

Envirosphere Consultants Limited

Unit 5—120 Morison Drive, Box 2906, Windsor, Nova Scotia, B0N 2T0

ph: (902) 798-4022, fax: (902) 798-2614, e-mail: enviroco@ns.sympatico.ca, website: www.envirosphere.ca

Attn: Cecil Lockhart
Ellsworth Estates
55 Cedarwood
New Minas, NS
B4N 5J2

Re: Water sample results for Lot 77, Highway 221, Centreville, Ellsworth Estates
Sample received: December 27, 2012, Date of Bacterial Analysis: December 27-28, 2012.
Sample identification: 4373
NSE Registered Water Supply Number: 2001-018876

January 9, 2013

Cecil Lockhart,

Your water sample *passed* the Canadian Drinking Water Quality Guidelines as indicated below by the absence of bacteria in your water sample. All chemical constituents were acceptable *with the exception of iron, in addition, the water is considered hard* according to the Canadian Drinking Water Quality Guidelines. Please see below and the following pages for the acceptable limits according to the Canadian Drinking Water Quality Guidelines.

Results

E. coli	absent.	No evidence of sewage contamination (human or animal).
Total coliforms	absent.	No evidence of soil bacteria infiltrating into the well water via surface water.

Method Summaries—Total Coliform and E. coli: IDEXX, Colilert 24 hr, Defined Substrate Test: based on Standard Methods, 21st Edition, 2005 and online version. ECL Method 1. Microbial Presence Absence. More information is available upon request.

Chemical Analysis

Levels of the following chemicals or water quality measurements were unacceptable.

Hardness	Excessively hard water can be unacceptable as drinking water due to taste and/or odour, and as domestic water due to the tendency of hard water to require more detergent or soap for cleaning. Hard water is not a health concern.
Iron	Concentrations of iron above the guideline of 300 µg/L can stain laundry and plumbing fixtures, and cause undesirable tastes in beverages. It may also discolour the water, and promote the growth of certain micro-organisms, leading to the deposition of a slimy coat in pipes. This is not a health concern.

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Recommendations

Based on the results of your chemical test, you may wish to consult a water treatment professional to discuss the best system or combination of systems for the specific problems with your water.


Please note, Nova Scotia Environment requires that registered water supply owners test their water four times a year for bacteria and once a year or every two years for chemical/mineral tests.

Keep in mind that the quality of the results are dependent on the quality of the sample given. If you have any questions concerning your water sample results, we would be happy to address them.

Sincerely,



Heather Levy
Lab Manager

Report Checked by 

Complete Analysis Package (chemicals/minerals/bacteria)- Lot 77, Highway 221, Centreville, sample ID 4373, Ellsworth Estates (Supply Number: 2001-018876).

Determination	Result	Unit	Allowable Limits*	Regulation Status	Interpretation
Total Alkalinity (CaCO ₃)	110	mg/L		NR	Acceptable
Dissolved Chloride (Cl)	34	mg/L	≤ 250	AO	Acceptable
Color	< 5	TCU	≤ 15	MAC	Acceptable
Nitrate+Nitrite (as Nitrogen)	1.27	mg/L		NR	Acceptable
Nitrite (as Nitrogen)	< 0.05	mg/L	3.2	MAC	Acceptable
Ammonia (as Nitrogen)	0.02	mg/L		NR	Acceptable
Total Organic Carbon (C)	< 0.5	mg/L		NR	Acceptable
Orthophosphate (P)	0.02	mg/L		NR	Acceptable
pH	8.2	units	6.5-8.5	AO	Acceptable
Reactive Silica (SiO ₂)	9.4	mg/L		NR	Acceptable
Dissolved Sulfate (SO ₄)	9	mg/L	≤ 500	AO	Acceptable
Turbidity	0.3	NTU	≤ 1, ≤ 5 **	MAC, AO	Acceptable
Conductivity	393	uS/cm		NR	Acceptable
Bicarbonate Alkalinity (CaCO ₃)	110	mg/L		NR	Acceptable
Total Dissolved Solids (TDS)	191	mg/L	≤ 500	AO	Acceptable
Carbonate Alkalinity (CaCO ₃)	< 10	mg/L		NR	Acceptable

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Determination	Result	Unit	Allowable Limits*	Regulation Status	Interpretation
Hardness	168	mg/L	0-30 very soft 31- 60 soft 61-120 moderately soft 121-180 hard > 180 very hard	NR	Hard, Acceptable
Aluminum (Al)	160	µg/L	100/200***	AO	Acceptable
Antimony (Sb)	< 2	µg/L	6	MAC	Acceptable
Arsenic (As)	< 2	µg/L	10	MAC	Acceptable
Barium (Ba)	45	µg/L	1000	MAC	Acceptable
Beryllium (Be)	< 2	µg/L		NR	Acceptable
Bismuth (Bi)	< 2	µg/L		NR	Acceptable
Boron (B)	12	µg/L	5000	MAC	Acceptable
Cadmium (Cd)	< 0.017	µg/L	5	MAC	Acceptable
Chromium (Cr)	24	µg/L	50	MAC	Acceptable
Cobalt (Co)	< 1	µg/L		NR	Acceptable
Copper (Cu)	< 2	µg/L	≤ 1000	AO	Acceptable
Iron (Fe)	428	µg/L	300	AO	Unacceptable
Lead (Pb)	1.7	µg/L	10	MAC	Acceptable
Manganese (Mn)	< 2	µg/L	≤ 50	AO	Acceptable
Molybdenum (Mo)	< 2	µg/L		NR	Acceptable
Nickel (Ni)	< 2	µg/L		NR	Acceptable
Selenium (Se)	< 1	µg/L	10	MAC	Acceptable
Silver (Ag)	< 0.1	µg/L		NR	Acceptable
Strontium (Sr)	456	µg/L		NR	Acceptable
Thallium (Tl)	< 0.1	µg/L		NR	Acceptable
Tin (Sn)	< 2	µg/L		NR	Acceptable
Titanium (Ti)	< 2	µg/L		NR	Acceptable
Uranium (U)	2.9	µg/L	20	MAC	Acceptable
Vanadium (V)	< 2	µg/L		NR	Acceptable
Zinc (Zn)	186	µg/L	≤ 5000	AO	Acceptable
Calcium (Ca)	62.2	mg/L		NR	Acceptable
Magnesium (Mg)	3.2	mg/L		NR	Acceptable
Total Phosphorus (P)	0.05	mg/L		NR	Acceptable
Potassium (K)	2.7	mg/L		NR	Acceptable
Sodium (Na)	7.2	mg/L	≤ 200	AO	Acceptable

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Determination	Result	Unit	Allowable Limits*	Regulation Status	Interpretation
Nitrate (as Nitrogen)	1.27	mg/L	10	MAC	Acceptable
Fluoride (F-)	< 0.1	mg/L	1.5	MAC	Acceptable
E. coli	Absent				
Total Coliforms	Absent				

* Based on: Guidelines for Canadian Drinking Water Quality.

** Turbidity: the MAC guideline has been established for water entering the system, and the AO guideline is primarily for water leaving the tap.

*** This is an operational guidance value, designed to apply only to drinking water treatment plants using aluminum based coagulants.

Description of Terms:

NR = Not currently regulated;

MAC = Maximum Acceptable Concentration;

AO = Aesthetic Objective (based on consumer taste and visual preferences).

1mg/L = 1000µg/L

Note: The analyses for chemicals/minerals/metals were subcontracted to an accredited laboratory. *More information is available upon request.*