

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

Part III Form 2

Section 11. ANNUAL REPORT.

Drinking-Water System Number:	220001799
Drinking-Water System Name:	Richard H. Neath Water Purification Plant
Drinking-Water System Owner:	City of Owen Sound
Drinking-Water System Category:	Large Municipal Residential
Period being reported:	January 1, 2008 – December 31, 2008

<u>Complete if your Category is Large Municipal Residential or Small Municipal Residential</u>	<u>Complete for all other Categories.</u>
<p>Does your Drinking-Water System serve more than 10,000 people? Yes [X] No []</p> <p>Is your annual report available to the public at no charge on a web site on the Internet? Yes [X] No []</p> <p>Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.</p> <div style="border: 1px solid black; padding: 5px; margin-left: 20px;"> <ul style="list-style-type: none"> • Owen Sound City Website • City Clerk's Office, City Hall • Public Works Office • Water Treatment Plant • Library </div>	<p>Number of Designated Facilities served: n/a</p> <p>Did you provide a copy of your annual report to all Designated Facilities you serve? Yes [] No [X]</p> <p>Number of Interested Authorities you report to: n/a</p> <p>Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility? Yes [] No [X]</p>

Note: For the following tables below, additional rows or columns may be added or an appendix may be attached to the report

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

Drinking Water System Name	Drinking Water System Number
Leith Water Distribution System	260065312

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 Richard H. Neath Water Purification plant is a surface water treatment plant with direct filtration, serving a population of 22,000 people. The City distribution network is divided into 6 pressure zones.

The Water Treatment process includes raw water screening, prechlorination, zebra mussel control (chlorination at Intake), flash mixing, coagulation/flocculation, UV disinfection, post chlorination, Fluoridation, and a wastewater detention tank to treat backwash water.

The City has a 22,000 m³ reservoir, with two booster stations that provides addition pressure in the Southeast and southwest portions of the City and outskirts.

List all water treatment chemicals used over this reporting period

Gaseous Chlorine, Hydrofluosilicic Acid, SternPAC, SternPAC 2300, Sodium Bisulphite (dechlorination), and MagnaFloc 110L (polymer addition to waste detention tank)

Were any significant expenses incurred to?

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

Please provide a brief description and a breakdown of monetary expenses incurred

[Installed components]

- New SCADA system implementation at the Water Treatment Plant and East Hill Pumping Station.
- Rewire of all SCADA signaling at East Hill Pumping Station.
- New hydraulic rock breaker backhoe attachment for Water Distribution
-

[Replaced components]

- Asbestos Removal at WTP including pipe joints and flooring, Reinsulated and new tile floors.
- Change out of filter media on Filter # 3. This included removal of the anthracite, sand and gravel layers and replacing with new media.

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

Please see Appendix "A"

Microbiological testing done under the Schedule 10, 11 or 12 of Regulation 170/03, during this reporting period.

	Number of Samples	Range of E.Coli Or Fecal Results (min #)-(max #)	Range of Total Coliform Results (min #)-(max #)	Number of HPC Samples	Range of HPC Results (min #)-(max #)
Raw	53	0-110	0-1010	n/a	n/a
Treated	53	0	0	12	<10
Distribution	465	0	0	108	<10 - 110

Operational testing done under Schedule 7, 8 or 9 of Regulation 170/03 during the period covered by this Annual Report.

	Number of Grab Samples	Range of Results (min #)-(max #)
Turbidity	8760	.02 – 5.00 NTU *High Raw Color and Turbidity Event January 10 2008*
Chlorine	8760	.29 – 2.00
Fluoride (If the DWS provides fluoridation)	8760	.25 - .72

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

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, order or other legal instrument.

Date of legal instrument issued	Parameter	Date Sampled	Result	Unit of Measure
CofA# 9037-5WBLZX February 20 th , 2004	Aluminum	December 16	.010	mg/L
CofA# 6368-6YVKTY April 2 nd , 2007	Total Suspended Solids	January	33	mg/L
CofA# 6368-6YVKTY April 2 nd , 2007	Chlorine – Wastewater System	January 3,8,16,25,29	0.00	mg/L
CofA# 6368-6YVKTY April 2 nd , 2007	Chlorine – Wastewater System	February 9,15,21,29	0.00	mg/L
CofA# 6368-6YVKTY April 2 nd , 2007	Chlorine – Wastewater System	March 7,14,21,25,31	0.00	mg/L
CofA# 6368-6YVKTY April 2 nd , 2007	Chlorine – Wastewater System	April 11,18,22,29	0.00	mg/L
CofA# 6368-6YVKTY April 2 nd , 2007	Total Suspended Solids	April	2	mg/L

CofA# 6368-6YVKTY April 2 nd , 2007	Chlorine – Wastewater System	May 7,12,23,28	0.00	mg/L
CofA# 6368-6YVKTY April 2 nd , 2007	Chlorine – Wastewater System	June 2,13,18,23	0.00	mg/L
CofA# 6368-6YVKTY April 2 nd , 2007	Total Suspended Solids	June 29, 30	0	mg/L
CofA# 6368-6YVKTY April 2 nd , 2007	Chlorine – Wastewater System	July 3,9,14,26,31	0.00	mg/L
CofA# 6368-6YVKTY April 2 nd , 2007	Total Suspended Solids	July 2, 3	0	mg/L
CofA# 6368-6YVKTY April 2 nd , 2007	Chlorine – Wastewater System	August 6, 11, 18, 27	0.00	mg/L
CofA# 6368-6YVKTY April 2 nd , 2007	Chlorine – Wastewater System	September 8, 17, 25	0.00	mg/L
CofA# 6368-6YVKTY April 2 nd , 2007	Total Suspended Solids	October 2	2	mg/L
CofA# 6368-6YVKTY April 2 nd , 2007	Chlorine – Wastewater System	October 2,7,15,24,27	0.00	mg/L
CofA# 6368-6YVKTY April 2 nd , 2007	Chlorine – Wastewater System	November 6, 11, 18, 27	0.00	mg/L
CofA# 6368-6YVKTY April 2 nd , 2007	Total Suspended Solids	December 21	14	mg/L
CofA# 6368-6YVKTY April 2 nd , 2007	Chlorine – Wastewater System	December 3, 8, 18, 21, 23, 31	0.00	mg/L

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

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	Feb 1	<.0001	mg/L	No
Arsenic	Feb 1	.0007	mg/L	No
Barium	Feb 1	.011	mg/L	No
Boron	Feb 1	.01	mg/L	No
Cadmium	Feb 1	<.00002	mg/L	No
Chromium	Feb 1	<.002	mg/L	No
Lead	Falls under New Regulatory requirements			
Mercury	Feb 1	<.00002	mg/L	No
Selenium	Feb 1	.0012	mg/L	No
Sodium	Feb 1	14.3	mg/L	No
Uranium	Feb 1	.00025	mg/L	No
Fluoride	Dec 31	.51	mg/L	No
Nitrite	Dec 16	<.1	mg/L	No
Nitrate	Dec 16	.4	mg/L	No

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

Summary of lead testing under Schedule 15.1 during this reporting period

(applicable to the following drinking water systems; large municipal residential systems, small municipal residential systems, and non-municipal year-round residential systems)

Location Type	Number of Samples	Range of Lead Results (min#) – (max #)	Number of Exceedances
Plumbing	132	<0.00002 mg/L – 0.0307 mg/L	21
Distribution	24	<0.00002 mg/L – 0.00151 mg/L	0

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

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	Feb 1	<.0003	mg/L	No
Aldicarb	Feb 1	<.003	mg/L	No
Aldrin + Dieldrin	Feb 1	<.00002	mg/L	No
Atrazine + N-dealkylated metabolites	Feb 1	<.0005	mg/L	No
Azinphos-methyl	Feb 1	<.001	mg/L	No
Bendiocarb	Feb 1	<.003	mg/L	No
Benzene	Feb 1	<.0005	mg/L	No
Benzo(a)pyrene	Feb 1	<.000005	mg/L	No
Bromoxynil	Feb 1	<.0003	mg/L	No
Carbaryl	Feb 1	<.001	mg/L	No
Carbofuran	Feb 1	<.001	mg/L	No
Carbon Tetrachloride	Feb 1	<.0002	mg/L	No
Chlordane (Total)	Feb 1	<.00004	mg/L	No
Chlorpyrifos	Feb 1	<.0005	mg/L	No
Cyanazine	Feb 1	<.0005	mg/L	No
Diazinon	Feb 1	<.001	mg/L	No
Dicamba	Feb 1	<.005	mg/L	No
1,2-Dichlorobenzene	Feb 1	<.0001	mg/L	No
1,4-Dichlorobenzene	Feb 1	<.0002	mg/L	No
Dichlorodiphenyltrichloroethane (DDT) + metabolites	Feb 1	<.0001	mg/L	No
1,2-Dichloroethane	Feb 1	<.0001	mg/L	No
1,1-Dichloroethylene (vinylidene chloride)	Feb 1	<.0001	mg/L	No
Dichloromethane	Feb 1	<.0003	mg/L	No
2-4 Dichlorophenol	Feb 1	<.0001	mg/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	Feb 1	<.005	mg/L	No
Diclofop-methyl	Feb 1	<.0005	mg/L	No
Dimethoate	Feb 1	<.001	mg/L	No
Dinoseb	Feb 1	<.0005	mg/L	No
Diquat	Feb 1	<.005	mg/L	No
Diuron	Feb 1	<.005	mg/L	No
Glyphosate	Feb 1	<.025	mg/L	No
Heptachlor + Heptachlor Epoxide	Feb 1	<.0001	mg/L	No
Lindane (Total)	Feb 1	<.0001	mg/L	No
Malathion	Feb 1	<.005	mg/L	No
Methoxychlor	Feb 1	<.0001	mg/L	No

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

Metolachlor	Feb 1	<.003	mg/L	No
Metribuzin	Feb 1	<.003	mg/L	No
Monochlorobenzene	Feb 1	<.0002	mg/L	No
Paraquat	Feb 1	<.001	mg/L	No
Parathion	Feb 1	<.003	mg/L	No
Pentachlorophenol	Feb 1	<.0001	mg/L	No
Phorate	Feb 1	<.0003	mg/L	No
Picloram	Feb 1	<.005	mg/L	No
Polychlorinated Biphenyls(PCB)	Feb 1	<.00005	mg/L	No
Prometryne	Feb 1	<.0001	mg/L	No
Simazine	Feb 1	<.0005	mg/L	No
THM (NOTE: show latest annual average)	Dec 16	.0272	mg/L	No
Temephos	Feb 1	<.010	mg/L	No
Terbufos	Feb 1	<.0003	mg/L	No
Tetrachloroethylene	Feb 1	<.0002	mg/L	No
2,3,4,6-Tetrachlorophenol	Feb 1	<.0001	mg/L	No
Triallate	Feb 1	<.010	mg/L	No
Trichloroethylene	Feb 1	<.0001	mg/L	No
2,4,6-Trichlorophenol	Feb 1	<.0001	mg/L	No
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	Feb 1	<.010	mg/L	No
Trifluralin	Feb 1	<.0005	mg/L	No
Vinyl Chloride	Feb 1	<.0002	mg/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
NONE			

The regulations have changed on lead reporting and sampling. This will not be retested under old requirements.

(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)

APPENDIX “A”

#	Date	AWQI #	Adverse Location	Adverse Parameter	Adverse Result	Units	Remedial Action
1	10-Jan	77328	Filter # 2	Turbidity	1.2	NTU	Increase PACI dosage, Re-ripen filters, slow plant down, due to High Raw turbidity & Color
2	11-Jan	77365	Filter Effluent	Turbidity	2.58	NTU	Continued from previous day.
3	12-Jan	77384	Filter # 4	Turbidity	1.9	NTU	Elevated results continued from Jan 10/08 reportable
4	13-Jan	77390	Filter # 1	Turbidity	1.67	NTU	Elevated results continued from Jan 10/08 reportable
5	15-Jan	77410	Filter Effluent	Turbidity	1.02	NTU	Elevated results continued from Jan 10/08 reportable
6	6-Feb	77758	Filter Effluent	Turbidity	1.75	NTU	High Raw Turbidities, Increased coagulant dosage.
7	27-Feb	78119	East Hill Zone - 8th St E - Hwy 6&10	Pressure	possibly < 20	PSI	Due to large mainbreak, pressure was reduced for a short duration until large fire pump started.
8	3-Apr	78693	Filter Effluent	Turbidity	1.07	NTU	Optimized PACI dosage, Re-ripen filters, slow plant down. Problem was High Raw turbidity & Color
9	4-Apr	78716	Filter Effluent	Turbidity	1.07	NTU	Optimized PACI dosage, Re-ripen filters, slow plant down due to High Raw turbidity & Color
10	9-Jul	80674	2nd Ave E	Low Pressure	15-17	PSI	Pressure Drop occurred due to watermain work on 2nd Ave E.

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

11	5-Aug	82220	576 4th St E	Low Chlorine	0.03	mg/L	Hydrant flushed for 40 minutes. Free Cl ₂ was .21 mg/L
12	28-Aug	83262	977 6th Ave E	Low Chlorine	0.04	mg/L	Hydrant flushed for 3 hrs 35 minutes. Free Cl ₂ was .20 mg/L

LEGEND							
PACI	Stands for PolyAluminumChloride. A coagulant used to optimize filtration.						
AWQI	Stands for Adverse Water Quality Incident. Used by the Ministry of the Environment Spills Action Center to track adverse results.						
NTU	Stands for Nephelometric Turbidity Unit. A measurement for determining the clarity of water.						