

Envirosphere Consultants Limited

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

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

Re: Water sample results for well house on Andrew Drive, Ellsworth Estates.
Sample received: December 12, 2016. Date of Bacterial Analysis: December 12 – 13, 2016.
Sample identification: 6592
NSE Registered Water Supply Number: 2001-018876

December 20, 2016

Cecil Lockhart,

Your water sample *passed* the Canadian Drinking Water Quality Guidelines as indicated below by the absence of bacteria in your water sample. Please see the following pages for the chemicals, which were all within the acceptable limits according to the Canadian Drinking Water Quality Guidelines. Please note, the water is considered hard.

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, 22nd Edition, 2012 and online version. ECL Method 1, Microbial Presence Absence. More information is available upon request.

Chemical Analysis

All chemical or water quality measurements were acceptable. Please note, the water is considered hard.


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.
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Recommendations

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 

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Complete Analysis Package (chemicals/minerals/bacteria)-Well House on Andrew Drive; sample ID 6592, Ellsworth Estates (Registered Water Supply Number: 2001-018876).

Determination	Result	Unit	Allowable Limits*	Regulation Status	Interpretation
pH	8.03	units	7.0-10.5	OG ¹	Acceptable
Reactive Silica (SiO ₂)	7.3	mg/L		NR	Acceptable
Chloride (Cl)	33	mg/L	≤ 250	AO	Acceptable
Fluoride (F ⁻)	< 0.12	mg/L	1.5	MAC	Acceptable
Sulfate (SO ₄)	8	mg/L	≤ 500	AO	Acceptable
Total Alkalinity (CaCO ₃)	115	mg/L		NR	Acceptable
Color	< 5	TCU	≤ 15	AO	Acceptable
Turbidity	0.9	NTU	≤ 1, ≤ 5 **	MAC, AO	Acceptable
Conductivity	344	uS/cm		NR	Acceptable
Nitrate+Nitrite (as Nitrogen)	1.04	mg/L		NR	Acceptable
Nitrate (as Nitrogen)	1.04	mg/L	10	MAC	Acceptable
Nitrite (as Nitrogen)	< 0.05	mg/L	1.0	MAC	Acceptable
Ammonia (as Nitrogen)	< 0.03	mg/L		NR	Acceptable
Total Organic Carbon (C)	1.6	mg/L		NR	Acceptable
Orthophosphate (P)	0.02	mg/L		NR	Acceptable
Total Sodium (Na)	7.4	mg/L	≤ 200	AO	Acceptable
Total Potassium (K)	2.5	mg/L		NR	Acceptable
Total Calcium (Ca)	65.4	mg/L		NR	Acceptable
Total Magnesium (Mg)	3.1	mg/L		NR	Acceptable
Total Phosphorus (P)	0.05	mg/L		NR	Acceptable
Bicarbonate Alkalinity (CaCO ₃)	115	mg/L		NR	Acceptable
Carbonate Alkalinity (CaCO ₃)	< 10	mg/L		NR	Acceptable
Hydroxide (OH)	< 5	mg/L		NR	Acceptable
Total Dissolved Solids (TDS)	193	mg/L	≤ 500	AO	Acceptable
Hardness	176	mg/L	0-30 very soft 31- 60 soft 61-120 moderately soft 121-180 hard > 180 very hard	NR	Hard, Acceptable
Total Aluminum (Al)	< 5	µg/L	100/200***	AO	Acceptable
Total Antimony (Sb)	< 2	µg/L	6	MAC	Acceptable
Total Arsenic (As)	< 2	µg/L	10	MAC	Acceptable
Total Barium (Ba)	46	µg/L	1000	MAC	Acceptable
Total Beryllium (Be)	< 2	µg/L		NR	Acceptable
Total Bismuth (Bi)	< 2	µg/L		NR	Acceptable
Total Boron (B)	7	µg/L	5000	MAC	Acceptable
Total Cadmium (Cd)	< 0.017	µg/L	5	MAC	Acceptable
Total Chromium (Cr)	< 1	µg/L	50	MAC	Acceptable
Total Cobalt (Co)	< 1	µg/L		NR	Acceptable
Total Copper (Cu)	< 1	µg/L	≤ 1000	AO	Acceptable
Total Iron (Fe)	74	µg/L	300	AO	Acceptable
Total Lead (Pb)	< 0.5	µg/L	10	MAC	Acceptable

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Complete Analysis Package (chemicals/minerals/bacteria)-Well House on Andrew Drive; sample ID 6592, Ellsworth Estates (Registered Water Supply Number: 2001-018876).					
Determination	Result	Unit	Allowable Limits*	Regulation Status	Interpretation
Total Manganese (Mn)	< 2	µg/L	≤ 50	AO	Acceptable
Total Molybdenum (Mo)	< 2	µg/L		NR	Acceptable
Total Nickel (Ni)	3	µg/L		NR	Acceptable
Total Selenium (Se)	< 1	µg/L	10	MAC	Acceptable
Total Silver (Ag)	< 0.1	µg/L		NR	Acceptable
Total Strontium (Sr)	507	µg/L		NR	Acceptable
Total Thallium (Tl)	< 0.1	µg/L		NR	Acceptable
Total Tin (Sn)	< 2	µg/L		NR	Acceptable
Total Titanium (Ti)	< 2	µg/L		NR	Acceptable
Total Uranium (U)	2.9	µg/L	20	MAC	Acceptable
Total Vanadium (V)	< 2	µg/L		NR	Acceptable
Total Zinc (Zn)	< 5	µg/L	≤ 5000	AO	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.

1 pH range for finished drinking water (Health Canada, 2015. Guidelines for Canadian Drinking Water Quality).

Description of Terms:

NR = Not currently regulated;

MAC = Maximum Acceptable Concentration;

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

OG = Operational Guideline.

1mg/L = 1000µg/L

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