



January 27,2014

The Corporation of the Municipality of Huron East
72 Main St. S
P.O. Box 610
Seaforth, ON
N0K 1W0

Attention: Brad Knight, Administrator, Clerk-Treasurer

**RE: Brucefield Well Supply System
2013 Annual Report**

Dear Brad,

Please find attached the 2013 Annual Operations Report for the Brucefield Water System, in accordance with Section 11(1) of O. Reg. 170/03. This report covers the period from January 1 to December 31 and meets the requirement of being prepared by February 28 of this year.

Please ensure that a copy of this report is given, without charge, to every person who requests a copy. In addition, please make certain that effective steps are taken to advise residents that copies of the report are available, and of how a copy can be obtained.

As per Schedule 22 of O. Reg. 170/03, please ensure that at least a copy of the Summary Report is given to the members of municipal council no later than March 31, 2014.

Finally, please ensure that a letter is sent to OMI Canada Inc verifying that this report has been received and accepted by Council.

If you have any questions regarding the report, we would be pleased to address them and you should contact the undersigned accordingly.

Sincerely,

OMI Canada Inc.

A handwritten signature in black ink, appearing to read "Joe Arnold".

Joe Arnold
Project Manager
Huron East
Project
519 490 5586

cc. B. Mills, Municipality of Huron East;

2013 ANNUAL REPORT FOR WATER SYSTEMS

Part 1 – ANNUAL REPORT (as required by O. Reg. 170/03, Section 11)

Drinking-Water System Number:	220007604
Drinking-Water System Name:	Brucefield Water System
Drinking-Water System Owner:	The Corporation of the Municipality of Huron East
Drinking-Water System Category:	Small Municipal Residential
Period being reported:	January 1-December 31, 2013

Complete if your Category is Large Municipal Residential or Small Municipal Residential	Complete for all other Categories
Does your Drinking-Water System serve more than 10,000 people? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Number of Designated Facilities served:
Is your annual report available to the public at no charge on a web site on the Internet? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Did you provide a copy of your annual report to all Designated Facilities you serve? <input type="checkbox"/> Yes <input type="checkbox"/> No
Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection. Town Office 72 Main St. S. Seaforth, ON	Number of Designated Facilities served: Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility? <input type="checkbox"/> Yes <input type="checkbox"/> No

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
N/A	N/A

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?

N/A

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

<input checked="" type="checkbox"/> Public access/notice via the web	<input checked="" type="checkbox"/> Public access/notice via Government Office	<input type="checkbox"/> Public access/notice via a newspaper
<input type="checkbox"/> Public access/notice via Public Request	<input type="checkbox"/> Public access/notice via a Public Library	<input type="checkbox"/> Public access/notice via a Public Library

Describe your Drinking Water System

Water Distribution System Class 2.

Well located at the intersection of Highway 4 and County Road 3 is 69.3 m deep and a 200 mm diameter steel casing and a submersible pump rated for 318 L/minute. The pump house contains four 455 L bladder type pressure tanks. Primary disinfection is supplied by ultraviolet reactors, secondary disinfection by sodium hypochlorite injection.

List all water treatment chemicals used over this reporting period

12% Sodium hypochlorite solution

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

None during this reporting period

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	Units	Corrective Action	Corrective Action Date
None during this reporting period					

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 Results (min #) - (max #)	Range of Total Coliform Results (min #) - (max #)	Number of HPC Samples	Range of HPC Results (min #) - (max #)
Raw	12	0	0	n/a	n/a
Treated	n/a	n/a	n/a	n/a	n/a
Distribution	52	0	0	52	<10-60

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 #)	Units
Turbidity	12	0.05-0.34	NTU
Chlorine	8760	0.25-3.89	mg/L
Fluoride (If the DWS provides fluoridation)	n/a		

Summary of additional testing and sampling carried out in accordance with the requirement of an approval, order or other legal instrument

None during this reporting period				
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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	Apr 26/11	.02	Ug/L	No
Arsenic	Apr 26/11	0.4	Ug/L	No
Barium	Apr 26/11	236	Ug/L	No
Boron	Apr 26/11	14	Ug/L	No
Cadmium	Apr 26/11	0.188	Ug/L	No
Chromium	Apr 26/11	1.0	Ug/L	No
Lead-sampling conducted by the Municipality of Huron East; see summary below				
Mercury	Apr 26/11	0.02	Ug/L	No
Selenium	Apr 26/11	1.0	Ug/L	No
Sodium	Oct 21/13	10.3	mg/L	No
Uranium	Apr 26/11	1.81	mg/L	No
Fluoride	Oct 21/13	1.10	mg/L	No
Nitrite	Jan 28/13	0.005	mg/L	No
Nitrate	Jan 28/13	0.483	mg/L	No
Nitrite	Apr 2/13	.003	mg/L	No
Nitrate	Apr 2/13	.479	mg/L	No
Nitrite	July 2/13	0.005	mg/L	No
Nitrate	July 2/13	0.516	mg/L	No
Nitrite	Oct 21/13	0.003	mg/L	No
Nitrate	Oct 21/13	0.524	mg/L	No

Summary of Lead Results*

Sampling Period	Range of Results (µg/L)	Non-residential	Distribution	Adverse Incidents?
Dec-11-12-Apr-15-13	0.15	N/A	1	No
Jun-15-13-Oct-15-13	0.18	N/A	1	No

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

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	Apr 26/11	.02	Ug/L	No
Aldicarb	Apr 26/11	.01	Ug/L	No
Aldrin + Dieldrin	Apr 26/11	0.01	Ug/L	No
Atrazine + N-dealkylated metabolites	Apr 26/11	0.01	Ug/L	No
Azinphos-methyl	Apr 26/11	0.02	Ug/L	No
Bendiocarb	Apr 26/11	0.01	Ug/L	No
Benzene	Apr 26/11	0.32	Ug/L	No
Benzo(a)pyrene	Apr 26/11	.004	Ug/L	No
Bromoxynil	Apr 26/11	0.33	Ug/L	No
Carbaryl	Apr 26/11	0.01	Ug/L	No
Carbofuran	Apr 26/11	0.01	Ug/L	No
Carbon Tetrachloride	Apr 26/11	0.16	Ug/L	No
Chlordane (Total)	Apr 26/11	0.01	Ug/L	No
Chlorpyrifos	Apr 26/11	0.02	Ug/L	No
Cyanazine	Apr 26/11	0.03	Ug/L	No

Summary of Organic parameters tested during this reporting period or the most recent sample results				
Diazinon	Apr 26/11	0.02	Ug/L	No
Dicamba	Apr 26/11	0.20	Ug/L	No
1,2-Dichlorobenzene	Apr 26/11	0.41	Ug/L	No
1,4-Dichlorobenzene	Apr 26/11	0.36	Ug/L	No
Dichlorodiphenyltrichloroethane (DDT) + metabolites	Apr 26/11	0.01	Ug/L	No
1,2-Dichloroethane	Apr 26/11	0.35	Ug/L	No
1,1-Dichloroethylene (vinylidene chloride)	Apr 26/11	0.33	Ug/L	No
Dichloromethane	Apr 26/11	0.35	Ug/L	No
2-4 Dichlorophenol	Apr 26/11	0.15	Ug/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	Apr 26/11	0.19	Ug/L	No
Diclofop-methyl	Apr 26/11	0.40	Ug/L	No
Dimethoate	Apr 26/11	0.03	Ug/L	No
Dinoseb	Apr 26/11	0.36	Ug/L	No
Diquat	Apr 26/11	1	Ug/L	No
Diuron	Apr 26/11	0.03	Ug/L	No
Glyphosate	Apr 26/11	6	Ug/L	No
Heptachlor + Heptachlor Epoxide	Apr 26/11	0.01	Ug/L	No
Lindane (Total)	Apr 26/11	0.01	Ug/L	No
Malathion	Apr 26/11	0.02	Ug/L	No
Methoxychlor	Apr 26/11	0.01	Ug/L	No
Metolachlor	Apr 26/11	0.01	Ug/L	No
Metribuzin	Apr 26/11	0.02	Ug/L	No
Monochlorobenzene	Apr 26/11	0.03	Ug/L	No
Paraquat	Apr 26/11	1	Ug/L	No
Parathion	Apr 26/11	0.02	Ug/L	No
Pentachlorophenol	Apr 26/11	0.15	Ug/L	No
Phorate	Apr 26/11	0.01	Ug/L	No
Picloram	Apr 26/11	0.25	Ug/L	No
Polychlorinated Biphenyls(PCB)	Apr 26/11	0.04	Ug/L	No
Prometryne	Apr 26/11	0.03	Ug/L	No
Simazine	Apr 26/11	0.01	Ug/L	No
THM (NOTE: show latest annual average)	Q1-Q4 2013	4.2	Ug/L	No
Temephos	Apr 26/11	0.01	Ug/L	No
Terbufos	Apr 26/11	0.01	Ug/L	No
Tetrachloroethylene	Apr 26/11	0.35	Ug/L	No
2,3,4,6-Tetrachlorophenol	Apr 26/11	0.14	Ug/L	No
Triallate	Apr 26/11	0.01	Ug/L	No
Trichloroethylene	Apr 26/11	0.43	Ug/L	No
2,4,6-Trichlorophenol	Apr 26/11	0.25	Ug/L	No
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	Apr 26/11	0.22	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	Sample Date	Result Value	Unit of Measure	ODWS Criteria
Fluoride	Oct 21/13	1.1	mg/L	1.5

Part 2 – SUMMARY REPORT (as required by O. Reg. 170/03, Schedule 22)

Non – Compliance with Legislations, Regulations, Approvals & Orders

During this period, the Facility was operated in full compliance with the Act, the regulations and the Facility's approval, save and except for the following:

Requirement	Duration of Failure	Measures to Correct the Failure
No Non-Compliance in 2013		

System Capability Assessment		
Monthly Raw Water Taking (m ³ /d):		
Month	Average Flow	Maximum Flow
January	44	65
February	42	48
March	43	52
April	45	57
May	57	89
June	56	80
July	50	64
August	51	70
September	48	66
October	47	94
November	46	59
December	47	59
AVERAGE	48	67
MAXIMUM	57	94
SYSTEM CAPACITY	458	458
% CAPACITY	10.5	19.4