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February 26, 2013

Municipality of West Grey
402813 Grey Road 4
RR#2
Durham, ON
N0G 1R0

Attention: Ken Gould, Public Works Manager

**RE: Neustadt Drinking Water System
2012 Annual Report**

Ken,

Please find attached the 2012 Annual Operations Report for the Neustadt Drinking 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.

Finally, 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, 2013.

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

Sincerely,

AMERICAN WATER CANADA CORP.

Greg Prangley
Project Manager, Ontario Regional Projects

cc. AWC West Grey Operations

2012 ANNUAL REPORT FOR WATER SYSTEMS

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

Drinking-Water System Number:	220002147
Drinking-Water System Name:	Neustadt Drinking Water System
Drinking-Water System Owner:	Municipality of West Grey
Drinking-Water System Category:	Large Municipal Residential
Period being reported:	January 1 – December 31, 2012

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: n/a
Is your annual report available to the public at no charge on a web site on the Internet? <input type="checkbox"/> Yes <input checked="" 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. Municipality of West Grey Grey Road #4 Durham, ON N0G 2V0	Number of Designated Facilities served: n/a
	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	

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 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 checked="" type="checkbox"/> Public access/notice via other method
INCLUDED WITH TAX NOTICE		

Describe your Drinking Water System

<p>Three GUDI wells: Well No. 2 with a submersible pump capable of delivering 10.6 L/s; Well No. 3 with a submersible pump capable of delivering 6.1 L/s; and Well No. 1 with a submersible pump capable of delivering 3.2 L/s. Pumping station No. 2 transfers flow monitored raw water from Well No. 2 and Well No. 3 (each well with online turbidity meters) to Well No. 1 pumphouse. Well No. 1 pumphouse contains the treatment equipment, including, but not limited to, flow meters, sodium hypochlorite disinfection system (primary disinfection), UV disinfection system (which operates at all times water is</p>

sent to consumers), cartridge filters, online chlorine and turbidity analyzers, low level alarms and auto dialer.

List all water treatment chemicals used over this reporting period

Sodium Hypochlorite 12%

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

SCADA system upgrades \$170K total (Durham and Neustadt)

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					

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 Well #1	52	0	0-2	n/a	n/a
Raw Well #2	52	0	0	n/a	n/a
Raw Well #3	52	0	0	n/a	n/a
Treated (POE)	52	0	0	52	0-2
Distribution	104	0	0	58	0-3

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 - Treated	4860	0.00-0.90	NTU
Chlorine-Treated	4860	0.51-1.32	mg/L
Chlorine - Distribution	417	0.64-1.18	mg/L
Fluoride (If the DWS provides fluoridation)	NA	NA	

*

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	Range of Results	Unit of Measure
December 1, 2009	UV transmittance	2012 (monthly)	98.0-99.0	% transmittance

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

Parameter	Sample Date	Result Value POE	Distribution	Unit of Measure	Exceedance
Antimony	Aug 20/12	ND	-	mg/L	NO
Arsenic	Aug 20/12	ND	-	mg/L	NO
Barium	Aug 20/12	0.12	-	mg/L	NO
Boron	Aug 20/12	0.029	-	mg/L	NO
Cadmium	Aug 20/12	ND	-	mg/L	NO
Chromium	Aug 20/12	ND	-	mg/L	NO
Lead-see results below					
Mercury	Aug 20/12	ND	-	mg/L	NO
Selenium	Aug 20/12	ND	-	mg/L	NO
Sodium	Aug 20/12	5.3	-	mg/L	NO
Uranium	Aug 20/12	0.00023	-	mg/L	NO
Fluoride	Nov. 14/11	1.2	-	mg/L	NO
Nitrite	Feb 6/12	ND	-	mg/L	NO
Nitrate	Feb 6/12	ND	-	mg/L	NO
Nitrite	May 8/12	ND	-	mg/L	NO
Nitrate	May 8/12	ND	-	mg/L	NO
Nitrite	Aug 20/12	ND	-	mg/L	NO
Nitrate	Aug 20/12	ND	-	mg/L	NO
Nitrite	Nov. 12/12	ND	-	mg/L	NO
Nitrate	Nov. 12/12	ND	-	mg/L	NO

Summary of Lead Results during this reporting period (Winter: Dec. 15/11-April 15/12; Summer: June 15-Oct. 15/12)

Sampling Period	Range of Results (µg/L) from Residential Samples (# of Samples taken)	Non-residential locations	Distribution System	Any Adverse Water Quality Incidents?
Winter	n/a	n/a	n/a	NO
Summer	n/a	n/a	n/a	NO

As per O. Reg 170/03 Schedule 15.1-5, residential lead sampling is no longer required

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	Aug 20/12	ND	µg/L	NO
Aldicarb	Aug 20/12	ND	µg/L	NO
Aldrin + Dieldrin	Aug 20/12	ND	µg/L	NO
Atrazine + N-dealkylated metabolites	Aug 20/12	ND	µg/L	NO
Azinphos-methyl	Aug 20/12	ND	µg/L	NO
Bendiocarb	Aug 20/12	ND	µg/L	NO
Benzene	Aug 27/12	ND	µg/L	NO

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

Benzo(a)pyrene	Aug 27/12	ND	µg/L	NO
Bromoxynil	Aug 20/12	ND	µg/L	NO
Carbaryl	Aug 20/12	ND	µg/L	NO
Carbofuran	Aug 20/12	ND	µg/L	NO
Carbon Tetrachloride	Aug 27/12	ND	µg/L	NO
Chlordane (Total)	Aug 20/12	ND	µg/L	NO
Chlorpyrifos	Aug 20/12	ND	µg/L	NO
Cyanazine	Aug 20/12	ND	µg/L	NO
Diazinon	Aug 20/12	ND	µg/L	NO
Dicamba	Aug 20/12	ND	µg/L	NO
1,2-Dichlorobenzene	Aug 27/12	ND	µg/L	NO
1,4-Dichlorobenzene	Aug 27/12	ND	µg/L	NO
Dichlorodiphenyltrichloroethane (DDT) + metabolites	Aug 20/12	ND	µg/L	NO
1,2-Dichloroethane	Aug 27/12	ND	µg/L	NO
1,1-Dichloroethylene (vinylidene chloride)	Aug 27/12	ND	µg/L	NO
Dichloromethane	Aug 20/12	ND	µg/L	NO
2,4 Dichlorophenol	Aug 20/12	ND	µg/L	NO
2,4-Dichlorophenoxy acetic acid (2,4-D)	Aug 20/12	ND	µg/L	NO
Diclofop-methyl	Aug 20/12	ND	µg/L	NO
Dimethoate	Aug 20/12	ND	µg/L	NO
Dinoseb	Aug 20/12	ND	µg/L	NO
Diquat	Aug 20/12	ND	µg/L	NO
Diuron	Aug 20/12	ND	µg/L	NO
Glyphosate	Aug 20/12	ND	µg/L	NO
Heptachlor + Heptachlor Epoxide	Aug 20/12	ND	µg/L	NO
Lindane (Total)	Aug 20/12	ND	µg/L	NO
Malathion	Aug 20/12	ND	µg/L	NO
Methoxychlor	Aug 20/12	ND	µg/L	NO
Metolachlor	Aug 20/12	ND	µg/L	NO
Metribuzin	Aug 20/12	ND	µg/L	NO
(Mono)chlorobenzene	Aug 27/12	ND	µg/L	NO
Paraquat	Aug 20/12	ND	µg/L	NO
Parathion	Aug 20/12	ND	µg/L	NO
Pentachlorophenol	Aug 20/12	ND	µg/L	NO
Phorate	Aug 20/12	ND	µg/L	NO
Picloram	Aug 20/12	ND	µg/L	NO
Polychlorinated Biphenyls(PCB)	Aug 20/12	ND	µg/L	NO
Prometryne	Aug 20/12	ND	µg/L	NO
Simazine	Aug 20/12	ND	µg/L	NO
THM (NOTE: show latest annual average)	Q1 - Q4 2012	10.7	µg/L	NO
Temephos	Aug 20/12	ND	µg/L	NO
Terbufos	Aug 20/12	ND	µg/L	NO
Tetrachloroethylene	Aug 27/12	ND	µg/L	NO
2,3,4,6-Tetrachlorophenol	Aug 20/12	ND	µg/L	NO
Triallate	Aug 20/12	ND	µg/L	NO
Trichloroethylene	Aug 27/12	ND	µg/L	NO
2,4,6-Trichlorophenol	Aug 20/12	ND	µg/L	NO
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	Aug 20/12	ND	µg/L	NO

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

Trifluralin	Aug 20/12	ND	µg/L	NO
Vinyl Chloride	Aug 27/12	ND	µg/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	Nov. 14/11	1.2	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:

None during 2012

System Capability Assessment								
Comparison of Flow Rates (m ³ /d):								
Month	Average Flow	Maximum Flow	Well 1 Avg Flow	Well 1 Max Flow	Well 2 Avg Flow	Well 2 Max Flow	Well 3 Avg Flow	Well 3 Max Flow
January	96.8	120	0.2	2.0	96.1	120	0.3	4.0
February	98.9	126	0.2	2.0	98.3	126	0.3	3.0
March	95.4	333	17.6	118	71.0	333	18.7	94.0
April	102	129	22.9	37.0	32.3	129	46.7	77.0
May	125	254	15.6	74.0	75.2	185	34.3	176
June	122	181	18.4	56.0	64.6	180	40.9	146
July	146	211	0.8	22.0	144	211	1.6	45.0
August	128	179	0.1	2.0	127	177	0.2	4.0
September	124	167	15.3	42.0	73.9	167	35.2	95.0
October	112	161	13.1	34.0	65.3	161	33.3	93.0
November	105	150	15.6	39.0	57.0	122	35.2	90.0
December	108	205	16.4	39.0	50.9	205	40.3	98.0
AVERAGE	114		11.3		79.8		23.9	
MAXIMUM	-	333	-	118	-	333	-	176
SYSTEM CAPACITY	916	916						
% CAPACITY	12.4%	36.4%						

*Due to rounding, the sum of the monthly well average totals may not equal the total average flow

Each well pump is set to a certain flow rate to maintain compliance with C of A and PTTW. The Maximum Instantaneous flow rates (L/s) for each well pump are as follows:

Well	Max flow rate (L/s)	Approved limit (L/s)
Well #1	2.2	3.2
Well #2	9.0	10.6
Well #3	6.0	6.1