	8760	0 – 4.999mg/L*
Fluoride (If the DWS provides fluoridation)	Not provided at this facility	

NOTE: For continuous monitors use 8760 as the number of samples.

*Spikes were caused by power failures and maintenance

*NOTE: Record the unit of measure if it is **not** milligrams per litre.*

Summary of additional testing and sampling carried out in accordance with the requirement of an approval or order.

Date of order or C of A	Parameter	Date Sampled	Result	Unit of Measure
Certificate of Approval # 5808-548K4T - December 20, 2001				
Treated	THM	01/13/04	81.05	ug/L
	THM	04/06/04	62.4	ug/L
	THM	07/06/04	83.5	ug/L
	THM	10/05/04	95.4	ug/L
Backwash Effluent	Suspended Solids	01/20/04	<6.0	mg/L
	Suspended Solids	02/17/04	3.0	mg/L
	Suspended Solids	03/16/04	3.0	mg/L
	Suspended Solids	04/20/04	3.0	mg/L
	Suspended Solids	05/18/04	<3.0	mg/L
	Suspended Solids	06/15/04	3.0	mg/L
	Suspended Solids	07/20/04	<3.0	mg/L
	Suspended Solids	08/17/04	3.0	mg/L
	Suspended Solids	09/21/04	<3.0	mg/L
	Suspended Solids	10/19/04	2.0	mg/L
	Suspended Solids	11/16/04	2.0	mg/L
	Suspended Solids	12/21/04	5.0	mg/L
Backwash Effluent	pH	01/20/04	7.79	
	pH	02/17/04	7.67	
	pH	03/16/04	7.98	
	pH	04/20/04	8.1	
	pH	05/18/04	8.54	
	pH	06/15/04	7.89	
	pH	07/20/04	7.15	
	pH	08/17/04	8.0	
	pH	09/21/04	7.92	
	pH	10/19/04	7.72	
	pH	11/16/04	7.48	
	pH	12/21/04	7.57	
Raw Water	Selenium	January	<1	ug/L
	Selenium	February	<1	ug/L
	Selenium	March	<1	ug/L
	Selenium	April	<1	ug/L
	Selenium	May	<1	ug/L
	Selenium	June	<1	ug/L
	Selenium	July	<1	ug/L
	Selenium	August	<1	ug/L
	Selenium	September	<1	ug/L

	Selenium	October	<1	ug/L
	Selenium	November	<1	ug/L
	Selenium	December	<1	ug/L
Treated Water	Selenium	January	<1	ug/L
	Selenium	February	<1	ug/L
	Selenium	March	<1	ug/L
	Selenium	April	<1	ug/L
	Selenium	May	<1	ug/L
	Selenium	June	<1	ug/L
	Selenium	July	<1	ug/L
	Selenium	August	<1	ug/L
	Selenium	September	<1	ug/L
	Selenium	October	2	ug/L
	Selenium	November	2	ug/L
	Selenium	December	3	ug/L
Distribution System	Selenium	January	<1	ug/L
	Selenium	February	<1	ug/L
	Selenium	March	<1	ug/L
	Selenium	April	<1	ug/L
	Selenium	May	<1	ug/L
	Selenium	June	<1	ug/L
	Selenium	July	<1	ug/L
	Selenium	August	<1	ug/L
	Selenium	September	<1	ug/L
	Selenium	October	2	ug/L
	Selenium	November	2	ug/L
	Selenium	December	4	ug/L

Summary of Inorganic parameters tested during this reporting period or most recent

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony*				
Arsenic	01/08/03	1.0	ug/L	NO
Barium	01/08/03	170	ug/L	NO
Boron	01/08/03	130	ug/L	NO
Cadmium	01/08/03	0.1	ug/L	NO
Chromium	01/08/03	10.0	ug/L	NO
Lead Distribution	01/13/04	<0.2	ug/L	NO
Lead Treated	01/08/03	0.5	ug/L	NO
Mercury	01/08/03	0.1	ug/L	NO
Selenium	12/07/04	3	ug/L	NO
Sodium	06/10/03	29.7	mg/L	YES
Uranium	01/08/03	4.0	ug/L	NO
Fluoride	01/08/03	0.4	mg/L	NO

Nitrite	01/13/04	<0.1	mg/L	NO
	04/06/04	<0.1	mg/L	NO
	07/06/04	<0.1	mg/L	NO
	10/05/04	<0.1	mg/L	NO
Nitrate	01/13/04	0.1	mg/L	NO
	04/16/04	0.1	mg/L	NO
	07/06/04	0.1	mg/L	NO
	10/05/04	<0.1	mg/L	NO

*This was not required to be tested for at the time.

Summary of Organic parameters sampled during this reporting period or most recent

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	04/15/03	<0.5	ug/L	NO
Aldicarb	04/15/03	<6.0*	ug/L	NO
Aldrin + Dieldrin	04/15/03	<0.05	ug/L	NO
Atrazine + N-dealkylated metabolites	01/08/03	<1.0	ug/L	NO
Azinphos-methyl	04/15/03	<2.0	ug/L	NO
Bendiocarb	04/15/03	<5.0	ug/L	NO
Benzene	04/15/03	<0.5	ug/L	NO
Benzo(a)pyrene	06/25/01	-1.0	ug/L	NO
Bromoxynil	04/15/03	<0.5	ug/L	NO
Carbaryl	04/15/03	<5.0	ug/L	NO
Carbofuran	04/15/03	<2.0	ug/L	NO
Carbon Tetrachloride	04/15/03	<0.2	ug/L	NO
Chlordane (Total)	04/15/03	<0.6	ug/L	NO
Chlorpyrifos	04/15/03	<1.0	ug/L	NO
Cyanazine	04/15/03	<1.0	ug/L	NO
Diazinon	04/15/04	<2.0	ug/L	NO
Dicamba	04/15/03	<10.0	ug/L	NO
1,2-Dichlorobenzene	04/15/03	<0.1	ug/L	NO
1,4-Dichlorobenzene	04/15/03	<0.2	ug/L	NO
Dichlorodiphenyltrichloroethane (DDT) + metabolites	04/15/03	<1.0	ug/L	NO
1,2-Dichloroethane	04/15/03	<0.1	ug/L	NO
1,1-Dichloroethylene (vinylidene chloride)	04/15/03	<0.1	ug/L	NO
Dichloromethane	04/15/03	<3.0	ug/L	NO
2,4 Dichlorophenol	04/15/03	<0.2	ug/L	NO
2,4-Dichlorophenoxy acetic acid (2,4-D)	04/15/03	<10.0	ug/L	NO
Diclofop-methyl	04/15/03	<0.9	ug/L	NO
Dimethoate	04/15/03	<2.0	ug/L	NO
Dinoseb	04/15/03	<1.0	ug/L	NO
Diquat	04/15/03	<5.0	ug/L	NO
Diuron	04/15/03	<10.0	ug/L	NO

Glyphosate	04/15/03	<25.0	ug/L	NO
Heptachlor + Heptachlor Epoxide	04/15/03	<0.1	ug/L	NO
Linadane (Total)	04/15/03	<0.1	ug/L	NO
Malathion	04/15/03	<10.0	ug/L	NO
Methoxychlor	04/15/03	<10.0	ug/L	NO
Metolachlor	04/15/03	<5.0	ug/L	NO
Metribuzin	04/15/03	<5.0	ug/L	NO
Monochlorobenzene	04/15/03	<0.2	ug/L	NO
Paraquat	04/15/03	<1.0	ug/L	NO
Parathion	04/15/03	<5.0	ug/L	NO
Pentachlorophenol	04/15/03	<0.2	ug/L	NO
Phorate	04/15/03	<0.5	ug/L	NO
Picloram	04/15/03	<10.0	ug/L	NO
Polychlorinated Biphenyls(PCB)	04/15/03	<0.05	ug/L	NO
Prometryne	04/15/03	<0.2	ug/L	NO
Simazine	04/15/03	<1.0	ug/L	NO
THM Distribution (NOTE: show latest annual average)	10/05/04	80.6	ug/L	NO
THM Treated (NOTE: show latest annual average)	10/05/04	95.4	ug/L	NO
Temephos	04/15/03	<25.0	ug/L	NO
Terbufos	04/15/03	<0.7	ug/L	NO
Tetrachloroethylene	04/15/03	<0.2	ug/L	NO
2,3,4,6-Tetrachlorophenol	04/15/03	<0.1	ug/L	NO
Triallate	04/15/03	<20.0	ug/L	NO
Trichloroethylene	04/15/03	<0.1	ug/L	NO
2,4,6-Trichlorophenol	04/15/03	<0.2	ug/L	NO
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	04/15/03	<22.0	ug/L	NO
Trifluralin	04/15/03	<1.0	ug/L	NO
Vinyl Chloride	04/15/03	<0.3	ug/L	NO

* the MDL is higher than the half MAC

List any Inorganic or Organic parameter(s) that exceeded half the standard prescribed in Schedule 2 of Ontario Drinking Water Quality Standards.

Parameter	Result Value	Unit of Measure	Date of Sample

(Only if DWS category is large municipal residential, small municipal residential, large municipal non-residential, non municipal year round residential, large non municipal non residential)