

**Part III Form 2  
Section 11. ANNUAL REPORT.**

<b>Drinking-Water System Number:</b>	<b>220001423</b>
<b>Drinking-Water System Name:</b>	<b>KENORA AREA WATER TREATMENT PLANT</b>
<b>Drinking-Water System Owner:</b>	<b>CITY OF KENORA</b>
<b>Drinking-Water System Category:</b>	<b>LARGE MUNICIPAL RESIDENTIAL</b>
<b>Period being reported:</b>	<b>JANUARY 1, 2004 – DECEMBER 31, 2004</b>

<p><b><u>Complete if your Category is Large Municipal Residential or Small Municipal Residential</u></b></p> <p><b>Does your Drinking-Water System serve more than 10,000 people? Yes [x] No [ ]</b></p> <p><b>Is your annual report available to the public at no charge on a web site on the Internet? Yes [x] No [ ]</b></p> <p><b>Location where Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.</b></p> <div style="border: 1px solid black; padding: 5px;"> <p>City Hall – 1, Main Street South              City of Kenora – Website  <a href="http://www.city.kenora.on.ca">www.city.kenora.on.ca</a>              Kenora Water Treatment Plant –              9, 7th Street South</p> </div>	<p><b><u>Complete for all other Categories.</u></b></p> <p><b>Number of Designated Facilities served:</b></p> <div style="border: 1px solid black; width: 100px; height: 20px; margin: 5px 0;"></div> <p><b>Did you provide a copy of your annual report to all Designated Facilities you serve? Yes [ ] No [ ]</b></p> <p><b>Number of Interested Authorities you report to:</b></p> <div style="border: 1px solid black; width: 100px; height: 20px; margin: 5px 0;"></div> <p><b>Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility? Yes [ ] No [ ]</b></p>
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**List Drinking-Water Systems, which receive all of their drinking water from your system:**

None

**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 [ ] No [ ]

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

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 Kenora Water Treatment Plant is classed as Large Municipal Residential. The total number of service connections at this time is 6,317. The water plant has a rated capacity of 292 Litres per second. The process is chemically assisted and includes filtration to meet the treatment requirements of O.Reg 170/03 for surface water.

**List all water treatment chemicals used over this reporting period**

Chlorine, Aluminum Sulphate, Polyelectrolyte, Sodium Hydroxide, Sodium Silicofluoride.

**Were any significant expenses incurred to?**

Install required equipment

Repair required equipment

Replace required equipment

**Describe**

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

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
February 3/04	Total THM's	DWSP quarter result 117.6	ug/L	Upgrading to chloramination.  Reduction of chlorine dosage in multiple injection points (ie: prechlorination).	Chloramination not yet in effect. May 25/04 achieved a running annual average of 92.5 ug/L through reduction of chlorine dosage.
February 3/04	Fluoride	On-line reading 2.00 spike	mg/L	Mechanical induced spike. Ordered new probes for fluoride analyzer. Fluoride feeder off 24hours.	February 4/04 Fluoride feeder is on and feeding at normal range.
March 1/04	Turbidity	31.04 spike  time 3:19	N.T.U.	Resample/Re-test. Self-correcting.	March 1/04 Returned to normal range.
March 1/04	Fluoride	On-line reading 2.00  spike time 15 secs	mg/L	Investigating pump start up spike. Resample/Re-test. Self-correcting.	March 2/04 Returned to normal range. Relocated sample line May 13/04.
March 3/04 March 15/04	Total THM's	DWSP quarter result 70.0  running annual average 113.4	ug/L	Upgrading to chloramination.  Reduction of chlorine dosage in multiple injection points (ie: prechlorination).	Chloramination not yet in effect. May 25/04 achieved a running annual average of 92.5 ug/L through reduction of chlorine dosage.

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Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
March 8/04	Fluoride	On-line Reading 1.70  spike time 19 secs	mg/L	Resample/Re-test. Self-correcting. Instrumentation spike - investigating for a true resolution.	March 9/04 Returned to normal range. Relocated sample line May 13/04.
March 16/04	Fluoride	On-line reading 2.00  spike time 9 secs	mg/L	Investigating pump start up spike. Resample/Re-test. Self-correcting.	March 17/04 Returned to normal range. Relocated sample line May 13/04.
March 27/04	Fluoride	On-line reading 2.00 spike	mg/L	Investigating pump start up spike. Resample/Re-test. Self-correcting.	March 28/04 Returned to normal range. Relocated sample line May 13/04.
April 5/04	Fluoride	On-line reading 2.00  spike time 26 secs	mg/L	Investigating pump start up spike. Resample/Re-test. Self-correcting.	April 6/04 Returned to normal range. Relocated sample line May 13/04.
April 7/04	Fluoride	On-line reading 2.00  spike time 16 secs	mg/L	Investigating pump start up spike. Resample/Re-test. Self-correcting.	April 8/04 Returned to normal range. Relocated sample line May 13/04.
April 13/04	Fluoride	On-line reading 2.00  spike time 22 secs	mg/l	Investigating pump start up spike. Resample/Re-test. Self-correcting.	April 14/04 Returned to normal range. Relocated sample line May 13/04.

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Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
April 14/04	Fluoride	On-line reading 2.00  spike time 18 secs	mg/L	Investigating pump start up spike. Resample/Re-test. Self-correcting.	April 15/04 Returned to normal range. Relocated sample line May 13/04.
April 22/04	Total THM's	Enviro-Test quarter result 62.0  running annual average 107.0	ug/L	Upgrading to chloramination.  Reduction of chlorine dosage in multiple injection points (ie: prechlorination)	Chloramination not yet in effect. May 25/04 achieved a running annual average of 92.5 ug/L through reduction of chlorine dosage.
May 8/04	Fluoride	On-line reading 2.00  spike time 6 secs	mg/L	Investigating pump start up spike. Resample/Re-test. Self-correcting.	May 9/04 Returned to normal range. Relocated sample line May 13/04.
May 10/04	Fluoride	On-line reading 2.00  spike time 6 secs	mg/L	Investigating pump start up spike. Resample/Re-test. Self-correcting.	May 11/04 Returned to normal range. Relocated sample line May 13/04.
May 12/04	Fluoride	On-line reading 2.00  spike time 4 secs	mg/L	Resample/Re-test. Self-correcting.	May 13/04 Relocated sample take off point for fluoride analyzer to highlift suction header instead of discharge header.

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

Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
<b>August 9/04</b>	<b>Total THM's</b>	<b>Enviro-Test quarter result 118</b>  <b>running annual average 84.7</b>	<b>ug/L</b>	<b>Upgrading to chloramination.</b>  <b>Reduction of chlorine dosage in multiple injection points (ie: prechlorination).</b>	<b>Chloramination not yet in effect.</b> <b>May 25/04 achieved a running annual average of 92.5 ug/L through reduction of chlorine dosage.</b>
<b>August 10/04</b> <b>17 Anne Crescent</b>	<b>Free Chlorine Residual &lt;.05</b>	<b>0.03</b>	<b>mg/L</b>	<b>Resample/Re-test.</b> <b>Flushed mains/pipes.</b> <b>Microbiological tested 3 consecutive days until good chlorine residual was maintained.</b>	<b>August 10/04</b>  <b>August 30/04</b> <b>Installed temporary bleeder.</b>
<b>August 11/04</b> <b>17 Anne Crescent</b>	<b>Free Chlorine Residual &lt;.05</b>	<b>0.03</b>	<b>mg/L</b>	<b>Resample/Re-test.</b> <b>Flushed mains/pipes.</b> <b>Microbiological tested 3 consecutive days until good chlorine residual was maintained.</b>	<b>August 11/04</b>  <b>August 30/04</b> <b>Installed temporary bleeder.</b>
<b>August 16/04</b> <b>15 Anne Crescent</b>	<b>Free Chlorine Residual &lt;.05</b>	<b>0.01</b>	<b>mg/L</b>	<b>Resample/Re-test.</b> <b>Increased disinfection.</b> <b>Flushed mains/pipes.</b> <b>Microbiological tested 3 consecutive days until good chlorine residual was maintained.</b>	<b>August 16/04</b>  <b>August 30/04</b> <b>Installed temporary bleeder.</b>

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Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
August 18/04 17 Anne Crescent	Free Chlorine Residual <0.05	0.04	mg/L	Resample/Re-test. Increased disinfection. Flushed mains/pipes. Microbiological tested 3 consecutive days until good chlorine residual was maintained.	August 18/04  August 30/04 Installed temporary bleeder.
August 18/04 17 Anne Crescent	Free Chlorine Residual <0.05	0.04	mg/L	Resample/Re-test. Flushed mains/pipes. Microbiological tested 3 consecutive days until good chlorine residual was maintained.	August 18/04  August 30/04 Installed temporary bleeder.
October 26/04 Norman Booster	Turbidity in distribution system	30.6	N.T.U.	Resample/Re-test. Increased disinfection. Flushed mains/pipes. Microbiological testing done.	October 26/04  November 2/04 resolution.
October 26/04 Ocean Ave. hydrant	Turbidity in distribution system	788	N.T.U.	Resample/Re-test. Increased disinfection. Flushed mains/pipes. Microbiological testing done.	October 26/04  November 2/04 resolution.
November 8/04 Del Art Manor	Turbidity in distribution system	8.59	N.T.U.	Resample/Re-test. Flushed mains/pipes.	November 8/04
November 8/04 Bayview Motors	Turbidity in distribution system	7.00	N.T.U.	Resample/Re-test. Flushed mains/pipes.	November 8/04

**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	Range of HPC Results (#-#)
Raw	53	0-7 E.C.	0 – 12,000	0	0
		0-20 Fecal			
Treated	54	Absent	Absent	52	0 - 3
Distribution	347	Absent	Absent	105	0 – 8*
					*320 one result Kantola Motors, June 08/04

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

	Number of Grab Samples	Range of Results (#-#)	Online Number of Grab Samples	Range of Results (#-#)
Turbidity	366	0.027 - 0.064 N.T.U.	8760	0.024 – 0.319 N.T.U.* *spikes due to mechanical error 0.454; 0.679; 0.762.
Chlorine	366	1.21 – 2.07 mg/L	8760	0.816 – 2.890 mg/L
Fluoride (If the DWS provides fluoridation)	366	0.44 - 0.78 mg/L	8760	0.46 – 0.76 mg/L* *refer to incident reporting for mechanical spikes. *reservoir flooding causing fluoride readings to dip to 0.11 on occasion.

**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
April 29 / 2003	Total suspended solids	Monthly 2004	13.18 (Average For 2004)	mg/L



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

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	January 26/2004	<1	ug/L	No
Arsenic	January 26/2004	<1	ug/L	No
Barium	January 26/2004	10	ug/L	No
Boron	January 26/2004	<50	ug/L	No
Cadmium	January 26/2004	<0.1	ug/L	No
Chromium	January 26/2004	<1	ug/L	No
Lead	January 26/2004	<1	ug/L	No
Mercury	January 26/2004	<0.1	ug/L	No
Selenium	January 26/2004	<5	ug/L	No
Uranium	January 26/2004	<5	ug/L	No
Nitrite	January 26/2004	<0.02	mg/L	No
	May 25/2004	<0.02	mg/L	No
	August 3/2004	<0.02	mg/L	No
	November 8/2004	<0.02	mg/L	No
Nitrate	January 26/2004	0.17	mg/L	No
	May 25/2004	<0.03	mg/L	No
	August 3/2004	<0.03		
	November 8/2004	0.07	mg/L	No

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

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	January 26/2004	<0.10	ug/L	No
Aldicarb	January 26/2004	<9	ug/L	No
Aldrin + Dieldrin	January 26/2004	<0.04	ug/L	No
Atrazine + N-dealkylated metabolites	January 26/2004	<0.20	ug/L	No
Azinphos-methyl	January 26/2004	<0.10	ug/L	No
Bendiocarb	January 26/2004	<0.20	ug/L	No
Benzene	January 26/2004	<0.5	ug/L	No
Benzo(a)pyrene	January 26/2004	<0.01	ug/L	No
Bromoxynil	January 26/2004	<0.20	ug/L	No
Carbaryl	January 26/2004	<0.20	ug/L	No
Carbofuran	January 26/2004	<0.20	ug/L	No
Carbon Tetrachloride	January 26/2004	<0.5	ug/L	No
Chlordane (Total)	January 26/2004	<0.3	ug/L	No

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Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Chlorpyrifos	January 26/2004	<0.10	ug/L	No
Cyanazine	January 26/2004	<0.10	ug/L	No
Diazinon	January 26/2004	<0.10	ug/L	No
Dicamba	January 26/2004	<0.20	ug/L	No
1,2-Dichlorobenzene	January 26/2004	<0.5	ug/L	No
1,4-Dichlorobenzene	January 26/2004	<0.5	ug/L	No
Dichlorodiphenyltrichloroethane (DDT) + metabolites	January 26/2004	<0.40	ug/L	No
1,2-Dichloroethane	January 26/2004	<0.5	ug/L	No
1,1-Dichloroethylene (vinylidene chloride)	January 26/2004	<0.5	ug/L	No
Dichloromethane	January 26/2004	<0.5	ug/L	No
2-4 Dichlorophenol	January 26/2004	<0.50	ug/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	January 26/2004	<0.20	ug/L	No
Diclofop-methyl	January 26/2004	<0.10	ug/L	No
Dimethoate	January 26/2004	<0.10	ug/L	No
Dinoseb	January 26/2004	<0.20	ug/L	No
Diquat	January 26/2004	<7	ug/L	No
Diuron	January 26/2004	<10	ug/L	No
Glyphosate	January 26/2004	<10	ug/L	No
Heptachlor + Heptachlor Epoxide	January 26/2004	<0.20	ug/L	No
Linadane (Total)	January 26/2004	<0.10	ug/L	No
Malathion	January 26/2004	<0.10	ug/L	No
Methoxychlor	January 26/2004	<0.10	ug/L	No
Metolachlor	January 26/2004	<0.10	ug/L	No
Metribuzin	January 26/2004	<0.10	ug/L	No
Monochlorobenzene	January 26/2004	<0.5	ug/L	No
Paraquat	January 26/2004	<1	ug/L	No
Parathion	January 26/2004	<0.10	ug/L	No
Pentachlorophenol	January 26/2004	<0.50	ug/L	No
Phorate	January 26/2004	<0.10	ug/L	No
Picloram	January 26/2004	<0.20	ug/L	No
Polychlorinated Biphenyls(PCB)	January 26/2004	<0.06	ug/L	No
Prometryne	January 26/2004	<0.10	ug/L	No
Simazine	January 26/2004	<0.10	ug/L	No
THM 1 <sup>st</sup> Quarter	January 26/2004	62.0	ug/L	N/A
THM 2 <sup>nd</sup> Quarter	May 25/2004	74.2	ug/L	N/A
THM 3 <sup>rd</sup> Quarter	August 3/2004	118	ug/L	N/A
THM 4 <sup>th</sup> Quarter	November 9/2004	60	ug/L	N/A
THM	Running Annual Average	78.55	ug/L	No

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Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Temephos	January 26/2004	<0.10	ug/L	No
Terbufos	May 28 / 2003	<0.20	ug/L	No
Tetrachloroethylene	January 26/2004	<0.5	ug/L	No
2,3,4,6-Tetrachlorophenol	January 26/2004	<0.50	ug/L	No
Triallate	January 26/2004	<0.10	ug/L	No
Trichloroethylene	January 26/2004	<0.5	ug/L	No
2,4,6-Trichlorophenol	January 26/2004	<0.50	ug/L	No
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	January 26/2004	<0.20	ug/L	No
Trifluralin	January 26/2004	<0.10	ug/L	No
Vinyl Chloride	January 26/2004	<0.5	ug/L	No

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 category is large municipal residential, small municipal residential, large municipal non residential, small municipal non residential, large non municipal non residential)