NH DIVISION OF
Public Health Services
Improving health, preventing disease, reducing costs for all

Wednesday, January 20, 2016

MICHAEL OLEARY
80 LADIEU RD
PLAINFIELD NH 03781

RE: Workorder: A510068 - STANDARD ANALYSIS

Dear MICHAEL OLEARY:

Enclosed are the analytical results for the sample(s) received by the laboratory on Thursday, Dec 17, 2015. Results reported conform to the most current NELAC standard, where applicable, unless otherwise narrated in the body of the report. Any results reported for samples subcontracted to another laboratory are indicated on the report. Please refer to http://www2.des.nh.gov/CertifiedLabs/Certified-Method.aspx for a copy of our current NELAP certificate and accredited parameters.

There are no state requirements for testing the water quality of private wells. The values in the "Limits" column of the Analytical Results reflect those set by the Environmental Protection Agency (EPA) for public water systems. For results that exceed these criteria, Fact Sheets are included in the report addendum to provide further information about the contaminant and available treatment options. Additional water quality Fact Sheets and related materials can be found at http://des.nh.gov/organization/commissioner/pip/factsheets/dwgb/index.htm.

We appreciate the opportunity to provide this analytical service for you. If you have any questions regarding this report or your results, please feel free to contact us.

The following signature indicates technical review and acceptance of the data.

Sincerely,

Rachel Rainey

Rachel Rainey

Authorized Signature

Enclosures

REPORT OF LABORATORY ANALYSIS

nelac

NH DIVISION OF
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New Hampshire Public Health Laboratories
Department of Health and Human Services
29 Hazen Dr., Concord NH 03301
Phone: (603) 271-3445
Fax: (603) 271-2997

DATA QUALIFIER DESCRIPTIONS

Workorder: A510068 - STANDARD ANALYSIS

The following are a list of some column headers and abbreviations with their meanings as used throughout the analysis report. Referring to them will assist you in interpreting your report.

RDL= The lowest value the laboratory calibrates its instrumentation for this parameter. Any instrumental estimate of results below the Report Limit is reported as Not Detected (ND).

DF= For some heavily contaminated samples, the laboratory must dilute samples to keep the final number within its calibration scale. This is referred to as the Dilution Factor. Final results and reporting limits are adjusted relative to the DF used.

QUAL= Indicates that the result has been qualified. Refer to the Analytical Report Comments and Qualifiers page for details.

LIMIT= Reflects the Maximum Contamination Level (MCL), if one exists, a secondary or recommended level or another State or Federal action level.

Surrogates = For some analyses, the laboratory adds a number of compounds to monitor analytical performance. These results are provided for your information.

> = Greater than	< = Less than
mg/L = milligrams per Liter	ug/L = micrograms per Liter
mg/kg = milligrams per kilogram	ug/kg = micrograms per kilogram
P-A = Present/Absent	CTS/100 mL = Counts per 100 milliliters
CFU = Colony forming unit	MPN = Most Probable Number

pCi/L = picoCuries per Liter

J = Estimated value; analyte detected at less than the Reporting Limit but greater than the laboratory's Method Detection Limit.

B = Analyte detected in the method blank for the batch of samples. Its presence in the sample may be suspect.

E = Estimated value; result exceeded the upper calibration level for the parameter.

Radiological results are expressed as a number + an uncertainty factor. Uncertainty is a calculated measure of the precision around the reported value.

All results for pH and residual chlorine samples analyzed more than 15 minutes after time of collection shall be considered QUALIFIED.

For assistance in interpreting your lab results and obtaining information regarding water treatment; go to www.des.nh.gov and search "Be Well Informed." Or go to http://xml2.des.state.nh.us/DWITool/.

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ANALYTICAL REPORT COMMENTS AND QUALIFIERS

Workorder: A510068 - STANDARD ANALYSIS

Sample Comments

Phone Number: 469-3233
Type of Sample: DRILLED
Well disinfected/last 6 mos.?: N
Is a Treatment system on-line?: N
Check Number: 4040

Receiving Codes

T1 - Sample temperature noncompliant

Parameter Footnotes

[1] SAMPLE WAS DIGESTED

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ANALYTICAL RESULTS

Workorder: A510068 - STANDARD ANALYSIS

Lab ID: **A510068001** Matrix: WATER
Sample ID: **PLAINFIELD** Sample Type: SAMPLE
Description: 351 STAGE ROAD PLAINFIELD TOWN GARAGE Collector : MICHAEL OLEARY

Parameters	Results	Units	RDL	DF	Prepared	Analyzed	Limit	Qual
Microbiology								
Preparation Method: SM 9223B								
Analytical Method: SM 9223B								
Total Coliform, P/A, CHR/FLU	PRESENT	P-A/100mL		1	12/17/2015 12:37	12/18/2015 13:09		
E.Coli, P/A, CHR/FLU	ABSENT	P-A/100mL		1	12/17/2015 12:37	12/18/2015 13:09		
Inorganics								
Preparation Method: EPA 200.2								
Analytical Method: EPA 200.7								
Copper	ND	mg/L	0.050	1	12/29/2015 14:11	1/11/2016 12:42	1.3	
Copper, Stagnant	1.40	mg/L	0.050	1	12/29/2015 14:11	1/11/2016 12:55	1.3	1
Hardness	77.3	mg/L	3	1	12/29/2015 14:11	1/11/2016 12:42		
Iron	0.088	mg/L	0.050	1	12/29/2015 14:11	1/11/2016 12:42	0.3	
Manganese	ND	mg/L	0.010	1	12/29/2015 14:11	1/11/2016 12:42	0.05	
Sodium	74.7	mg/L	1.00	1	12/29/2015 14:11	1/11/2016 12:42	250	
Preparation Method: EPA 200.2								
Analytical Method: EPA 200.8								
Arsenic	ND	mg/L	0.0010	1	12/22/2015 10:00	12/29/2015 10:58	0.01	
Lead	ND	mg/L	0.0010	1	12/22/2015 10:00	12/29/2015 10:58	0.015	
Lead, Stagnant	0.1762	mg/L	0.0010	1	12/22/2015 10:00	12/29/2015 12:16	0.015	
Uranium	ND	ug/L	1.0	1	12/22/2015 10:00	12/29/2015 10:58	30	
Wet Chemistry								
Analytical Method: LACHAT 10-117-07-1-B								
Chloride	100	mg/L	3.0	1		12/17/2015 14:28	250	
Analytical Method: LACHAT 10-107-04-1-C								
Nitrate-Nitrogen	0.56	mg/L	0.050	1		12/17/2015 14:28	10	
Analytical Method: SM 4500-H+B								
pH	7.05	units	1.0	1		12/17/2015 14:15		
Analytical Method: LACHAT 10-109-12-2-A								
Fluoride	ND	mg/L	0.20	1		12/17/2015 14:28	4	
Analytical Method: LACHAT 10-107-04-1-C								
Nitrite-Nitrogen	ND	mg/L	0.050	1		12/17/2015 14:28	1	

Date: 01/20/2016

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ANALYTICAL RESULTS

Workorder: A510068 - STANDARD ANALYSIS

Lab ID: **A510068001**
Sample ID: **PLAINFIELD**
Description: 351 STAGE ROAD PLAINFIELD TOWN GARAGE

Matrix: WATER
Sample Type: SAMPLE
Collector : MICHAEL OLEARY

Parameters	Results	Units	RDL	DF	Prepared	Analyzed	Limit	Qual
Analytical Method: LACHAT 10-107-04-1-C								
Nitrate+Nitrite-Nitrogen	0.57	mg/L	0.050	1		12/17/2015 14:28		

ENVIRONMENTAL
Fact Sheet

NEW HAMPSHIRE DEPARTMENT OF Environmental Services

29 Hazen Drive, Concord, New Hampshire 03301 • (603) 271-3503 • www.des.nh.gov

ARD-EHP-9 2013

Copper: Health Information Summary

Copper is a naturally-occurring metallic element that occurs in soil at an average concentration of about 50 parts per million (ppm). It is present in all animals and plants and is an essential nutrient for humans and animals in small amounts.

The major sources of environmental copper releases include the mining, smelting and refining of copper, industries producing products from copper such as wire, pipes and sheet metal, and fossil fuel combustion. Water pipes are often made of copper and bath fixtures may be made from brass and bronze alloys that contain copper. The principal source of copper in drinking water results from the leaching of copper from pipes and bath fixtures due to acidic water. Blue-green stains left in bath fixtures are a sign of the presence of copper in water.

Other releases of copper to the environment include agricultural use against plant diseases and treatments applied to water bodies to eliminate algae.

Health Effects

Absorption/Metabolism

Studies investigating oral absorption of copper have found the percentage absorbed ranging from 24-60 percent. Factors affecting the amount absorbed include the amount of copper in the diet and competition with other metals found in food such as iron and zinc. There are no studies examining inhalation exposure to copper. The amount of dermal absorption is also not known, but a few studies indicate that it is very low.

Beneficial Effects

Copper is a component of several enzymes necessary for normal metabolic functions in humans. The Recommended Daily Allowance (RDA) of copper for adults is 0.9 milligrams (mg). The median intake of copper from the typical U.S. diet ranges from 1 to 1.6 mg/day. The safe highest level of intake for an extended period of time (chronic exposure) is 10 mg/day. Food sources rich in copper include shellfish, organ meats, nuts, beans and cocoa.

Effects of copper deficiency can include anemia, low numbers of white blood cells, osteoporosis in infants and children, and defects in connective tissue leading to skeletal problems.

Lead in Drinking Water

Lead is a highly toxic metal that can cause serious health problems, especially for babies, children, and pregnant women. Too much lead in the body can harm the brain, kidneys, nervous system and red blood cells.

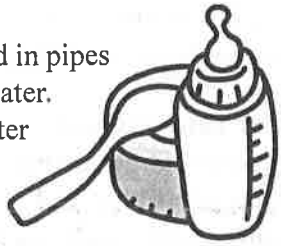
Young children and babies are most at risk to lead because their bodies are still growing. Children's bodies take in and keep more lead than adults. Large amounts of lead in the blood can affect a child's ability to learn and how they act. A fetus can also be affected by a woman being around lead before and during pregnancy.

The U.S. Environmental Protection Agency (EPA) has set the highest level for lead at .015 milligrams per liter (15 parts per billion) for drinking water. Steps should be taken to reduce lead if it is present.

Sources

Lead water pipes were commonly used until the 1940's. Lead solder was used until 1986; however, it is still around and may sometimes be used in the pipes in a house.

Lead in drinking water comes from the corrosive action of the water (especially soft water) on lead pipes and fittings, galvanized iron pipes and fittings, lead solder, and brass or chrome fixtures. It can be found in both public and private water systems and in pipes in the house.



Hot water dissolves lead in pipes more easily than cold water. For that reason, hot water should **not be used** for making baby food, formula or for cooking.

Boiling tap water will NOT reduce the amount of lead in your water.

Bathing and showering should be safe for you and your children, even if the water has lead in it over EPA's action level. Human skin does not take in lead from water.

Testing

You cannot see, smell or taste lead in your water. The only way to know if lead is in water is to have it tested. For public or community water supplies, ask your water provider if the water has lead in it. For private wells, call the NH Department of Environmental Services (DES). A "first draw" water sample - the very first water out of the tap after no water use for 6-8 hours - can be tested for lead. If lead is there, a flushed sample should be tested.

Treatment

FLUSH THE PIPES - In most cases, flushing out pipes will reduce the lead level. To flush the lines, let the water run for a few minutes until it is as cold as it gets. At this point, another water sample can be taken to see if the flushing was successful. If your second test shows more than .015 milligrams of lead per liter, the source of lead should be removed.

USE A FILTRATION SYSTEM - Check the manufacturer's information to be sure the product you choose can reduce lead to at least .015 milligrams per liter of water. Sediment filters do not remove lead.

OVER →

NH Department of Health & Human Services, Division of Public Health Services, Childhood Lead Poisoning Prevention Program

800-897-LEAD

rev. 4/07

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December 21, 2015

MICHAEL O'LEARY

80 LADIEU RD
PLAINFIELD NH 03781

The **microbiology** results for sample **A510068001** located at **351 STAGE RD-PLAINFIELD TOWN GARAGE / PLAINFIELD** complete. Your completed final report will follow in the mail at a later date, but we want to inform you that your analysis showed the presence of bacteria. Please note the following bacteria were Present:

Total coliform	PRESENT

Description of possible result:

Total coliform bacteria are a group of easily cultured organisms used in water testing to determine the microbiological quality of drinking water. The total coliform bacteria group includes environmental species, found in soil, on plants, and in surface water; and fecal species, found in the intestines of warm-blooded animals, including humans. They are not normally found in ground water. Testing for specific disease causing organisms can be difficult, time consuming and expensive. While most total coliforms are not considered pathogens under normal conditions, if testing confirms coliform bacteria as being present, there is a possibility that more serious disease causing viruses, bacteria, and parasites may also be present in the water.

E. coli is a specific species (subgroup) of coliform bacteria normally found in the digestive systems of warm-blooded animals, including humans. A positive test may indicate that human or animal waste, possibly containing disease causing organisms, has entered into your water system.

If your test result indicates the presence of *E. coli*, we recommend that you do not drink the water. The Centers for Disease Control (CDC) **www.cdc.gov**, offers the following guidance until your water supply is tested and found safe.

- Use only bottled, boiled, or treated water for drinking, cooking or preparing food, washing dishes, cleaning, brushing your teeth, washing your hands, making ice, and bathing until you have an acceptable bacteria test. If your water supply is limited, you can use alcohol-based hand sanitizer for washing your hands.
- Boiling water, when practical, is the preferred way to kill harmful bacteria and parasites. Bringing water to a rolling boil for 1 minute will kill most organisms. Boiling will not remove chemical contaminants.
- If you can't boil water, you can treat water with chlorine tablets, iodine tablets, or unscented household chlorine bleach (5.25% sodium hypochlorite). If you use chlorine tablets or iodine tablets, follow the directions that come with the tablets. If you use household chlorine bleach, add 1/8 teaspoon of bleach per gallon of water if the water is clear. For cloudy water, add 1/4 teaspoon of bleach per gallon. Mix the solution thoroughly and let it stand for about 30 minutes before using it. Treating water with chlorine tablets, iodine tablets, or liquid bleach will not kill many parasitic organisms. Boiling is the best way to kill these organisms.

Proper well location and construction are keys to avoiding bacterial contamination of drinking water. Prior to disinfection, attempt to identify and eliminate the source of the contamination. Additional reference information has been included with this letter.

To obtain accurate results, it is very important that all samples be taken according to the directions provided with the sample container(s). Additional sampling test kits can be obtained by calling 271-3445 or on line at: http://www2.des.state.nh.us/DESOnestop/HOBottles.aspx

PRIOR TO DISINFECTION

Detailed well construction fact sheets, which describe proper well construction, are available on the web at http://des.nh.gov/organization/commissioner/pip/factsheets/dwgb/index.htm for "Dug Well Design" and "Bedrock Well Design". If web access is unavailable, please call the DES Public Information Center (PIC) at 271-2975 to obtain Fact Sheet copies. For more information, please call the DES Drinking Water and Groundwater Bureau at (603) 271-2513.

Total coliform bacteria should not be present in private well water. If they are present, disinfection is recommended. However, before disinfecting the well, several steps should be taken.

Well Inspection Carefully inspect the well to identify any potential pathway(s) that allowed bacteria to enter the well. If there are structural deficiencies in the well that are not addressed, bacterial contamination will reoccur. The vast majority of bacterial occurrences in wells can be linked to easily corrected construction problems.

Well Location The location of the well is critical. Make sure it is not near surface water, septic systems, animals, etc. For more information on proper well location, see one of the Well Design Fact Sheets referenced above.

Flushing the System Flushing is the best way to clean your well and stabilize its water quality. Chlorine cannot kill bacteria entrapped within mud, rust or other solids. In order to achieve total bacterial kill, all components of the system must be flushed to a clean condition. Flush through outside hose taps to avoid overloading your septic tank or leach field until the water runs clear. Be sure to bypass any treatment devices until discussing disinfection with a treatment device installer or manufacturer.

New and stagnant wells should also be flushed before disinfection begins. It is not unusual for new wells or new plumbing to have high levels of bacteria resulting from the drilling and plumbing processes. It may be necessary to disinfect more than once.

Treatment Systems Treatment systems can harbor bacteria. Filters with slime indicate biofilm formation and may require changing filters, membranes and bleaching the housing. Clean gloves should be worn to change filters and membranes, to add salt, etc. Always check the manufacturer's instructions before bleaching a treatment system. If convenient, collecting a water sample for analysis before the treatment system, but as close to the well as possible, may help rule out well contamination. If the well is not contaminated, you can disinfect from the holding tank or treatment system.

Other contamination possibilities might include crushed pipes, lightning strikes, hitting the well, construction in the area, blasting, cross connected pipes, or changes to the plumbing.

Please Note: There are many different but effective ways to disinfect a well. The procedure described here is one suggestion. Your specific circumstance may warrant a different method. Additional information on disinfection is available from various internet sources, such as: www.des.nh.gov, www.maine.gov, www.vt.gov and from water treatment companies and pump installers.