WESTCHESTER COUNTY HEALTH DEPARTMENT

RULES & REGULATIONS

FOR

PRIVATE WELL WATER TESTING

IN

WESTCHESTER COUNTY, NEW YORK

Adopted by the Commissioner pursuant to
Section 873.203 and Section 707.10
of the Laws of Westchester County

Effective Date November 19, 2007

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1.0 General Provisions

These Rules & Regulations for Private Well Water Testing in Westchester County (the "Rules & Regulations") supplement the Private Well–Water Testing Law, Chapter 707 of the Laws of Westchester County. The Private Well–Water Testing Law ("the Law") was duly adopted on May 23, 2007 and effective November 19, 2007. Please refer to the Law for compliance details. Both the Rules & Regulations and the Law may be found at the Westchester County Department of Health ("the Department") website www.westchestergov.com/health .

The Private Well–Water Testing Law generally applies to real properties served by potable private wells, and requires; testing of private well-water systems upon the sale of any real property, and testing of private well-water systems upon the lease of any real property with required routine testing thereafter in the manner established, and for at least the parameters required by the Law. The Law also requires that all new private wells, prior to first use, and all private wells not in use as a potable water supply for a period of five (5) years must be tested in the manner established, and for at least the parameters required by the Law. The Law does not apply to real property served by a Public Water Supply as defined by Part 5, Subpart 5-1, Section 5-1.1(ay) of the New York State Sanitary Code (NYSSC) where the potable water supply has five (5) or more service connections or regularly serves an average of twenty-five (25) or more individuals daily for at least sixty (60) days out of the year.

All private well water potable water supplies tested pursuant to the Law shall be tested for at least the following: (1) primary parameters: bacteria (total coliform); either fecal coliform or Eschericia coli (e-coli) if the sample tests positive for total coliform bacteria; nitrate; arsenic; lead; all primary organic contaminants (POCs) included in Part 5 of the New York State Sanitary Code; vinyl chloride; and methyl-tertiary-butyl-ether (MTBE); and (2) secondary parameters: pH; iron; manganese; sodium; and chloride, and any additional parameters required by these Rules and Regulations. Results of other parameters tested, that are not required to be tested under the Law or the Rules and Regulations, shall not be reported by the Certified Laboratory to the Department. However, the public is advised to contact the Department should there be any questions regarding the results of other parameters tested.

Appendix A of the Rules & Regulations lists all individual parameters that must be tested pursuant to the Law with their corresponding Maximum Contaminant Level (MCL), Sources in Drinking Water, Health Effects, and Recommended Treatment.

Only Certified Laboratories are authorized to conduct the water tests, and only employees of these laboratories or Authorized Representatives of the Certified Laboratories may collect water samples pursuant to the Law. The Law also establishes the location from, and the conditions under which the water testing must be performed.

In addition, the Law mandates that Certified Laboratories submit all required test results directly to the Department as well as the person(s) who requested the test. Further, with regard to sales of property, the law contains provisions on the rights and responsibilities of both sellers and purchasers whenever there is a primary parameter water test failure. Also, the law sets forth the procedural requirements placed on sellers, purchasers, lessors or owners, as appropriate, to remediate or correct the condition of a primary parameter water test failure to establish safe levels of contaminants. Finally, the law establishes civil penalties for non-compliance.

2.0 Water Testing

- If the results of water testing performed in accordance with Sections 707.03, 707.04 or 707.05 of the Law indicate a primary parameter water test failure, then initial confirmation sampling shall be performed by the Certified Laboratory. This initial confirmation sampling shall be required to be performed for only the primary parameter(s) in failure, and shall be required to be performed as soon as practical but within 7 days of receiving result(s) of such water test failure from the Certified Laboratory. Should the results of any primary parameters tested in initial confirmation sampling now meet water quality standards for drinking water, then further confirmation sampling shall be performed by the Certified Laboratory for these primary parameters only, and shall be required to be performed as soon as practical but within 7 days of receiving result(s) of initial confirmation sampling from the Certified Laboratory. Should the results of any of the primary parameters tested in the further confirmation sampling again meet water quality standards for drinking water then the condition created by the original primary parameter water test failure shall be considered corrected and remediated in compliance with Section 707.06 of the Law. Confirmation sampling shall be limited to the foregoing. Further, confirmation sampling shall be performed at the same sampling point and under the same conditions as the original testing performed in accordance with Sections 707.03, 707.04 or 707.05 of the Law. Should the results of either confirmation sampling not meet water quality standards for drinking water, then there exists a primary parameter water test failure which requires remediation pursuant to Section 707.06 of the Law.

3.0 Remediation and Treatment

- In the event that any part of a residence is occupied at the time a water test discloses a primary parameter water test failure or becomes occupied thereafter, the owner of the property shall immediately provide potable water for drinking, cooking, and food preparation, and continue to provide potable water until such time that the condition is corrected or remediated. In the case of a lead water test failure, bottled water, certified by the New York State Department of Health, shall be provided.

- Upon a primary parameter water test failure, remediation required to correct the condition to achieve safe levels of contaminants shall include one or more of the following actions or other method of remediation acceptable to the Department:
  - ❖ Satisfactory well disinfection[1]
  - ❖ Well repair
  - ❖ Abandonment of the existing private well and construction of new private well
  - ❖ Abandonment of the existing private well and connection to a regulated Public Water Supply
  - ❖ Replacement of plumbing fixtures, interior household plumbing, and/or water service line from private well. This applies to a lead water test failure only
  - ❖ Installation of a Water Treatment System(s)[2], as defined by Section 707.01.18, to serve the Whole House[3] or Points Of Use[4] as follows:
    - ➢ Water Treatment Systems shall be installed to serve the Whole House[3] or Points Of Use[4] dependant upon cited parameters as follows:
      - Whole House:
        - o Bacteria
        - o Primary Organic Contaminants(POCs)
        - o Vinyl Chloride
        - o Methyl-Tertiary-Butyl-Ether(MTBE)
      - Points Of Use:
        - o Lead
      - Whole House or Points Of Use:
        - o Nitrate
        - o Arsenic
- Upon remediation of the condition created by a primary parameter water test failure, a subsequent water test(s) must be conducted within thirty (30) days establishing a safe level of contaminants, pursuant to Section 707.06.C of the Law and as follows:
  - ❖ If remediation required to correct the condition to achieve safe levels of contaminants involved only well repair then a single subsequent water test is required from a single Point Of Use[4]
  - ❖ If remediation required to correct the condition to achieve safe levels of contaminants involved only abandonment of the existing private well and connection to a regulated Public Water Supply, then no subsequent water test is required and the condition created by a primary parameter water test failure shall be considered corrected and remediated in compliance with Section 707.06 of the Law.
  - ❖ If remediation required to correct the condition to achieve safe levels of contaminants involved replacement of plumbing fixtures, interior household plumbing, and/or water service line from private well, then a subsequent water test is required from each Point Of Use[4]. This applies to a lead water test failure only.
  - ❖ If remediation required to correct the condition to achieve safe levels of contaminants involved only installation of a Water Treatment System[2] to serve

the Whole House[3], then a single subsequent water test is required from a single Point Of Use[4].

- ❖ If remediation required to correct the condition to achieve safe levels of contaminants involved installation of a Water Treatment System[2] at each Point Of Use[4], then a subsequent water test is required from each Point Of Use[4].

- The condition created by a primary parameter water test failure shall be considered corrected and remediated upon subsequent water testing establishing a safe level of contaminants as indicated by analytical results from a Certified Laboratory which do not exceed maximum contaminant levels or action level for the primary parameters tested. Such subsequent water testing shall follow one or more of the remedial actions listed above.
- Should results of any subsequent water testing not meet water quality standards for drinking water, then there continues to exist a primary parameter water test failure which requires other remedial action pursuant to Section 707.06 of the Law.

Footnotes-

[1]Well, Water Storage Tank, and Household Plumbing Disinfection Procedure in Appendix B shall be followed. Following such procedure, testing for bacteria (total coliform); and either fecal coliform or Eschericia coli (e-coli) if the sample tests positive for total coliform bacteria, shall be performed by the Certified Laboratory at the same sampling point and under the same conditions as the original testing performed in accordance with Sections 707.03, 707.04 or 707.05 of the Law. Should the results of such testing meet water quality standards for drinking water then subsequent testing shall be performed by the Certified Laboratory after at least 7 days of normal water use at the property after receiving such results from the Certified Laboratory. The well shall be considered to be satisfactorily disinfected if the subsequent testing meets water quality standards for drinking water; and the condition created by the original bacteria water test failure shall be considered corrected and remediated in compliance with Section 707.06 of the Law. Should results of any testing for bacteria following the disinfection procedure not meet water quality standards for drinking water, then there exists a primary parameter water test failure which requires other remedial action pursuant to Section 707.06 of the Law.

[2]Information on home water treatment systems and how to find vendors and manufacturers of such systems may be found at the USEPA website http://www.epa.gov/safewater/faq/pdfs/fs_healthseries_filtration.pdf . In addition, the following terms may be useful in conducting searches on the web: “Drinking Water Treatment Systems”, “Point Of Entry Drinking Water Treatment”, “Water Filters”, and “UV System”.

[3]Whole House shall be defined as the entire potable water system of the subject property.

[4]Points Of Use shall be defined as kitchen faucets and other faucets, spigots or taps intended for drinking, cooking or food preparation and shall include all bathroom faucets, refrigerator water and ice dispensers, and all other food service

and drink dispensing devices directly connected to the potable water system of the subject property. For purposes of compliance with this Section, Points Of Use shall not include tubs and showers where only incidental water consumption may occur.

4.0 Certified Laboratory Requirements

- Certified Laboratories shall be required to submit electronically or by means of a public web application maintained by the Department, all required water test results and other information required to be submitted pursuant to the Law and the Rules & Regulations.
- A Certified Laboratory shall be required to be registered with the Department to submit electronically or by means of a public web application maintained by the Department, all required water test results and other information required to be submitted pursuant to the Law and the Rules & Regulations.
- Results of other parameters tested, that are not required to be tested under the Law or the Rules and Regulations, shall not be reported by the Certified Laboratory to the Department.
- Before any Authorized Representative of a Certified Laboratory may collect water samples pursuant to the Law, the Certified Laboratory shall provide necessary and adequate training to the Authorized Representative regarding the collection of water samples and other information pursuant to the Law and the Rules & Regulations.
- An Authorized Representative shall be a third party in relation to the property owner, seller, purchaser, lessor, and lessee as applicable and shall not have any vested interest in the property and/or property transfer.
- A Private Well Water Testing Reporting Form shall be completed in its entirety upon any collection of water samples pursuant to the Law.
- All information collected on the Private Well Water Testing Reporting Form shall be submitted by the Certified Laboratory to the Department.

Appendix A

Table 1 – Primary Parameters

Information obtained from the New York State Department of Health Website
http://www.health.state.ny.us/environmental/water/drinking/ccr/table1.htm and
http://www.epa.gov/safewater/contaminants/index.html#mcls

Contaminant	MCL*	Sources in Drinking Water	Health Effects	Recommended Treatment**
Total Coliform Bacteria	Any positive sample	Naturally present in the environment.	Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.	Ultraviolet Disinfection Systems
E. Coli	Any positive sample	Human and animal fecal water.	E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, and people with severely compromised immune systems.	Ultraviolet Disinfection Systems
Nitrate	10 mg/l	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.	Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue-baby syndrome.	Reverse Osmosis Filters

Contaminant	MCL*	Sources in Drinking Water	Health Effects	Recommended Treatment**
Arsenic	10 ug/l	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.	Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.	Reverse Osmosis Filters or Activated Alumina Filters
Lead	AL=15 ug/l	Corrosion of household plumbing systems; Erosion of natural deposits.	Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.	Reverse Osmosis Filters
Vinyl Chloride	2 ug/l	Degradation of other chemicals leaching from waste sites, spills, etc.	Some people who drink water containing vinyl chloride in excess of the MCL over many years may have an increased risk of getting cancer.	Carbon Filters
Methyl Tertiary Butyl Ether (MTBE)	10 ug/l	Releases from gasoline storage tanks. MTBE is an octane enhancer in unleaded gasoline. Atmospheric deposition.	EPA reviewed available health effects information on MTBE in its 1997 Drinking Water Advisory guidance and decided that there was insufficient information available to allow EPA to establish quantitative estimates for health risks and as such would not set health advisory limits. The drinking water advisory document indicates that there is little likelihood that MTBE in drinking water will cause adverse health effects at concentrations between 20 and 40 ppb or below.	Carbon Filters

Contaminant	MCL*	Sources in Drinking Water	Health Effects	Recommended Treatment**
Primary Organic Contaminants (POCs)	5 ug/l	Discharge from industrial activities or petroleum spills	Refer to the following websites for further information: http://www.health.state.ny.us/environmental/water/drinking/ccr/table1.htm or http://www.epa.gov/safewater/contaminants/index.html#mcls	Carbon Filters

* Maximum Contaminant Level (MCL) – Maximum permissible level of a contaminant in drinking water as established in Part 5 of the New York State Sanitary Code.

** Other treatment options may be available

Table 2 – Secondary Parameters

Information obtained from the New York State Department of Health Website
http://www.health.state.ny.us/environmental/water/drinking/ccr/table1.htm

Contaminant	MCL*	Sources in Drinking Water	Health Effects	Recommended Treatment
Iron	300 ug/l	Naturally occurring.	Iron has no health effects. At 1,000 ug/l a substantial number of people will note the bitter astringent taste of iron. Also, at this concentration, it imparts a brownish color to laundered clothing and stains plumbing fixtures with a characteristic rust color. Staining can result at levels of 50 ug/l, lower than those detectable to taste buds. Therefore, the MCL of 300 ug/l represents a reasonable compromise as adverse aesthetic effects are minimized at this level. Many multivitamins may contain 3,000 or 4,000 micrograms of iron per capsule.	No Treatment Required
Manganese	300 ug/l	Naturally occurring; Indicative of landfill contamination.	The Food and Nutrition Board of the National Research Council determined an estimated safe and adequate daily dietary intake of manganese to be 2,000-5,000 micrograms for adults. However, many peoples diets lead them to consume even higher amounts of manganese, especially those who consume high amounts of vegetable or are vegetarian. The infant population is of greatest concern. It would be better if the drinking water were not used to make infant formula since it already contains iron and manganese. Excess manganese produces a brownish color in laundered goods and impairs the taste of tea, coffee, and other beverages. Concentrations may cause a dark brown or black stain on porcelain plumbing fixtures. As with iron, manganese may form a coating on distribution pipes. These may slough off, causing brown blotches on laundered clothing or black particles in the water.	No Treatment Required

Contaminant	MCL*	Sources in Drinking Water	Health Effects	Recommended Treatment
Sodium	(see Health Effects)	Naturally occurring; Road salt; Water softeners; Animal waste.	Water containing more than 20 mg/l of sodium should not be used for drinking by people on severely restricted sodium diets. Water containing more than 270 mg/l of sodium should not be used for drinking by people on moderately restricted sodium diets.	No Treatment Required
Chloride	250 mg/l	Naturally occurring or indicative of road salt contamination.	No health effects. The MCL for chloride is the level above which the taste of water may become objectionable. In addition, to the adverse taste effects, high chloride concentration levels in the water contribute to the deterioration of domestic plumbing and water heaters. Elevated chloride concentrations may also be associated with the presence of sodium in drinking water.	No Treatment Required
pH	n/a	Naturally occurring	A low pH (acidic) can cause corrosion of household plumbing causing lead to be leached out into the drinking water from any lead solder joints, the water service line from p rivate well, and/or plumbing fixtures containing lead. A high pH (basic) can cause slippery feel, soda taste and deposits. pH range should be 6.5 to 8.0.	No Treatment Required

Additional information may be obtained from http://www.epa.gov/safewater/

* Maximum Contaminant Level (MCL) – Maximum permissible level of a contaminant in drinking water as established in Part 5 of the New York State Sanitary Code.

Appendix B

Well, Water Storage Tank, and Household Plumbing Disinfection Procedure

Private wells, water storage tanks, and/or household plumbing may become contaminated with Total Coliform Bacteria. Such contamination may result from an isolated source of contamination from an isolated event, e.g. flood or unclean faucet; or from a continuous source of contamination, e.g. poor well design or construction, cracked well casing, or defective sanitary seal on well casing allowing ground water near the surface of the ground to continually infiltrate the well.

This disinfection procedure is not intended where there is continuous source of contamination. Satisfactory well disinfection as discussed in Section 3.0 of the Rules & Regulations would suggest an isolated source of contamination.

The following disinfection procedure is from Section 8.0 of the Westchester County Health Department Rules & Regulations For The Design And Construction Of Residential Subsurface Sewage Treatment Systems And Wells In Westchester County, New York:

1. For each 50 – foot depth, mix one quart of solution containing 5-1/4 % available chlorine in 5 gallons or water. Recent guidance from the New York State Health Department advises that laundry bleach with additives (i.e., scented, softening agents, etc.) and lacking NSF/ANSI Standard 60 approval for use in drinking water treatment should not be used for well disinfection purposes.
2. Pour this solution into the well and recirculate water through the household plumbing and a garden hose back into the well to assure the entire well water column is chlorinated. Open all taps one at a time until a noticeable chlorine odor appears at the tap then turn them off.
3. Again add chlorine solution to the well and recirculate water through the garden hose back into the well to assure the entire well water column is chlorinated. Shut off the pump and replace the well cap or sanitary seal on top of the casing. Allow the chlorine solution to remain in the system for a minimum of eight (8) hours, or overnight if possible.
4. Thoroughly flush the system until the chlorine odor dissipates. A DPD chlorine test kit may be used to determine when the chlorine has dissipated.
5. Collect a sample for bacteriological examination by a NYS ELAP approved lab