RP261018014

LABORATORY ANALYSIS REPORT

NELSON ANALYTICAL LAB

120 York Street, Kennebunk, ME 04043
www.nelsonanalytical.com
(207)467-3478 phone

REPORT OF ANALYSIS

Laboratory ID: 226100467

NH ELAP Accreditation #NH2018
Maine State Certification # ME00015
Maine Radon Certification # ME17500

Report To : Anderson, Jon
188 Middle Rd
Waterboro, ME, 04087

Client Sample ID: Anderson, Jon

Enclosed are the analytical results for the sample(s) received by the laboratory. The results relate only to the sample(s) included in this report.This report must not be reproduced, except in full, without the written approval of the laboratory.

Drinking water test types are listed as Primary, Secondary or N/A. Primary standards are regulated by the EPA as a health-related parameter. Secondary standards are aesthetic parameters that are not regarded as a health concern. Parameters marked with N/A have no EPA primary or secondary standards associated with them.
Water samples analyzed for Total Coliform and E. coli bacteria are analyzed using Standard Methods 9223B using Colilert 18.
Tests marked with an * indicate parameters not accredited by the State of Maine for the method used. These parameters are accredited under our NH ELAP accreditation.
Nelson Analytical, LLC is currently accredited by the New Hampshire Environmental Lab Accreditation Program, ANAB, and the Maine Laboratory Accreditation Program.

For a list of current accredited tests, please visit the websites listed below.
https://www.maine.gov/dhhs/mecdc/environmental-health/dwp/professionals/labCert.shtml
https://www4.des.state.nh.us/OneStopPub/WSEB/acclab/2018.pdf

For past accreditation and analyte lists please call the laboratory at 207-467-3478 to obtain a copy.

NH ARSENIC NOTE: NH Department of Environmental Services (DES) has established a state Maximum Contaminant Level (MCL) for arsenic of 5 ppb (0.005 mg/L), which will take effect on July 1, 2021, for all NH public water systems. The current federal MCL for arsenic is 10 ppb (0.010 mg/L). For more information: https://www.des.nh.gov/sites/g/files/ehbemt341/files/documents/2020-01/dwgb-3-2.pdf

Some common abbreviations that you may find in this report are: mg/l = milligrams per liter (parts per million), ug/l= micrograms per liter (parts per billion), ND = Non-Detect (Not Detected at or above the Reporting Limit , MPN = Most Probable Number, <= Less than the reporting limit.

If you have any questions or concerns regarding this report, please do not hesitate to contact the laboratory at (207)467-3478.

All analyses were performed at Nelson Analytical unless otherwise noted. Any samples that have been subcontracted , if applicable, are clearly noted.

Thank you!

Sampling performed by the lab is according to the lab document "Water Sampling Instructions". EPA standards list pH & Chlorine as field parameters which should be tested immediately upon sample collection. Samples tested for pH after submission are beyond the hold time. Samples will be analyzed as quickly as laboratory operations allow. Metals samples preserved and analyzed on the same day do not meet the method criteria. #-Sample(s) received at laboratory do not meet method specified temperature criteria. #L-Sample(s) received in lobby and it was unable to be verified if they were in a cooler or on ice at receipt.
Solid samples are reported on a dry weight basis unless noted otherwise.
Subcontract Laboratories: SUB1: Nelson Analytical Manchester (NH1005) ME-NH01005 SUB 2: (NH 2136) (ME-CT00007),SUB3: (NH2001) (ME00019), SUB 4: NH2073 SUB5: (NH2530) (ME FL00117), SUB7: EAI Analytical (NH 1007),SUB 8: ME00002 SUB9: (NH2516) (MA00100)

Report Date: 10/18/2026 07:57

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REPORT OF ANALYSIS

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Maine State Certification # ME00015
Maine Radon Certification # ME17500

Client Name: Anderson, Jon

Date Reported : 10/18/2026

Client Sample ID: **Anderson, Jon**
Laboratory ID: **226100467.01**
Sample Location: **408 Stone Rd, West Newfield, ME - Untreated**
Sample Matrix : **Drilled Well Water**

Date Collected: **10/15/2026 07:30 PM**
Collected By : **J. Anderson**
Date Received : **10/16/2026 09:08 AM**
Temperature Rec'd °C: **8.8#**

Parameters	Results	Acceptable Level	Units	Date Analyzed	Test Method	Test Type	Test Remarks
Total Coliform Bacteria	Absent	Absent	P-A/100ml	10/16/2026 11:40	SM 9223B	Primary	Within EPA Standard
E. coli Bacteria	Absent	Absent	P-A/100ml	10/16/2026 11:40	SM 9223B	Primary	Within EPA Standard
Nitrate-N	<1.0	10	mg/L	10/16/2026 16:47	SM 4500 NO3	Primary	Within EPA Standard
Nitrite-N	<0.01	1.0	mg/L	10/16/2026 16:58	SM 4500 NO2B	Primary	Within EPA Standard
Fluoride	0.55	4.0	mg/L	10/16/2026 11:28	SM 4500F-C	Primary	Within EPA Standard
Arsenic	<0.0010	0.0100	mg/L	10/16/2026 17:14	EPA 200.8	Primary	Within EPA Standard
Lead	<0.001	0.015	mg/L	10/16/2026 17:14	EPA 200.8	Primary	Within EPA Standard
Copper	<0.010	1.30	mg/L	10/16/2026 17:14	EPA 200.8	Primary	Within EPA Standard
Chloride	<10	250	mg/L	10/16/2026 11:22	SM 4500Cl-B	Secondary	Within EPA Standard
pH	7.94	6.5-8.5	SU	10/16/2026 11:11	SM 4500H B	Secondary	Within EPA Standard
Iron*	<0.100	0.300	mg/L	10/16/2026 17:14	EPA 200.8	Secondary	Within EPA Standard
Manganese	0.037	0.050	mg/L	10/16/2026 17:14	EPA 200.8	Secondary	Within EPA Standard
Conductivity	180	N/A	umhos/cm	10/16/2026 11:11	SM 2510B	N/A	No EPA Limit
Alkalinity	82	N/A	mg CaCO3/L	10/16/2026 16:49	SM 2320B	N/A	No EPA Limit
Sodium*	9.9	N/A	mg/L	10/16/2026 17:14	EPA 200.8	N/A	No EPA Limit
Total Hardness*	66	N/A	mg/L	10/16/2026 17:14	SM 2340B	N/A	No EPA Limit
Radon	890	See Note	pCi/L	10/17/2026 02:37	SM 7500	N/A	No EPA Limit

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RADON NOTE: There is currently no legal or regulatory limit for radon in water. The EPA has a proposed limit of 4000 pCi/L. Maine and Vermont have recommended limits of 4000 pCi/L, and Massachusetts 10,000 pCi/L. New Hampshire DES recommends treatement for levels above 10,000 pCi/L, or above 2000 pCi/L if Radon in Air levels exceed 4 pCi/L. More information can be found at www.epa.gov/radon.

PRIMARY: Regulated by the EPA as a health related parameter SECONDARY: Aesthetic parameter - not regarded as a health concern

Tests marked with an * indicate parameters not accredited by the State of Maine. These parameters are accredited under our NH ELAP accreditation

Respectfully Submitted

Lorri Maling, Laboratory Director

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Date: 10/18/2026

NELSON ANALYTICAL LAB - TEST DESCRIPTIONS

RP261018014

Total Coliform & E. coli Bacteria (Limit = "ABSENT" per 100ml)

The organisms in the total coliform group are called indicator organisms. That is, if present, they indicate that there is a possibility, but not a certainty, that disease organisms may also be present in the water. When absent there is a very low probability of disease organisms being present in the water. The ability of the total coliform test to reliably predict the bacterial safety of water relative to the hundreds of possible diseases that might be present is critical since it is impossible, in a practical sense, to check separately for every disease organism directly on a monthly or quarterly basis. The presence of only Total Coliform generally does not imply an imminent health risk but does require an analysis of all water systems facilities and their operation to determine how these organisms entered the water system. Escherichia Coli (E. coli). This is a specific species (subgroup) within the coliform family. They originate only in the intestines of animals and humans. They have a relatively short life span compared to the more general Total Coliform. Their presence indicates a strong likelihood that human or animal wastes are entering the water system and have a much higher likelihood of causing illness.

Iron & Manganese (Secondary Limits = 0.3 & 0.05 mg/l respectively)

These occur naturally in New England's geology. They dissolve into groundwater as acidic rainfall percolates through the soil and rock. In higher concentrations, they can cause the following problems:

1. Staining on laundry and water fixtures.
2. Taste - a metallic or vinyl type taste in the water.
3. Appearance - occasionally will give an oily appearance,"crusty" sheen to the water's surface.
4. Clogging. - supports the growth of Iron bacteria. This non-health related bacteria can clog strainers, pumps, and valves.

EPA, at present, has not set health standards for iron. The EPA has established a health advisory for Manganese at 0.3 mg/L.

Hardness: The presence or absence of conventional hardness in drinking water is not known to pose a health risk to users. Hardness is normally considered an aesthetic water quality factor. The presence of some dissolved mineral material in drinking water is typically what gives the water its characteristic and pleasant "taste". At higher concentrations however, hardness creates the following consumer problems:

1. Produces white mineral deposits on tubs, showers, and dishes.
2. Reduces the efficiency of devices that heat water. As hardness deposits build in thickness, they act like insulation, reducing heat transfer.
3. Can reduce the ability of soaps to create suds, thus reducing the efficiency of cleaning ability. Can cause problems with laundry.

Nitrate & Nitrite Nitrogen (Limits = 10.0 & 1.0 mg/l respectively)

Nitrate is a component in fertilizer, and both nitrate/nitrites are found in sewage and sanitary wastes from humans and animals. Nitrate/nitrite concentrations are not normally high in New England's wells or surface waters. When elevated, the surrounding area is often heavily developed, used for agricultural purposes, or subject to heavy fertilization. Excessive levels of these nitrogen compounds in drinking water have caused serious illness and sometimes death in infants under six months of age. Symptoms include shortness of breath and blueness of the skin (methemoglobinemia).

Sodium & Chloride (Chloride = 250 mg/l): The compound known as "salt" consists of the elements sodium and chloride. Substantially higher levels of Sodium and Chloride tend to imply contamination by activities of man including road salt storage, use of road salts, and discharges from water softeners. Typical background levels of Sodium and Chloride for pristine locations in New England's are generally less than 15 mg/L and 30 mg/L respectively.

pH (Acceptable Range = 6.5 - 8.5): The pH of water is a measure of its acidity or alkalinity. A low pH indicates acidic water, which is therefore likely to be corrosive to household plumbing such as copper pipes. In older homes (prior to mid to late 1980's) the plumbing may also contain Lead in the soldered joints. Corrosive water will dissolve these metals from the plumbing into the water. Dissolved Copper & Lead in drinking water can be a health concern and can also be a maintenance concern as the water corrodes the plumbing in the home eventually causing water leaks.

Lead & Copper (Limits = 0.015 & 1.3 mg/l respectively)

Found in water with corrosive tendencies (see pH). There is an extremely low occurrence of naturally occurring lead & copper in water. It is nearly always from plumbing systems with copper lines and/or lead solder. Levels are highest after water has been stagnant in the pipes. The recommended method for testing Lead & Copper when plumbing is a concern is to sample water after it has been sitting in the pipes for 6 - 10 hours, without running the water at all prior to filling the bottle. This is called a "first draw" and simulates a worst-case test.

Uranium and Radioactivity (Limit = 30 ug/L for Uranium and 15 pCi/L for Gross Alpha

New England's bedrock contains naturally occurring radioactivity. A few examples include Radon, Radium 226, Radium 228, and Uranium. Radon is a gas (see separate description); the others are minerals. A Uranium health standard is set by the EPA at 30 ug/ml. The basic test to determine the total radioactivity from all these sources is Gross Alpha. Long term exposure to Uranium may cause changes to kidney disease or damage. Vermont has established a level of 20 ug/L for Uranium.

Alkalinity: A measure of water's acid neutralizing capacity. A low alkalinity in combination with low hardness may increase corrosive tendencies, especially in water that already has a pH below or at the low end of the acceptable range.

Arsenic (Limit = 0.005 mg/l- New Hampshire, Lim

Arsenic occurs naturally in New England. In fact, arsenic was mined commercially in New England during the 1800s. Arsenic also occurs as a result of human activities. Activities that could have left arsenic residuals include apple orchard spraying and coal ash disposal. Generally, it is not possible to predict if a well will have elevated arsenic.Only water quality testing can determine its presence and concentration in well water. Arsenic has been classified by the U.S. Environmental Protection Agency (EPA) as a human carcinogen (cancer causing agent.) Long term exposure to arsenic has been linked to cancer, cardiovascular disease, immunological disorders, diabetes, and other medical issues. New England's DES recommends that at least two tests be processed before concluding the well's arsenic concentration, as well water quality can change due to many factors. In July of 2021 the State of New Hampshire established a state MCL of 0.005 mg/L.

Radon (No regulated limit)

IMPORTANT NOTE: Radon levels may test significantly different when collected from a well that is not in a normal pattern of use, compared to Radon levels from same well when in normal daily use.

Radon gas is normally found in all well water. Bedrock wells typically have much higher levels than dug or point wells. The most significant concern is the inhalation of Radon from the air. Radon typically enters air via two common pathways:

1. Migration (up from the soil) into the house air through cracks and/or other openings in the foundation.
2. Release of dissolved radon gas into the air from water usage in the home.

In New England's, the migration of radon up from the soil contributes the largest percent of radon found in the average home. Radon from a groundwater type water supply source, particularly a bedrock (artesian, drilled) well, contributes the next largest percentage of radon in the home. The US EPA has set an advisory "action level" of 4 pCi/L for radon gas in indoor air. While not a mandated health standard, this level is a guideline for people to use in assessing the seriousness of their exposure to airborne radon. Studies show that high levels of radon gas in the air increase the risk of developing lung cancer. At present there is no federal or state regulated standard for radon in drinking water. In 2016, the New Hampshire Department of Environmental Services (NHDES) and the Maine Radon Program recommended that private wells with radon concentrations at or above 10,000 pCi/L be treated to reduce radon levels. Treatment for water with concentrations between 2000 and 10,000 pCi/L (in NH), or 4000 and 10,000 (in ME), may be advisable if the air concentrations in the home exceed 4 pCi/L. The EPA has proposed a limit of 4000 pCi/L, but this has never been enacted. Massachusetts recommends 10,000 pCi/L and Vermont 4,000 pCi/L. A useful equation developed by the EPA to determine the seriousness of Radon in water is that 1 pCi/L of Radon will develop in air for every 10,000 pCi/L in water.

Fluoride (limit = 2.0/4.0 mg/l secondary/primary): Fluoride occurs naturally in New England's bedrock. Fluoride has no taste, color, or odor and thus the only way to determine its concentration is by laboratory analysis. The Centers for Disease Control (CDC) have recommended 0.7 – 1.2 milligrams per liter (mg/L) as the optimum beneficial concentration of fluoride in drinking water for dental protection. Below 0.5 mg/L there is little tooth decay protection. Above 1.5 mg/L, there is little additional benefit. In the range of 2.0-4.0 mg/L of fluoride, staining of tooth enamel is possible. At concentrations above 4.0 mg/L, studies have shown the possibility of skeletal fluorosis as well as the staining of teeth. In its most severe form, skeletal fluorosis is characterized by irregular bone deposits that may cause arthritis and crippling when occurring at joints.

MtBE / Volatile Organic Compounds (VOC's)

MtBE is the abbreviation for the compound "methyl tertiary butyl ether". This compound is a colorless liquid added to gasoline. Thus, its presence in well water would indicate that gasoline contamination exists in the well. MtBE degrades very slowly, is highly soluble in water, and has very low taste and odorthresholds. The EPA has not set a formal health- based drinking water standard for MtBE. However, the NH. Department of Health and Human Services has recently developed a health-based drinking water standard for MtBE of 13 micrograms per liter (ug/L). Studies with animals suggest drinking water with high levels of MtBE may cause stomach irritation, liver and kidney damage, and nervous system effects. An increased amount of liver and kidney cancer was found in rats and mice breathing high levels of MtBE. Because of the animal studies on MtBE, New England's considers MtBE a possible human carcinogen. MtBE is tested in a group of approx. 70 compounds associated with petroleum or organic chemical contamination called Volatile Organic Compounds (VOC's). Many of these compounds are also known carcinogens.

Sulfide (Rotten Egg Odor): Sulfide can be formed naturally as a by-product of the decomposition of organic material possibly aided by the presence of non-hazardous sulfur reducing bacteria, or by chemical reactions of soil and bedrock minerals containing sulfur. At the concentrations typically found in drinking water, it is not hazardous to health. It is also important to note that the odor threshold for sulfide is considerably lower than the point at which our laboratory test detects it. So, you may smell it before we can find it.

Conductivity: A very basic test measuring the total dissolved mineral content of water. Includes all individual minerals separately listed on this page.