

APPENDIX B

NEW YORK STATE DEPARTMENT OF
HEALTH MONITORING REQUIREMENTS
FOR PUBLIC DRINKING WATER SUPPLIES

- STATE SANITARY CODE PART 5 (APRIL 30, 1987)

NEW MONITORING REQUIREMENTS FOR ORGANIC CHEMICALS
(OCTOBER 22, 1987)

PART 5**DRINKING WATER SUPPLIES**

(Statutory authority: Public Health Law, § 225)

Subpart 5-1 Public Water Supplies

Subpart 5-2 Water Well Construction

Subpart 5-3 Protection of Underground and Surface Sources of Drinking Water

Subpart 5-4 Classification of Community Water System Operators

Historical Note

Part repealed, new filed Feb. 28, 1967; Part repealed, new (Subparts 5-1 and 5-2) filed Aug. 3, 1972 eff. Aug. 3, 1972.

Sections 5.1-5.2**Historical Note**

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5.3-5.5**Historical Note**

Secs. repealed, new filed Feb. 28, 1967; repealed, filed Aug. 3, 1972 eff. Aug. 3, 1972.

5.6**Historical Note**

Sec. repealed, filed Feb. 28, 1967 eff. March 15, 1967.

5.10-5.11**Historical Note**

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5.20**Historical Note**

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5.21**Historical Note**

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5.30-5.33**Historical Note**

Secs. repealed, new filed Feb. 28, 1967; repealed, filed Aug. 3, 1972 eff. Aug. 3, 1972.

5.34-5.36**Historical Note**

Secs. filed Feb. 28, 1967; repealed, filed Aug. 3, 1972 eff. Aug. 3, 1972.

5.40**Historical Note**

Sec. repealed, new filed Feb. 28, 1967; repealed, filed Aug. 3, 1972 eff. Aug. 3, 1972.

5.41**Historical Note**

Sec. repealed, filed Feb. 28, 1967 eff. March 15, 1967.

SUBPART 5-1

PUBLIC WATER SUPPLIES

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Historical Note

Subpart (§§ 5-1.1—5-1.40) filed Aug. 3, 1972; repealed, new (§§ 5-1.1—5-1.100) filed April 4, 1977 eff. June 24, 1977 except as otherwise specifically provided.

GENERAL PROVISIONS

Section 5-1.1 Definitions. As used in this Subpart, the following words and terms shall have the indicated meaning, except as otherwise specifically provided:

(a) *Auxiliary source* means a source of water supply which is not normally used but which has been approved for use by the department and other State agencies having jurisdiction, and has been developed for use when the normal source or sources fail to meet the water supply requirements.

(b) *Commissioner* means the Commissioner of Health of the State of New York.

(c) *Community water system* means a public water system which serves at least five service connections used by year-round residents or regularly serves at least 25 year-round residents.

(d) *Consumer notification* means notification of all persons served by the system in a manner acceptable to the commissioner as follows:

(1) Community water systems. Notification must be made within three months after the failure to comply or the issuance of a variance or exemption. Such notice shall be repeated at least once every three months so long as such failure to comply continues or such variance or exemption remains in effect.

(2) Noncommunity water systems. Notification must be made by posting a notice in a conspicuous location immediately after the failure to comply or the issuance of a variance or exemption.

(3) The supplier of water shall furnish the State with a copy of the notice.

(e) *Contaminant* means any physical, chemical, microbiological or radiological substance or matter in water.

(f) *Designated representative* means the health commissioner or health officer of a city of 50,000 population or over, or the health commissioner or health officer of a county or part-county health district, the State regional director, or district director having jurisdiction; a public health director or public health engineer qualified as duly appointed pursuant to Part 11 of this Title; or a county health commissioner, or county health director having the powers and duties prescribed in section 352 of the Public Health Law, or any other individual so designated by the commissioner.

(g) *Disinfection station* means a facility consisting of one or more points where water is routinely treated with an oxidant for disinfection, odor control or other purposes, excluding treatment on a raw water transmission main.

(h) *Distribution point* means a sampling point representative of drinking water within the distribution system.

(i) *Department* means the New York State Department of Health.

(j) *Dose equivalent* means the product of the absorbed dose from ionizing radiation and such factors as account for differences in biological effectiveness due to the type of radiation and its distribution in the body as specified by the International Commission on Radiological Units and Measurements (ICRU).

(k) *Dwelling unit* means one or more rooms with provisions for living, sanitary and sleeping facilities arranged for use of one family.

(l) *Emergency source* means a source of water supply which is not the regular source or auxiliary source and which is developed during an emergency for temporary use.

(m) *Entry point* means a representative sampling location after the last point of treatment but before the first consumer connection.

(n) *Gross alpha particle activity* means the total radioactivity due to alpha particle emission as inferred from measurements on a dry sample.

(o) *Gross beta particle activity* means the total radioactivity due to beta particle emission as inferred from measurements on a dry sample.

(p) *Ground water source* means a source of water supply taken from a ground water aquifer and developed in a manner which is acceptable to the commissioner, but shall not include an admixture of surface water or water exposed to the ground surface.

(q) *Man-made beta particle and photon emitters* means all radionuclides emitting beta particles and/or photons, except the daughter products of thorium-232, uranium-235 and uranium-238, listed in *Maximum Permissible Body Burdens and Maximum Permissible Concentration of Radionuclides in Air or Water for Occupational Exposure*, National Bureau of Standards, Handbook 69, as amended August 1963, U.S. Department of Commerce. Copies of this publication are available from N.C.R.P. Publications, 7910 Woodmont Avenue, Bethesda, MD, and a copy is available for inspection and copying at the offices of the records access officer of the Department of Health, Corning Tower, Empire State Plaza, Albany, NY.

(r) *Maximum contaminant level (MCL)* means the maximum permissible level of a contaminant in water which is delivered to the free-flowing outlet of the ultimate user of a public water system, except in the case of turbidity where the maximum permissible level is measured at the point of entry to the distribution system. Substances added to the water by the user, and confined to the premises of the user, are excluded from this definition.

(s) *Maximum total trihalomethane potential (MTP)* means the maximum concentration of total trihalomethane produced in a given water containing a free chlorine residual after seven days at a temperature of 25°C or above.

(t) *Noncommunity water system* means a public water system that is not a community water system.

(u) *Person* means an individual, corporation, company, association, partnership, State agency, municipality (including a county), or Federal agency.

(v) *Picocurie* means that quantity of radioactive material producing 2.22 nuclear transformations per minute.

(w) *Potable water* means a water which meets the drinking water quality requirements established by sections 5-1.50 and 5-1.51 of this Subpart.

(x) *Point of use* means the free-flowing outlet of the ultimate user of a public water system.

(y) *Public health hazard* means an existing or imminent condition which can be responsible for or cause illness, injury or death and for which immediate corrective or remedial action is required. Public health hazards include, but are not limited to, the following:

- (1) confirmed microbiological, primary inorganic chemical, organic chemical, radiological, or nitrate MCL violations;
- (2) use of an unapproved or contaminated water supply source;
- (3) insufficient quantity of water to meet drinking or sanitary demands;
- (4) hazardous or toxic chemical contamination;
- (5) disinfection which is inadequate to destroy harmful microorganisms or to maintain a specified chlorine residual;
- (6) disruption of water service of four hours or more;
- (7) cross-connections of sufficient hazard to adversely affect water consumers' health; and
- (8) any other conditions determined to be a public health hazard by the commissioner.

(z) *Public notification* means disseminating information in a manner and format commensurate with the degree of severity of the cause of said notification which can reasonably be expected to make the general public aware of the contents of the notice. The notification must be made in the following manner:

- (1) Publication for at least three consecutive issues in a newspaper of general circulation in the area served by the water system within 14 days after the supplier of water learns of a failure to comply or within 48 hours of the determination of a public health hazard.
- (2) Furnishing a notice to the radio and television stations serving the area served by the water system within seven days after the supplier of water learns of a failure to comply or within 48 hours of the determination of a public health hazard.
- (3) The supplier of water shall furnish the State with copies of the notification made to the newspaper and radio and television stations.
- (4) The State may waive all or part of the requirements of this subdivision based upon prompt corrections of the violations or elimination of the public health hazard.

(aa) *Public water system* means either a community or noncommunity system which provides piped water to the public for human consumption, if such system has at least five service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year. Such term includes:

- (1) collection, treatment, storage and distribution facilities under control of the supplier of water of such system and used in connection with such system; and
- (2) collection or pretreatment storage facilities not under such control which are used in connection with such system.

(bb) *Regular source* means a source of water supply which is normally used and is approved by the department and other State agencies having jurisdiction.

(cc) *Rem* means the unit dose equivalent from ionizing radiation to the total body or any internal organ or organ system.

(dd) *Millirem (mrem)* means 0.001 of a rem.

(ee) *Reporting period* means a period of time designated by the State for the purpose of determining maximum contaminant level compliance.

(ff) *Service connection* means the pertinent pipes, valves and fittings that connect a distribution system to a consumer's facility.

(gg) *Source of water supply* means any ground water aquifer, surface water body or watercourse from which water is taken either periodically or continuously for drinking, culinary or food-processing purposes, or which has been designated for present or future use as a source of water supply for domestic or municipal purposes.

(hh) *State* means the State Commissioner of Health, or his designated representative.

(ii) *State notification* means notifying the State by telephone to a designated representative of the commissioner within 24 hours of the confirmed existence of a public health hazard, or within 48 hours after the supplier of water learns of a failure to comply, followed within 24 hours by a certified letter posted to the designated representative of the commissioner previously notified by telephone.

(jj) *Supplier of water* means any person who owns or operates a public water system.

(kk) *Total trihalomethane (TTHM)* means the sum of the concentration of trichloromethane (chloroform), dibromochloromethane, bromodichloromethane and tribromomethane (bromoform).

(ll) *Violation* means failure to comply with or conform to the provisions of this code, exceedance by a single sample of a maximum contaminant level, or failure to comply with or conform to monitoring, reporting or notification requirements.

(mm) *Water treatment plant* means any plant or equipment which, through the addition of chemicals or through aeration, ion exchange, demineralization, coagulation, sedimentation or filtration, or through any other means or combinations of treatment, shall change the physical, chemical, radiological or microbiological quality of water.

Historical Note

Sec. filed Aug. 3, 1972; repealed, new filed April 4, 1977; amds. filed: June 24, 1981; Nov. 8, 1984; April 6, 1987 eff. April 6, 1987.

5-1.2 Effective date. Except as otherwise specifically provided, this Subpart shall become effective June 24, 1977.

Historical Note

Sec. filed Aug. 3, 1972; repealed, new filed April 4, 1977 eff. June 24, 1977.

5-1.3 -- 5-1.5

Historical Note

Secs. filed Aug. 3, 1972; repealed, filed April 4, 1977 eff. June 24, 1977.

SOURCES OF WATER SUPPLY

5-1.10 Statement. The rules contained in this Subpart, together with the watershed rules and regulations set forth in Parts 100 through 158 of this Title, have been promulgated to protect present or future sources of water supply.

Historical Note

Sec. filed Aug. 3, 1972; repealed, new filed April 4, 1977 eff. June 24, 1977.

5-1.11 Applicability. The provisions of sections 5-1.10 through 5-1.15 of this Subpart shall apply, throughout the entire State of New York, to all existing and proposed sources of water supply.

Historical Note

Sec. filed Aug. 3, 1972; repealed, new filed April 4, 1977 eff. June 24, 1977.

5-1.12 Water quality for existing sources of water supply. Whenever the supplier of water determines or is advised by the State that one or more of the maximum contaminant levels set forth in this Subpart are or may be exceeded; or that effectiveness of treatment processes diminishes to the extent that a violation of the maximum contaminant levels set forth in this Subpart may occur; or that any deleterious changes in raw water quality have occurred; or that a change in the character of the watershed or aquifer has been observed which may affect water quality; or that any combination of the preceding exists, the supplier of water shall immediately notify the State and do the following:

- (a) undertake a study to determine the cause or causes of such conditions, independent of known or anticipated treatment technology;
- (b) modify existing or install treatment to comply, to the extent practicable, with sections 5-1.50 and 5-1.51 of this Subpart;
- (c) initiate water sampling as needed to delineate the extent and nature of the cause of concern;
- (d) conduct an investigation of all or part of the watershed or aquifer to ascertain any existing or potential changes in the character of the sources of water supply; and
- (e) submit a written report to the State within 30 days of the onset of the foregoing conditions summarizing the findings outlined in subdivisions (a), (b), (c) and (d) of this section.

Historical Note

Sec. filed April 4, 1977; amds. filed: June 24, 1981; April 6, 1987 eff. April 6, 1987.

5-1.13 Sampling and analytical requirements. The supplier of water shall collect and analyze raw water samples for contaminants at a frequency prescribed by the State.

Historical Note

Sec. filed April 4, 1977 eff. June 24, 1977.

5-1.14 Water quality for proposed sources of water supply. Prior to the approval of a source of water supply for public water system purposes, a report shall be submitted to the State. Such report shall include, but may not be limited to, all of the following:

- (a) a summary of available raw water quality data for at least 10 years prior to the date of the report or as otherwise required by the State;
- (b) a sanitary survey of the watershed or aquifer, with particular emphasis on water quality as affected by existing or potential spills, point and nonpoint discharges, and natural seasonal occurrences; and
- (c) a description of the proposed water treatment processes.

Historical Note

Sec. filed April 4, 1977; amd. filed June 24, 1981 eff. June 24, 1981.

5-1.15 Limitation. If the information required is already available for the same source of water supply or if an emergency exists which requires the development of an emergency source, the requirements of section 5-1.14 of this Subpart shall not apply.

Historical Note

Sec. filed April 4, 1977 eff. June 24, 1977.

PLANNING, SITING, TREATMENT AND APPROVAL

5-1.20 Applicability. The provisions of sections 5-1.20 through 5-1.40 of this Subpart shall apply to all public water systems.

Historical Note

Sec. filed Aug. 3, 1972; amds. filed: April 3, 1973 May 6, 1974; repealed, new filed April 4, 1977 eff. June 24, 1977.

5-1.21 Siting requirements. Before a person shall enter into a financial commitment for or initiate construction of a public water system, such person shall notify the State and, to the extent practicable, avoid locating part or all of the public water system at a site which:

- (a) is subject to a significant risk from earthquake, floods, fires or other disasters; or
- (b) except for intake structures, is within the floodplain of a 100-year flood or is lower than any recorded high tide.

Historical Note

Sec. filed Aug. 3, 1972; repealed, new filed April 4, 1977 eff. June 24, 1977 except as otherwise specifically provided.

5-1.22 Approval of plans and completed works. (a) No supplier of water shall make, install or construct, or allow to be made, installed or constructed, a public water system or any addition or deletion to or modification of a public water system until the plans and specifications have been submitted to and approved by the State.

(b) *Bulletin 42, Recommended Standards for Water Works*, 1962 edition, published by Health Education Service, P.O. Box 7126, Albany, NY 12224 and *Rural Water Supply*, 1966 edition, published by the Department of Health, both available for public inspection at the Bureau of Public Water Supply Protection, Department of Health, Empire State Plaza, Corning Tower Bldg., Rm. 478, Albany, NY 12237, shall, in their entirety, be the basis upon which all plans and specifications for public water systems will be approved. The department may allow deviations from these standards in accordance with procedures and criteria established by the commissioner.

(c) The State may approve such plans or may require such modification which is deemed necessary to protect public health or safety. Application for plan approval shall be made on a form prescribed by the commissioner.

(d) A supplier of water shall receive the approval of the State before placing into service any public water system constructed under the requirements of this section. Application for placement into service shall be made on a form prescribed by the commissioner.

Historical Note

Sec. filed April 4, 1977; amds. filed: June 24, 1963; April 6, 1967 eff. April 6, 1967.

* See Appendix 5-A, ts/rs.

** See Appendix 5-B, ts/rs.

5-1.23 Reporting emergencies. (a) The supplier of water shall not take, use, or cause to be taken for use water from any emergency source or discontinue or alter disinfection or other treatment processes without first having notified by telephone or telegram, and received the approval of, the State. Upon receipt of such notification, the State shall advise the supplier of water and interested local officials of the approved action or proposed action by the supplier of water to protect the public health during the emergency.

(b) The supplier of water must make State notification when he determines that the delivery of water is interrupted to a minimum of 25 individuals or five service connections, or to a minimum of one percent of the total number of individuals served or service connections, whichever is larger, for a period of four hours or more.

(c) A printed copy of this section shall be conspicuously posted in the office used by the supplier of water.

Historical Note

Sec. filed April 4, 1977; amd. filed June 24, 1981
eff. June 24, 1981.

5-1.24 Approval of fluoridation of public water systems. Fluorine compounds shall not be added to a public water system until a written application has been submitted to, and written approval is granted by, the State.

Historical Note

Sec. filed April 4, 1977; amd. filed April 6, 1987
eff. April 6, 1987.

5-1.25 Disinfection of facilities. No spring basin, collecting basin, well, infiltration gallery, water main, pumping station, standpipe or reservoir shall be placed in service following cleaning or repairs until it has been disinfected in a manner approved by the commissioner.

Historical Note

Sec. filed April 4, 1977 eff. June 24, 1977 except
as otherwise specifically provided.

5-1.26 Dewatering trenches. No repairs to the public water system shall be made until the trench has been dewatered to a point below the mains, valves or other structures. Every effort shall be made to prevent the entrance of foreign material and seepage into the public water system.

Historical Note

Sec. filed April 4, 1977 eff. June 24, 1977 except
as otherwise specifically provided.

5-1.27 Adequacy of distribution system. The public water system shall be maintained and operated by the supplier of water to assure a minimum working pressure of 20 pounds per square inch at ground level at all points in the distribution system. Measurement of pressure may be obtained from representative points of use.

Historical Note

Sec. filed April 4, 1977; amd. filed June 24, 1981
eff. June 24, 1981.

5-1.28 Blowoff facilities. All blowoff drains or discharge pipes connected to the public water system should be terminated at points where these structures will not be subject to flooding or otherwise subject to contamination.

Historical Note

Sec. filed April 14, 1977 eff. June 24, 1977 except
as otherwise specifically provided.

5-1.29 Pumping equipment. Pumping equipment of a public water system, for water which is not subject to subsequent treatment, shall be so installed and operated as to prevent contamination of the public water system. Whenever priming is necessary, such pump shall be primed with water meeting the requirements of sections 5-1.50 and 5-1.51 of this Subpart.

Historical Note

Sec. filed April 4, 1977; amd. filed April 6, 1987
eff. April 6, 1987.

5-1.30 Providing treatment for public water systems. (a) The supplier of water shall provide such treatment as necessary to deliver to the consumer a water conforming to the requirements of this Subpart. Minimum treatment for a source of water supply shall be disinfection by chlorination or other disinfection methods acceptable to the commissioner.

(b) Notwithstanding anything to the contrary contained in subdivision (a) of this section, the commissioner is hereby authorized, upon the submission of a written application therefor, to grant a waiver, renewable annually, to the disinfection rule established by this section for a ground water source provided that:

(1) the full-time public health officer or his designated representative having jurisdiction over the community water system of such ground water source recommends such waiver;

(2) the record of the bacteriological and physical characteristics for the ground water source or sources demonstrates that they conformed to the maximum contaminant levels of this Subpart, for the 12 months immediately preceding the date of application for waiver; such record shall be established under procedures provided by the commissioner;

(3) a laboratory approved pursuant to Subpart 85-2 of Part 55 of this Title, is used by the supplier of water to provide monitoring of drinking water quality and delivery of drinking water in conformity with this Subpart;

(4) an active cross-connection control program acceptable to the commissioner to prevent the backflow or entry of undesirable and toxic substances into the water distribution system is adopted and maintained by the supplier of water, and such cross-connection control program shall include the maintenance of adequate distribution system pressures;

(5) appropriate watershed rules and regulations to protect such ground water source are adopted pursuant to the provisions of article 11 of the Public Health Law, updated as necessary, and administered by the supplier of water, or other watershed controls satisfactory to the commissioner are adopted, updated and administered;

(6) all water storage facilities are adequately protected pursuant to section 5-1.82 of this Subpart; and

(7) all sources of the water supply are properly located, constructed and effectively protected and maintained in a manner acceptable to the commissioner.

(c) Notwithstanding anything to the contrary contained in subdivision (a) of this section and based on compliance by the public water system with the requirements of subdivision (b) of this section, the State is hereby authorized upon submission of a written application to grant a waiver, renewable annually, to the disinfection rule established by this section for a ground water source which has been treated with or is presently treated with disinfection.

(d) Notwithstanding anything to the contrary contained in either subdivision (a) or (b) of this section, the State may waive the disinfection requirements of this section for a ground water source at a noncommunity water system or a community water system serving less than 50 dwelling units, based upon periodic evaluation of a sanitary survey and the geology of the area; the bacteriological, chemical and physical characteristics of the water; the location, construction and protection of the ground water source; and the method of water storage and distribution.

(e) When chlorine is used as the disinfectant, a free chlorine residual shall be maintained at representative points in the distribution system, unless otherwise approved by the commissioner. Representative chlorine residual analyses shall be performed and reported as required by the State.

Historical Note

Sec. filed Aug. 3, 1972; repealed, new filed April 4, 1977; amd. filed April 6, 1987 eff. April 6, 1987. Amended (c)-(d).

5-1.31 Cross-connection control. (a) The supplier of water shall protect the public water system, in accordance with procedures acceptable to the commissioner, by containing potential contamination within the premises of the user in the following manner:

(1) by requiring an acceptable air gap, reduced pressure zone device, double check valve assembly or equivalent protective device acceptable to the commissioner consistent with the degree of hazard posed by any service connection;

(2) by requiring the users of such connections to submit plans for the installation of protective devices to the supplier of water and the State for approval; and

(3) by assuring that all protective devices be tested at least annually. Records of such tests shall be made available to and maintained by the supplier of water. Such tests shall be conducted by certified backflow prevention device testers pursuant to the following requirements:

(i) A "general tester" certification will be issued when the applicant presents proof of satisfactory completion of a training course for testers of backflow prevention devices which has been approved by the department.

(ii) A "limited tester" certification will be issued when the applicant presents proof of employment by a manufacturer as its agent for the servicing, maintaining and testing of backflow prevention devices.

(iii) The department has the authority to require any person applying for certification or renewal of certification as a certified tester of backflow prevention devices to take a written, oral or practical examination, if it deems such examinations to be reasonably necessary in determining the applicant's qualifications. The results of such examinations may be the sole basis for approval or disapproval of an application for certification or renewal of certification.

(iv) At least three months prior to the expiration date of a current certificate, both a general tester and a limited tester must submit proof that they are still engaged in the activity represented by their current certification.

(v) A certification will be suspended or revoked, upon due notice and an opportunity for a hearing thereon, for any of the following reasons: submission of false test reports for backflow prevention devices; proof that the person is no longer engaged in servicing, maintaining and testing backflow prevention devices; or failure to make application for recertification.

(b) The supplier of water should not allow a user to establish a separate source of water. However, if the user justifies the need for a separate source of water, the supplier of water shall protect the public water system from a user who has a separate source of water and does not pose a hazard as detailed in subdivision (a) of this section in the following manner:

(1) by requiring the user to regularly examine the separate water source as to its quality;

(2) by approving the use of only those separate water sources which are properly developed, constructed, protected and found to meet the requirements of sections 5-1.50 and 5-1.51 of this Subpart; and

(3) by filing such approvals with the State annually.

(c) All users of a public water system shall prevent cross-connections between the potable water piping system and any other piping system within the premises.

Historical Note

Sec. filed Aug. 3, 1972; repealed, new filed April 4, 1977; amds. filed: June 24, 1981; April 6, 1987 eff. April 6, 1987.

5-1.32 Protection of equalizing and distribution reservoirs. Equalizing and distribution reservoirs which deliver water to the user without subsequent acceptable treatment shall be covered, or the water from an uncovered reservoir must be continuously disinfected in a manner acceptable to the State before being discharged into the distribution system.

Historical Note

Sec. filed Aug. 3, 1972; repealed, new filed April 4, 1977 eff. June 24, 1977 except as otherwise specifically provided.

5-1.33 Emergency plans. A supplier of water of a community water system may be required to prepare, update and submit an acceptable written plan to the State to provide safe drinking water to all consumers during an emergency.

Historical Note

Sec. filed Aug. 3, 1972; repealed, filed April 4, 1977; new filed June 24, 1981 eff. June 24, 1981.

5-1.34 - 5-1.36

Historical Note

Secs. filed Aug. 3, 1972; repealed, filed April 4, 1977 eff. June 24, 1977.

BOTTLED AND BULK WATER

5-1.40 Distribution of bottled or bulk water. No person shall sell, offer for sale or deliver bottled or bulk water for human consumption, food preparation or culinary purposes unless the source, equipment, treatment, packaging and method of handling are approved by the commissioner and meet the requirements of sections 5-1.50 and 5-1.51 of this Subpart. Sampling and analyses of bottled or bulk water shall be at a frequency necessary to insure protection of the public health, as determined by the commissioner. The commissioner may exempt bottled water from the chemical and radiological requirements of the aforementioned sections based on justification submitted to him by the person selling, offering for sale or delivering bottled water, that establishes that the granting of the exemption would not constitute a hazard to the health of the consumers of such bottled water. In all situations where the commissioner has exempted bottled water, an appropriate label, approved by the commissioner, shall be conspicuously placed on all bottles or containers of such exempted water manufactured,

distributed or sold at retail within the State of New York. The basis for approvals required by this section shall be *Bottled and Bulk Water Standards*, 1986 edition, published by Department of Health, Albany, NY 12237, and available for public inspection at the Bureau of Public Water Supply Protection, Department of Health, Empire State Plaza, Corning Tower, Room 478, Albany, NY 12237, in its entirety. (See section 5-1.41, *infra*.)

Historical Note

Sec. filed Aug. 3, 1972; repealed, new filed April 4, 1977; amds. filed: July 5, 1979; April 6, 1987 eff. April 6, 1987.

5-1.41 Bottled and bulk water standards.

FOREWORD

Bulk and bottled water in New York State is regulated by the State Department of Health under authorization of the Public Health Law, sections 1100 through 1102, Article 11, Title 1, Potable Waters. Specific regulations are outlined in the New York State Sanitary Code, Part 5, Drinking Water Supplies, of which this document is a part.

These standards serve as the minimum requirements considered necessary to maintain the purity of water bottled, packaged, or delivered for drinking, food preparation, or culinary purposes. They are intended to be used in the design and preparation of plans and specifications, and to serve in operation and maintenance of bulk water facilities or bottled water facilities. The following references were used as a basis for this standard:

1. *Rural Water Supply*, New York State Health Department, 1966.
2. *Product Excellence Program Guidelines (G.M.P.'s)*, American Bottled Water Association, 1972.
3. *Plant Technical Manual I & II*, American Bottled Water Association, 1976.
4. *CFR 21, Code of Federal Regulations, US FDA*.
5. *Recommended Standards for Water Works*, New York State Health Department, Bulletin 42, 1962.

The information contained in this document outlines requirements for source control, equipment design, treatment, bottling or packaging, analytical testing, record keeping, and reporting. In addition, certification requirements and procedures are outlined.

SECTION 1

DEFINITIONS

Approved Laboratory shall mean a laboratory approved by the New York State Department of Health; or approved by the United States Environmental Protection Agency (EPA); or approved by another state which has been granted primacy by EPA; or approved by a third-party organization acceptable to the primacy state to do drinking water analyses in accordance with water quality testing procedures outlined by the EPA.

Approved Source shall mean the source of water from a spring, artesian well, drilled well, municipal water supply, or any other source which has been evaluated and found to be of satisfactory sanitary quality as determined by the State.

Artesian Well Water shall mean water that comes from a deep well where water is forced up by underground pressure.

Bottled or Packaged Water is considered to be any product, including natural spring or well water taken from municipal or private utility systems or other water, distilled water, deionized water, or any of the foregoing to which chemicals may be added, which are put into sealed bottles, packages, or other containers, to be sold for domestic consumption or culinary use, involving a likelihood of such water being ingested by human beings.

Bottled and Bulk Water Standards shall mean this document.

Bulk Water shall mean water intended for potable uses which is transported by means of tank trucks.

Commissioner shall mean the Commissioner of Health of the State of New York.

Food and Drugs 21 CFR shall mean the Code of Federal Regulations Title 21, Food and Drugs.

Multi-Use Containers shall mean those containers which are intended by the bottler for more than one use.

Nontoxic Materials shall mean transporting, storing, and packaging materials which are free of substances which may render the water injurious to health or which may adversely affect the flavor, color, odor, or bacteriological quality of the product.

Person in Charge shall mean the designated employee or employees who are appointed and in responsible charge of the bottling facility, and who are present at all times during the bottling operation.

Recommended Standards for Water Works shall mean New York State Health Department Bulletin 42, 1962 edition, published by Health Education Service, P. O. Box 7283, Albany, NY 12224.

Rural Water Supply shall mean the New York State Department of Health publication as copyrighted in 1966 and reprinted in 1977.

Spring Water shall mean water derived from an underground formation from which water flows naturally to the surface of the earth.

Standard Methods for the Examination of Water and Wastewater shall mean the joint publication of the American Public Health Association, the American Water Works Association and the Water Pollution Control Federation.

State shall mean the State Commissioner of Health, or his designated representative.

Well Water shall mean water that is taken from below the ground through piping or similar installed device utilizing external force or vacuum.

SECTION 2

SOURCES OF WATER

The sources of all bulk or bottled drinking water located in New York State must be approved by the State. Sources of all bottled drinking water located outside New York State must be approved by the agency having jurisdiction.

1. General Source Requirements:

a. All sources shall be developed in conformity with up-to-date sanitary engineering practices as set forth in *Rural Water Supply* and the *Recommended Standards for Water Works*.

b. All sources shall be located, developed, and protected so they are not subject to natural or artificial contamination.

c. Routine chemical, physical, radiological, and bacteriological monitoring of all source waters is essential for public health protection. The untreated waters of the source shall be sampled to characterize raw water bacteriological, physical, radiological, and chemical quality at the minimum frequency prescribed by the Commissioner. See APPENDIX I, Table I - BOTTLED WATER SAMPLING REQUIREMENTS.

d. Unusual source and source development situations shall be discussed with staff of the State, before such sources are developed.

2. Springs—Physical Requirements:

Springs, as a minimum, shall have:

a. A watertight wall completely surrounding the spring, not less than 12 inches above the highest point of ground, and extending down through the overburden to the water-bearing stratum. The top of the wall shall be level to accommodate a cover.

b. On rock, such walls shall be keyed and sealed with cement grout to the rock.

c. A tight-fitting, locked cover shall be installed on the top of the encircling wall. This shall provide reliable protection against contamination by animal, or humans.

d. Where the spring is protected by a spring house, the building shall be verminproof and shall be kept locked.

e. A ditch, or berm, shall be constructed and routinely maintained to divert surface water away from the spring.

f. Spring water shall be collected only at the natural orifice of the spring or through a bore hole that is adjacent to the natural orifice. Spring water collected with the assistance of external force or through a bore hole, or through a spring head that is otherwise altered to protect the water source shall retain all the physical properties of and be of the same composition and quality as the water that flows naturally to the surface of the earth.

3. Drilled wells, as a minimum, shall:

- a. Have watertight casings to the depth necessary to prevent surface contamination, and to seal off contamination of undesirable strata. The casing shall be sealed by filling the annular opening (between the casing and the earth) with cement or cement-sand grout, or other approved sealant, at least 1 1/4 inches thick. This seal shall extend from ground surface to a point not less than six inches below groundwater level.
- b. Have permanent casing at least 12 inches above the pumphouse floor or concrete apron surface and at least 18 inches above final ground surface.
- c. Be located on sites not subjected to floodings, or be provided with an earth berm surrounding the casing and termination at an elevation at least two feet above the highest known flood elevation, or have other suitable protection as determined by the Health Department.
- d. Be equipped with an approved pitless adaptor unit installed at the joint where the discharge pipe passes through the well casing.

- SECTION 3

REQUIRED TREATMENT

All bottled water facilities packaging water for distribution in New York State must provide satisfactory treatment of each water supply source used.

1. Minimum treatment of each water supply source used shall be disinfection by chlorination, ozonation or other disinfection methods acceptable to the Commissioner.
2. The Commissioner is authorized, when requested in writing, to grant a waiver which is renewable annually, to the disinfection requirement for groundwater sources, provided that:
 - a. The record of the bacteriological characteristics for each groundwater source demonstrates conformance to the maximum microbiological contaminant levels of the State Sanitary Code, Part 6, for the 12 months immediately preceding the date of application for waiver; such record shall be established under procedures provided by the Commissioner.
 - b. A laboratory, as described in SECTION 9, SAMPLING, METHODS, AND RECORD KEEPING of this document, is used by the bottling facility to provide monitoring of finished product water quality.
3. Where treatment is provided, all equipment must meet, as a minimum, the standards outlined in *Recommended Standards for Water Works*.

SECTION 4

BOTTLING PLANT FACILITIES

Bottling plants must be constructed to facilitate cleanliness, and be maintained to maximize sanitation and public health protection.

1. Minimum Structural Requirements:

- a. Buildings and rooms shall be of sufficient size to allow for the proper installation of equipment and to allow for movement of personnel during operation.
- b. The bottle filling operations shall be separated from other plant operations or storage areas by tight walls, ceilings, and self-closing doors or other appropriate barriers to isolate these areas and provide protection against incidental contamination. Conveyor openings shall not exceed the size required to permit passage of containers.
- c. Plant buildings shall be verminproof.
- d. Walls and ceilings shall be smooth, light color, washable, and kept in good repair. Overhead structures, fixtures, ducts, and pipes shall not be suspended over working areas so that drip or condensate may contaminate products, or product contact surfaces.
- e. Floors shall be smooth, nonabsorbent, and verminproof. Floors are to be graded to adequate drains equipped with traps and grills.
- f. Doors and windows to outside areas shall be adequately screened and/or otherwise protected against entry of vermin, airborne contamination, and particulates.
- g. All rooms are to be provided with sufficient ventilation to keep them free of excessive heat, steam, condensation, vapors, odors, and fumes.

h. Lighting, either natural or artificial, shall be provided in all rooms where bottled or packaged waters are produced. An intensity of not less than 50 footcandles shall be provided in inspection areas; 30 footcandles in work spaces, and 5 footcandles in storage areas. Light bulbs, fixtures, skylights, or other glass suspended over exposed production areas shall be of the safety type or otherwise protected from breakage to prevent product contamination.

i. Washrooms shall be convenient, separate and apart from any room or rooms where bottled or packaged water is processed, and from areas where bottles and packages are sanitized. Toilets, urinals, and wash basins shall be provided, as appropriate, for the number of employees. Washrooms shall be equipped with self-closing doors and fitted with windows or separate ventilation to the outside. Signs shall be posted directing employees to wash their hands after using the toilet.

j. Clean, dry storage facilities shall be provided for product containers and packaging materials.

k. Dressing rooms shall be provided for changing and hanging street apparel and shall be apart and separate from work areas.

l. Wastewater disposal shall be provided and have discharge to a municipal wastewater system or a State approved individual wastewater disposal system.

SECTION 5

PRODUCTION, EQUIPMENT AND PACKAGING

All bottled water production, including transporting, packaging and storage, shall be conducted under such conditions and controls as are necessary to minimize the potential for undesirable bacterial or other microbiological growth, toxic formation, deterioration, or contamination of the processed product.

1. Processing Equipment:

a. Bottles must be mechanically filled and closed.

b. Existing State certified bottling operations employing hand filling and capping of containers must demonstrate that protection from contamination is provided. The State will require these facilities to use mechanical filling and closing methods when protection from contamination is not demonstrated, or unsatisfactory or unsanitary conditions are found.

c. Fillers, piping, pumps, and other process equipment used in the production of bottled water products may not be used for the production of milk, and/or fruit drinks.

2. Minimum Equipment Requirements:

All equipment shall be of sanitary design and shall be constructed of nontoxic, nonabsorbent material which will not impart flavor, color, or odor to the bottled water. All equipment shall be installed and maintained to facilitate the cleaning of equipment and of all adjacent spaces.

a. Storage tanks used for bottled water production shall be:

(1) Tightly closed to exclude all foreign matter, and vented through inverted approved air filters.

(2) Without connections to supplies of water not approved, in writing, by the State or the governmental regulatory agency having jurisdiction over facilities located outside the State.

(3) Protected from cross connection and equipped with backflow prevention devices approved by the State, or the governmental regulatory agency having jurisdiction over facilities located outside the State.

(4) Equipped with linings or coatings conforming to the listing of acceptable linings for process and potable water tanks from the State, or the governmental regulatory agency having jurisdiction over facilities located outside the State.

(5) Used only for water and not for storage of any other food product or nonfood substance.

b. All pipelines and valves shall have no cross connections between finished product water lines and any other water pipelines.

c. Hoppers shall be provided with covers.

d. Fillers shall have the inlet so designed as to prevent the entrance of condensation. Filling valves shall be equipped with a condensation diverting apron.

3. Containers:

- a. Packaging processes and materials shall not transmit contaminants or objectionable (poisonous or deleterious) substances to the bottled water.
- b. Containers and closures for bottled water shall be in compliance with those requirements contained in Food and Drugs 21 CFR.
- c. Only sanitary, non-toxic, lubricants shall be used on container contact surfaces.
- d. Bottles shall be provided with a tamper-evident seal or cap.
- e. Screw, snap or crown caps shall be new.
- f. Screw, snap, or crown caps must be sanitized unless protected and received clean and kept free from bacterial contamination.
- g. When sanitized bottles cannot be filled immediately, they shall be closed or covered immediately when removed from packages. When they are to be filled, such closed bottles shall be opened, resanitized, filled, and closed immediately in one continuous operation.
- h. All cleaned bottles shall be protected from dust, dirt, insects, debris, and other forms of contamination.
- i. Each container of bottled drinking water shall be identified by a production code. The production code shall identify a particular batch or segment or a continuous production run and the day produced. The plant shall record and maintain information as to the kind of product, volume produced, date produced, lot code used, and the distribution of the finished product to wholesale and retail outlets to which the plant directly supplies product.

4. Recall Plan:

- a. The plant shall have on file an approved, written recall plan which shall detail procedures for recall of any particular batch as identified in the above section.

SECTION 6

SANITATION AND MAINTENANCE

Buildings, fixtures, and other physical facilities of the plant shall be kept in good repair and shall be maintained in a sanitary condition. Cleaning operations shall be conducted in such a manner as to minimize the danger of contamination of product and product contact surfaces. Detergents, sanitizers, and other materials employed in cleaning and sanitizing procedures shall be free of microbiological contamination and shall be safe and effective for their intended use. Only such materials as required to maintain sanitary conditions, for use in laboratory testing procedures, for plant and equipment maintenance and operation, or used in manufacturing or processing operations, shall be stored in the plant. These materials shall be identified and used only in such manner and conditions that will be safe for their intended use.

1. Buildings:

- a. Immediate plant grounds shall be kept clean of litter, waste, refuse, uncut weeds and grass, and free from conditions which might attract or harbor birds or vermin. Areas within the immediate vicinity of the plant must be properly drained to prevent seepage or footborne filth.
- b. Buildings shall be verminproof and kept in good repair. Only pesticides approved for use by the New York State Department of Environmental Conservation and/or registered with the U.S. Environmental Protection Agency shall be used for vermin control.
- c. Walls and ceilings in bottling areas shall be kept clean. Overhead structures, fixtures, and ducts in nonbottling areas shall be kept free from accumulations of dust and soil.
- d. Floors shall be kept clean and free of waste, litter, and extraneous material. Floors in the bottling areas shall be cleaned daily and sanitized with a 200 ppm chlorine solution or equivalent quaternary ammonium compounds.
- e. Doors and windows shall be kept clean and in good repair.
- f. Ventilation equipment shall not create conditions that may contribute to product contamination by airborne contaminants and shall be kept free of accumulation of dust and soil.
- g. Washrooms shall not be utilized for storage of garments, food products, utensils, or packaging and wrapping materials. Hot and cold running water, powdered, liquid, or bar soap, and single-use sanitary towels are to be provided. The toilet room and fixtures shall be maintained in a sanitary condition and kept in good repair at all times.

h. Storage facilities shall be kept clean and dry and provide protection from splash, insects, dust, and other contamination.

1. All refuse shall be stored in properly identified, covered containers.

2. Equipment.

All tanks, pipelines, and equipment used to store, handle, and transport water shall be inspected, maintained, cleaned, and sanitized according to the following requirements:

a. Storage Tanks shall be:

(1) Inspected for cleanliness on a monthly basis and shall be kept free of scale, evidence of oxidation and residue.

(2) Cleaned on a monthly basis by sanitizing with one of the following and flushing with product water.

(a) Chlorine water solution of 200 ppm for a minimum of five minutes.

(b) Spray wet surface with 200 ppm chlorine water solution. This is to be used on surfaces that are not reached by the above soaking treatment.

(c) Bactericides, such as organic chlorine compounds, and bactericidal agents containing iodine or bromine.

(d) 0.1 ppm ozone water solution for not less than ten minutes contact time.

b. Product Water Pipelines shall be:

(1) Kept free of scale, evidence of oxidation, and residue.

(2) Cleaned on a daily basis by sanitizing with one of the following:

(a) Chlorine water of 200 ppm for a minimum of five minutes followed by flushing with product water.

(b) The continuous recirculation of at least 0.1 ppm ozonated water.

c. Product Equipment shall be:

(1) Cappers shall be kept free of residue and sanitized on a daily basis.

(2) Hoppers shall be kept covered, free of residue, and contact surfaces shall be sanitized on a daily basis.

(3) Ozone mixing tanks and equipment, soft water tanks, and other associated equipment shall be inspected on a monthly basis, disassembled, if necessary, cleaned, and sanitized as needed.

(4) Bottled washing equipment shall be kept free of paper residue and substances which may interfere with proper operation of jets. Internal sprays shall be checked on a daily basis to assure proper timing and adequate washing of bottles.

(5) Fillers shall be kept free from scale, evidence of oxidation and residue, and shall be sanitized on a daily basis. Filling and capping operations shall be so conducted as to prevent contamination of water being bottled. The filler reservoir shall be kept covered at all times.

3. Personnel:

a. Employees shall wear clean outer garments and caps while bottling, packaging water, or sanitizing bottles and packages.

b. Expectoration is prohibited, except into receptacles for wastewater or sewage.

c. Before starting work, and immediately after visiting a toilet, smoking, eating, drinking, or any other activity that soils the hands, every person shall wash his hands and forearms with soap and warm water and thoroughly rinse them in clean water.

d. No person affected by disease in a communicable form, or while a carrier of such disease, or while affected with boils, sores, infected wounds, or other abnormal sources of microbiological contamination, shall knowingly be permitted to work in a bottled water plant in any capacity in which there is a reasonable possibility of finished product water becoming contaminated by such person, or of disease being transmitted by such persons or other individuals.

e. Tobacco shall not be used in any product-processing room.

f. Eating and drinking is prohibited in product-processing rooms.

SECTION 7
SANITIZING BOTTLES

The bottles shall be properly sanitized before use by using approved methods and approved sanitizing agents.

1. Before filling, all multi-use containers shall be thoroughly washed in an effective cleansing agent and water solution, having a temperature not less than 120°F, followed by application of a bactericidal solution, and the inside rinsed with product water to remove traces of sanitizing agents.
2. The bactericidal procedure for the inside of bottles, as a minimum, shall be one of the following:
 - a. Sanitize with 100 ppm chlorine water solution at 75°F for not less than 30 seconds.
 - b. Sanitize with a 2¼ percent caustic solution at a minimum temperature of 120°F followed by a rinse containing not less than 10 ppm free chlorine. (Note: When caustic is discharged by means of high-velocity jets, this procedure shall be considered to satisfy both cleaning and bactericidal requirements.)
 - c. Sanitize with water at an inside bottle temperature of not less than 170°F for not less than 15 seconds.
 - d. Sanitize by exposing all surfaces to a 3 percent caustic solution at a minimum temperature of 120°F for five minutes—by means of automatic bottle washers utilizing high-velocity jets (hydro type) or by means of soaker washers—followed by a rinse containing not less than 10 ppm free chlorine.
 - e. Other methods equally protective of public health as the above, when approved by the Commissioner, may be used.
3. Single-use bottles or containers, which are free of all bacteria, dust, or other contamination, need not comply with the above sanitizing requirement prior to filling.

SECTION 8
LABELING

Each bottle or container shall bear a label, to be affixed to each bottle or container before it leaves the plant. Wording shall be printed in English, in legible type which shall be in contrast by typography, layout, or color, with other printed matter on the label, cap, or container.

1. Contents of Label - Each label shall indicate:
 - a. The type of source water:
 - (1) For water coming from springs: "Spring Water."
 - (2) For artesian or pumped water taken from the ground, from drilled wells, or approved dug wells: "Well Water."
 - (3) For a municipal water supply source, the name of the municipal supply, such as New York City public water supply, Buffalo City public water supply, etc.
 - (4) For bottled waters identified on the label as being distilled, the type of source water does not need to be indicated.
 - b. Address, and location of the bottling facility or corporate offices.
 - c. Net contents and/or capacity of the container.
 - d. The assigned New York State Health Department certificate number. Abbreviations are limited to "NYSHD Cert. #000."
2. Exemption Labels:

In all situations where the Commissioner has exempted a bottled water from the chemical and/or radiological maximum contaminant levels, an appropriate label, approved by the Commissioner, shall be conspicuously placed on all bottles or containers of such exempted water manufactured, distributed, or sold at retail within the State of New York.

- a. Acceptable wording on the label of those bottled water products that have received exemption from the primary radiological and inorganic chemical MCLs is:

"This water contains levels of minerals* in excess of standards for drinking water established by the New York State Commissioner of Health and, therefore, should not be used as a principal or sole source of drinking water."

(* The specific minerals in excess of standards may be placed anywhere on the bottle.)

- b. Acceptable wording on the label of those bottled water products that have received exemption from only the secondary inorganic chemical MCLs is:

"This is a mineral water and should not be used as a sole source of drinking water."

SECTION 9

SAMPLING, METHODS, AND RECORD KEEPING

Bottled waters must be routinely sampled and analyzed for physical, chemical, radiological, and bacteriological quality. The results of these analyses must be recorded and routinely forwarded to the State.

1. Sampling Requirements:

Bottled water shall be sampled at the frequency and analyzed for the water quality parameters outlined in Appendix I, Table I - Bottled Water Sampling Requirements, unless specifically otherwise required or approved by the State.

2. Sampling Methods and Analyses:

- a. Source water samples shall be taken from each approved source.
- b. Product water samples shall be taken from a batch or segment of a continuous production run for each type of bottled water produced during a day's production. The representative sample shall consist of a primary container of the product.
- c. All required product water quality analyses must be performed by an approved laboratory.
- d. All required source water quality analyses must be performed by a laboratory meeting one of the following criteria:
 - (1) An approved laboratory.
 - (2) A foreign laboratory approved by the appropriate government agency for source water analysis in that foreign country.
 - (3) If a laboratory other than a New York State approved laboratory is used, each bottler must submit proof of approval by the appropriate governmental agency to perform the designated analyses.
 - (4) All firms bottling in New York State must use a laboratory approved by the State for all analyses except for radiological constituents, which can be performed in a U.S. Environmental Protection Agency approved laboratory.
 - (5) Analyses shall be conducted in accordance with the analytical requirements set forth in *Standard Methods for the Examination of Water and Wastewater*, current edition, and/or applicable procedures acceptable to the Commissioner.

3. Container Sampling:

- a. Containers and closures shall be inspected to ascertain that they are free from contamination.
- b. At least once every three months, a bacteriological swab and/or rinse count should be made from at least four containers and closures selected just prior to filling and sealing. No more than one of the four samples may exceed more than one bacteria per milliliter of capacity or one colony per square centimeter of surface area. All samples shall be free of coliform organisms. The procedure and apparatus for these bacteriological tests shall be in conformance with those recognized by the State. Tests shall be performed by qualified plant personnel or an approved laboratory.

4. Record Retention and Reports:

- a. Records shall be kept of all inspections, cleaning, and sanitizing operations and bottling production. Records of all bacteriological and chemical testing must also be maintained by owners and operators of bottled and bulk water facilities, and shall be available to the State for the most recent two year period.
- b. Monthly operating reports for bottlers operating in New York State shall be submitted to the local health unit having jurisdiction. Reports shall include the total monthly production and all physical, chemical, radiological, and bacteriological analytical results for that month; the treatment process, chemical used, sources of water, and other pertinent data. Form GEN 221, *Report on Bottled Water Operation*, or a form acceptable to the Commissioner, shall be used for this purpose.

c. Failure to submit these reports shall be cause for suspension and/or revocation of the Certificate of Approval.

d. Out-of-State bottlers shall submit their monthly operating reports no later than the 10th of the month following the month of the reporting period. The annual inspection report performed by the government agency having jurisdiction shall be submitted each year. The monthly operating reports and annual inspection report are to be forwarded directly to:

New York State Department of Health
Bureau of Public Water Supply Protection, Room 478
Mayor Erastus Corning II Tower Building
The Governor Nelson A. Rockefeller Empire State Plaza
Albany, New York 12237

SECTION 10
BULK WATER

Tank trucks, loading and unloading facilities, and other equipment used to transport bulk water shall be maintained clean and sanitary at all times. Tanks previously used to transport toxic materials, petroleum products, or other deleterious substances shall not be used to haul drinking water.

1. Sources:

All sources of water for bulk water shipment must be approved by the New York State Health Department and must meet the requirements outlined in Section 2, Sources of Water and Section 3, Required Treatment.

2. Storage tanks:

All source water storage facilities must be maintained clean and sanitary at all times and must meet the requirements outlined in Section 4, Bottling Plant Facilities.

3. Bulk Transport and Transfer Procedures:

a. Sanitation:

(1) Prior to filling, tank interior shall be cleaned, flushed with potable water, sanitized with not less than 100 ppm chlorine water solution for a contact period of not less than 20 minutes, and rinsed with potable water.

(2) Tanks also used for the transport of dairy products must have the interior of the tank inspected with a black lamp (ultraviolet) by the hauler each time water is to be transported. Tanks shall be rejected for use when odors or contaminants are found. The dome cover shall be closed immediately after inspection.

(3) All hoses, connections, and fittings shall be sanitized with a concentrated solution of chlorine (3 oz. of 5% household bleach to 2 gallons of water) by brushing solution on all exposed parts.

(4) The cover shall not be opened after sanitizing.

(5) Notwithstanding the above, the frequency of tank sanitization may be reduced, upon approval by the State, based on satisfactory demonstration of sanitary handling for bulk tanks used solely for potable water transport.

b. Fluid Transfer:

(1) Tank trucks or tank trailers may be filled through the fitting on the inner dome cover when the tail pipe cannot be used.

(2) Water quality in the tank, after 20-30 gallons have been delivered into the tank, shall be checked as follows:

(a) Stop filling.

(b) Have discharge valve opened.

(c) Inspect water as it discharges. If water has unpleasant odor and/or looks dirty, it shall be rejected for use.

(3) When these checks indicate satisfactory water quality, proceed to fill the tank.

(4) The dome cover shall be closed and sealed after filling to volume desired.

(5) The tank discharge valve cover shall be closed and sealed after filling.

(6) If used a fill connection shall be constructed in a manner to prevent contamination and shall be capped at all times when not in use.

Sampling:

- a. The number and type of samples, frequency, and points of sampling shall be in accordance with requirements outlined in Appendix I, Table I - Bottled Water Sampling Requirements, or a program approved or directed by the State.
- b. Analysis of the samples must be performed for the plant by an approved commercial laboratory as outlined in Section 9, Sampling, Methods, and Record Keeping.

Records:

- a. Shall be maintained and include the number of gallons delivered daily, cleansing and sanitizing methods used for tank truck and tank trailer interiors, risers, connections, hoses, etc.
- b. Such records shall include date, time and location of delivery, concentration of solution, time of contact when applicable, and water quality analysis results as legal evidence of compliance with public health practices and standards.
- c. The above records shall be submitted on a monthly basis to the local public health agency having jurisdiction.

SECTION 11**CERTIFICATION PROCEDURES**

All bottled water products sold or distributed in New York State must be certified. In addition, there is a provision for certifying products which are found to exceed certain maximum contaminant levels in the drinking water standards, upon approval or a exemption request by the Commissioner. The procedure to apply for certification includes the following:

1. Bottled Water Certification Procedure:

- a. A Form GEN 222 *Application for Certification of Approval for Distribution of Bottled or Bulk Water* must be completed and signed by the owner or operator in responsible charge of the bottling facility. All questions must be answered.
- b. A statement must be submitted from the appropriate regulatory agency of the state or country having jurisdiction over the bottling operation, indicating that the facility has been approved to bottle or package water for human consumption. This approval may be in the form of a copy of a certificate, license, permit, or a letter of approval from the agency. A copy of the laws and regulations on bottled water processing from the regulatory agency having jurisdiction must also be submitted when another state or country has no program for inspection and approval of bulk and bottled water facilities, the Commissioner of Health may determine acceptability based on an inspection and evaluation by a independent individual or organization knowledgeable in bulk and bottled water handling practice.
- c. An engineering report, plans, and specifications for the proposal must be prepared by a registered Professional Engineer licensed to practice in New York State or in the state in which the facility is located. This submittal must include, but not be limited to, the development of the source, methods employed in the bottling operation, the water treatment used, and laboratory control of water quality provided, and a flow diagram from source through the bottling operation. The report submitted with the application must show compliance with the requirements of the *Bottled and Bulk Water Standards*.

d. Two (2) caps and two (2) labels for each container size of the bottled water product that is to be certified must be submitted.

e. A complete inorganic chemical, organic chemical, microbiological, and radiological analysis of contaminants as listed in Appendix I, Table I - Bottled Water Sampling Requirements must be performed on each source and each finished bottled water product to be distributed in New York State. Results of these analyses must be submitted with the application. Additional analyses may be required if in the judgment of the Commissioner, they are needed to determine that acceptability of the source.

f. All analyses must be performed by an approved laboratory and in accordance with the sampling methods as outlined in Section 9, Sampling, Methods, and Record Keeping.

g. All analyses must have been performed within the last six (6) months from the date of the application for certification, with the exception of the microbiological analyses which must have been performed within thirty (30) days from the date of the application for certification.

h. A list of names, addresses, and telephone numbers of those who are now or are expected to be distributing your product in New York State must be provided.

2. Procedure for Maximum Contaminant Level (MCL) Exemption of Bottled Water Products:

If the water quality analysis of the product indicates that any of the MCLs are exceeded, the following requirements for an exemption request must also be satisfied:

a. An exemption request must be submitted with the above certification data for each chemical or radiological contaminant that exceeds the MCL. No exemption will be given for bacteriological or organic chemical MCLs.

b. This request must include documentation that the contaminant exceeding the MCL will not constitute an unreasonable health risk. The documentation must include:

- (1) The identification of the contaminant(s) exceeding the MCL.
- (2) The concentration level (in mg/l) of the contaminant(s), including the maximum, minimum, and average value found in the product.
- (3) The target consumer group (age group, etc.)
- (4) The consumption pattern (in milliliters per day) of the consumers based on estimated or actual market surveys.
- (5) The health significance of the higher contaminant(s) concentration level.

3. Bulk Water Certification Procedures:

a. A Form GEN 222 *Application for Certification of Approval for Distribution of Bottled or Bulk Water* must be completed and signed by the owner or the operator in responsible charge of the bulk water facility. All questions must be answered.

b. A statement must be submitted from the appropriate regulatory agency of the state having jurisdiction over the bulk water operation indicating that an inspection of the water source, transporting vehicles, and sanitation procedures has been made and is in conformance with the appropriate minimum standards as outlined in the *Bottled and Bulk Water Standards*. When another state has no program for inspection and approval of bulk water operators, the Commissioner may determine acceptability based on an inspection and evaluation by an independent individual or organization knowledgeable in bulk water handling practices.

c. A report must be submitted that includes the procedures used in the sanitizing of the tank interior, the name and location of the source water, other uses of the tank truck, frequency and type of water quality analysis performed, quantities and frequencies of shipments, primary use of potable water shipped, and loading and unloading procedures.

d. A complete inorganic chemical, organic chemical, microbiological, and radiological analysis of contaminants as listed in Appendix I, Table I - Bottled Water Sampling Requirements, must be performed on each source to be used. Results of these analyses must be submitted with the application. Additional analyses may be required if, in the judgment of the Commissioner, they are needed to determine the acceptability of the source.

e. All analyses must be performed in accordance with the sampling methods as outlined in Section 9, Sampling, Methods, and Record Keeping.

f. All analyses must have been performed within the last six (6) months from the date of the application for certification, with the exception of the microbiological analyses which must have been performed within thirty (30) days from the date of the application for certification.

4. Conditions for Maintaining Approval:

a. Each year, a statement must be submitted from the appropriate regulatory agency of the state having jurisdiction over the bottling facility indicating that the facility has been inspected and approved to bottle or package water for human consumption.

b. A form GEN 221 *Report on Bottled Water Operation* must be completed and submitted no later than the 10th of the month following the month of the reporting period. The microbiological sample results on source and finished products must conform to the requirements of Section 9, Sampling, Methods, and Record Keeping. Result of each analysis must be entered on the GEN 221 opposite the date the sample was collected. The quantity of water shipped for distribution in New York State must be entered on the GEN 221 in the daily product column opposite the date of actual shipment.

c. The required organic chemical, inorganic chemical, and radiological analysis on the source and finished water product, will be required for the calendar year. Copies of official laboratory results are to be submitted by July 1 to this Department and must be from an approved laboratory.

d. An interruption in the operation or treatment, or a change of source shall be reported immediately to the Commissioner. Submission of plans or an engineering report may be required.

e. All exemptions must be submitted by July 1 for the calendar year. The required annual water quality monitoring data will be reviewed along with any other available data. In addition to the submission of data for maintaining approval, the data as outlined in Item 2 - Procedure for Maximum Contaminant Level (MCL) Exemption of Bottled Water Products, must also be submitted.

f. Unless immediate revocation of a Certificate of Approval is necessary to protect public health and safety, notice and opportunity for a hearing will be afforded prior to revocation.

5. Violations: Violations of the regulations may subject the owner or operator of the bottled or bulk water facility to civil penalties of up to \$1,000 per violation, in addition to revocation of the certification of the bottled or bulk water facility and prohibition of the distribution, sale, or offering for sale of the product within New York State.

APPENDIX I

TABLE I. BOTTLED WATER SAMPLING REQUIREMENTS

<i>Type of Analysis</i>	<i>Maximum Contaminant Levels</i>	<i>Frequency of Samples</i>	<i>Number of Samples</i>	
			<i>Source Water</i>	<i>Finished Product</i>
Microbiological:		Monthly	1	4
- Standard Plate Count	*			
- Coliform Count	Less than 1 colony per 100 ml.			
Radiological:		Every 4 years	1	1
- Gross Alpha Particle Activity (including Radium 226 but excluding Radon and Uranium).	15 picoCuries per liter.			
- Combined Radium 226 and Radium 228.	5 picoCuries per liter.			
Physical:		Yearly	1	1
- Turbidity	5 units.			
- Color	15 units.			
- Odor	Threshold Odor No. 3			
Inorganic chemical (includes)	In milligrams/liter	Yearly	1	1
Arsenic (As)	0.05			
Barium (Ba)	1.0			
Cadmium (Cd)	0.01			
Chloride (Cl)	250.0			
Chromium (Cr)	0.05			
Copper (Cu)	1.0			
Cyanide	0.2			
Fluoride (F)	2.2			
Iron (Fe)	0.3			
Lead (Pb)	0.05			
Manganese (Mn)	0.3			
Mercury (Hg)	0.002			
Nitrate (N)	10.0			
Selenium (Se)	0.01			
Silver (Ag)	0.05			
Sulfate (SO ₄)	250.0			
Zinc (Zn)	5.0			
Alkalinity	*			
Corrosivity	*			
Hardness	*			
Phenols	*			
pH	*			
Potassium (K)	*			
Sodium (Na)	*			
Total dissolved solids	*			

* No maximum contaminant level established.

TABLE I (cont'd)

Type of Analysis	Maximum Contaminant Levels	Frequency of Samples	Number of Samples	
			Source Water	Finished Product
Organic chemical (includes)	In milligrams/liter	Every 3 years		1
Endrin (1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,5a,5,6,7,8,8a,-octahydro-naphthalene)	0.0002			
Lindane (1,2,3,4,5,6-hexachloro-cyclohexane, gamma isomer)	0.004			
Methoxychlor (1,1,1-trichloro-2,2-bis p-methoxyphenyl ethane)	0.1			
Toxaphene (C ₁₀ H ₁₀ Cl ₈ -technical chlorinated camphene, 67-69 percent chlorine)	0.005			
2,4,-D (2,4-dichlorophenoxyacetic acid)	0.1			
2,4,5-TF Silvex (2,4,5-trichlorophenoxypropionic acid)	0.01			
Other organic chemical	0.10	Yearly		1
Total trihalomethane (TTHM)				

Historical Note

Sec. filed April 6, 1967 eff. April 6, 1967.

PUBLIC WATER SYSTEMS; MAXIMUM CONTAMINANT LEVELS; MONITORING REQUIREMENTS; NOTIFICATIONS REQUIRED

5-1.50 Applicability and responsibility. The provisions of sections 5-1.50 and 5-1.51 of this Subpart shall apply to public water systems. The supplier of water of a public water system is responsible for completion of the sampling and analytical requirements set forth in such sections. At the discretion of the State, analyses performed by the State may be used for monitoring purposes.

Historical Note

Sec. filed April 4, 1977; amd. filed April 6, 1967 eff. April 6, 1967.

5-1.51 Maximum contaminant levels. (a) The maximum contaminant levels (MCL) contained in section 5-1.52, tables 1 through 7, shall not be exceeded. In the case where an MCL is exceeded, notwithstanding anything to the contrary contained in section 5-1.12 of this Subpart, the supplier of water will take the necessary steps to comply with this section as deemed appropriate by the State to ensure the protection of the public health, including the undertaking of remedial feasibility studies and subsequent installation of a suitable treatment process. Compliance with the maximum contaminant levels shall be determined by the procedures contained in tables 1 through 7.

(b) The minimum monitoring requirements for each contaminant are indicated in section 5-1.52, tables 8 through 12.

(c) The notifications required whenever a maximum contaminant level is violated or a monitoring requirement is not met, are indicated in section 5-1.52, table 13.

(d) Analyses to determine compliance with this section shall be made in accordance with the methods set forth in *Standard Methods for the Examination of Water and Wastewater*, current edition. Except for microbiological analysis, a standard sample size shall be employed, with the standard sample used in the membrane filter procedure being 100 milliliters and in the multiple tube fermentation technique, being five times the standard portion of 10 milliliters and/or applicable procedures acceptable to the commissioner.

(e) Monitoring and reporting frequencies for specific contaminants may be established at State discretion whenever the State believes that a potential exists for an MCL violation or the contaminant may present a risk to public health.

Historical Note

Sec. filed April 4, 1977; amd. filed June 24, 1981;
repealed, new filed April 6, 1987 eff. April 6, 1987.

TABLE 1—INORGANIC CHEMICALS AND PHYSICAL CHARACTERISTICS
MAXIMUM CONTAMINANT LEVEL DETERMINATION

Contaminants	MCL (milligrams per liter)	Determination of MCL Violation
Primary		
Arsenic	0.05	If the results of a monitoring sample analysis exceeds the MCL, the supplier of water shall collect three more samples from the same sampling point within 30 days or as soon as practical. An MCL violation occurs when the average ¹ of the four results exceeds the MCL.
Barium	1.00	
Cadmium	0.010	
Chromium	0.05	
Lead	0.05	
Mercury	0.002	
Selenium	0.01	
Silver	0.05	
Fluoride	2.2	
Secondary		
Chloride	250.0	
Copper	1.0	
Corrosivity	Noncorrosive ⁴	
Iron	0.3 ²	
Manganese	0.3 ²	
Sodium	No designated limits ³	
Sulfate	250.0	
Zinc	5.0	
Color	15 Units	
Odor	3 Units	

¹ Rounded to the same number of significant figures as the MCL for the substance in question.

² If iron and manganese are present, the total concentration of both should not exceed 0.8 mg/l. Higher levels may be allowed when justified by the supplier of water.

³ 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.

⁴ Corrosivity shall be determined by the calcium carbonate saturation method or other methods acceptable to the commissioner. Corrosive water may be allowed by the State based on justification submitted by the supplier of water which shall include, but not be limited to:

- data concerning increases in metal concentration of point of use water as compared to source water metal content;
- distribution water quality characteristics such as calcium, hardness, alkalinity, total dissolved solids, and pH;
- documentation of the lack of complaints of potential adverse effects; and
- a report summarizing, for at least a period of one year, the above.

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TABLE 2—NITRATE
MAXIMUM CONTAMINANT LEVEL DETERMINATION

<i>Contaminant</i>	<i>MCL</i>	<i>Determination of MCL violations</i>
Nitrate (as N)	10.0 mg/l ¹	If the results of a monitoring sample analysis exceed the MCL, the supplier of water shall collect another sample from the same sampling point, within 24 hours of the receipt of results or as soon as practical. An MCL violation occurs when the average of the two results exceeds the MCL.

¹ An MCL of 20 mg/l may be permitted at a noncommunity water system if the supplier of water demonstrates that:

- (a) the water will not be available to children under six months of age;
- (b) notice that nitrate levels exceed 10 mg/l and the potential health effects of exposure will be continuously posted in a conspicuous location;
- (c) local and State public health authorities will be notified annually of nitrate levels that exceed 10 mg/l; and
- (d) no adverse health effects shall result.

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TITLE 10 HEALTH

TABLE 3—ORGANIC CHEMICALS
MAXIMUM CONTAMINANT LEVEL DETERMINATION

Contaminant	MCL	Type of water system	Determination of MCL violation
Chlorinated hydrocarbons¹			
Endrin	0.0002 mg/l	Community and noncommunity	If the results of a monitoring sample analysis exceed the MCL, the supplier of water shall collect three more samples from the same sampling point within 30 days or as soon as practical. An MCL violation occurs when the average of the four sample results exceeds the MCL.
Lindane	0.004 mg/l		
Methoxychlor	0.1 mg/l		
Toxaphene	0.005 mg/l		
Chlorophenoxy²			
2,4-D	0.1 mg/l	Community	The results of all analyses per quarter must be arithmetically averaged and must be reported to the State within 30 days of the public water system's receipt of the analyses. A violation occurs if the average of the four most recent sets of quarterly samples (12-month running average) exceeds the MCL.
2,4,5-TP Silvex	0.01 mg/l		
Total trihalomethanes ³	0.10 mg/l ¹		
		Noncommunity	Not applicable.

¹ Effective one year after commencing sampling according to the minimum monitoring requirements.

² The State may require a supplier of water to monitor for maximum total trihalomethane potential at a frequency specified by the State.

³ Chlorinated hydrocarbons:

Endrin (1, 2, 3, 4, 10, hexachloro-6,7, -epoxy 1, 4, 4a, 5, 6, 7, 8, 8a-octahydro-1, 4-endo, endo-5, 8-dimethano naphthalene).

Lindane (1, 2, 3, 4, 5, 6-hexachloro-cyclohexane, gamma isomer).

Methoxychlor (1, 1, 1-Trichloro-2, 2-bis p-methoxyphenyl ethane).

Toxaphene (C₁₂H₁₀Cl₈ technical chlorinated camphene, 87-99 percent chlorine).

Chlorophenoxy²:

2, 4-D (2, 4-dichlorophenoxyacetic acid).

2, 4, 5-TP Silvex (2, 4, 5-trichlorophenoxypropionic acid).

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TABLE 4—ENTRY POINT TURBIDITY
MAXIMUM CONTAMINANT LEVEL DETERMINATION

<i>Contaminant</i>	<i>MCL</i>	<i>Determination of MCL violation</i>
Entry point turbidity (surface water only)	1 NTU ^{1,2,3,4} (Monthly average)	A violation occurs when the average of all daily entry point analyses for the month exceeds the MCL (rounded off to the nearest whole number).
	5 NTU ^{1,2,3,4} (Two-consecutive-day average)	A violation occurs when the average of two consecutive daily entry point analyses exceeds the MCL (rounded off to the nearest whole number).

¹ The commissioner may establish a monthly average entry point turbidity MCL of 5 NTU based on justification submitted by the supplier of water. Such justification shall demonstrate that the higher turbidity does not:

- (a) interfere with disinfection;
- (b) prevent maintenance of a minimum of 0.2 mg/l free chlorine residual at representative points within the distribution systems; or
- (c) interfere with microbiological determinations, and substantiate why meeting a 1 NTU level is not feasible.

² If the daily entry point analysis exceeds 1 NTU for a system with a monthly average MCL of 1 NTU or if a daily entry point analysis exceeds 5 NTU for a system with a monthly average MCL of 5 NTU, a repeat sample must be taken as soon as practicable and preferably within one hour. If the repeat sample exceeds 1 NTU for a system with a monthly average MCL of 1 NTU or 5 NTU the supplier of water must make State notification. The repeat sample must be used for computing the monthly average and the two-consecutive-day average.

³ NTU = Nephelometric Turbidity Units.

⁴ If the two-consecutive-day average exceeds the maximum contaminant level, the supplier of water shall analyze for microbiological contamination at a point downstream of the first consumer, but as close to the first consumer as is feasible. The additional microbiological sample should be taken within one hour or as soon as feasible after determining the two-consecutive-day average. The supplier of water shall report the result of this microbiological analysis to the State within 48 hours of obtaining the result. The result of this analysis shall not be used for monitoring purposes.

TABLE 5—DISTRIBUTION SYSTEM TURBIDITY
MAXIMUM CONTAMINANT LEVEL DETERMINATION

<i>Contaminant</i>	<i>MCL</i>	<i>Determination of MCL violation</i>
Distribution system turbidity	5NTU (Monthly average)	A violation occurs when the monthly average of the results of all distribution samples collected in any calendar month exceeds the MCL (rounded off to the nearest whole number).

**TABLE 6 MICROBIOLOGICAL
MAXIMUM CONTAMINANT LEVEL DETERMINATION**

<i>Contaminant</i>	<i>MCL</i>	<i>Determination of MCL Violation</i>
Coliform bacteria	Membrane filter method (M.F.): (a) Reporting period average: 1 coliform per 100 ml average; and/or ¹ (b) Maximum sample value criteria: 4 coliform per 100 ml in no more than one ¹ sample when less than 20 samples are taken, or no more than 5 percent of the samples when 20 or more samples are taken during the reporting period.	Membrane filter method (M.F.): A violation occurs when the reporting period average or the maximum sample value criteria during the reporting period is exceeded.
	Multiple tube fermentation technique (M.T.F.): (a) Reporting period criteria: Coliform shall not be present in more than 10 percent of all portions analyzed during the reporting period; and/or ¹ (b) Maximum sample value criteria: Coliform shall not be present in three or more portions in no more than ¹ one sample when less than 20 samples are taken, or no more than 5 percent of the samples when 20 or more samples are taken during the reporting period.	Multiple tube fermentation technique (M.T.F.): A violation occurs when the reporting period average or the maximum sample value criteria during the reporting period is exceeded.

¹ The State may permit a supplier of water serving fewer than 9,400 people, to exclude one positive sample per reporting period in accordance with criteria acceptable to the commissioner.

² If a single sample exceeds 4 coliform per 100 ml (M.F.) or coliform bacteria occur in three or more 10 ml portions (M.T.F.) two consecutive daily check samples must be obtained from the same sampling point, using the same monitoring methods as the monitoring sample. Daily check samples must be taken until two consecutive daily samples are less than 1 ml per 100 ml or show no presence of coliform. If a check sample is positive, State notification must be made.

TABLE 7—RADIOLOGICAL.
MAXIMUM CONTAMINANT LEVEL DETERMINATION

<i>Contaminant</i>	<i>MCL</i>	<i>Type of water system</i>	<i>Determination of MCL violation</i>
Combined radium-226 and radium-228	5 picocuries per liter	Community	A violation occurs when the annual composite of four quarterly samples or the average of the analyses of four quarterly samples exceeds the MCL.
Gross alpha particle activity (including radium-226 but excluding radon and uranium)	15 picocuries per liter	Noncommunity	Not applicable
Beta particle and photon radioactivity from manmade radionuclides.	Four millirems per year as the annual dose equivalent to the total body or any internal organ. The department shall determine the concentration capable of producing four millirems per year.	Community using surface water serving more than 100,000 people	A violation occurs when the annual composite of four quarterly samples or the average of the analyses of four quarterly samples exceeds the MCL.
		Community using surface source serving 100,000 or fewer people or community using ground-water	Not applicable
		Noncommunity	Not applicable

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**TABLE 8—INORGANIC CHEMICALS
MINIMUM MONITORING REQUIREMENTS**

Contaminant	Type of water system	Source type	
		Groundwater only	Surface only or Surface and groundwater
Arsenic	Community	Point of use water once every three years.	Point of use to water once per year.
Barium			
Cadmium			
Chromium			
Lead	Noncommunity	State discretion ¹	State discretion ²
Mercury			
Selenium			
Silver			
Fluoride			
Nitrate ³	Community	State discretion ⁴	State discretion ⁵
Chloride			
Copper			
Corrosivity ⁶			
Iron			
Manganese			
Sodium ⁷	Noncommunity	State discretion ⁸	State discretion ⁹
Sulfate			
Zinc			
Color			
Odor			

¹ An annual sample for nitrates will be required if the noncommunity water system is permitted an increased MCL for nitrates.
² All community water systems will be required to collect and analyze initial monitoring sample for sodium and corrosivity determination.
³ All systems with a Langelier index less than 2.0 or a carbonate hardness or alkalinity less than 60 mg/l are required to monitor for heavy metals in the distribution system annually.

⁴ All community systems with sodium levels exceeding 20 mg/l will be required to collect an annual sample for sodium analysis.
⁵ State discretion shall mean requiring monitoring when the State has reason to believe the MCL has been violated, or the potential exists for an MCL violation.

**TABLE 9—ORGANIC CHEMICALS
MINIMUM MONITORING REQUIREMENTS**

<i>Contaminant</i>	<i>Type of water system</i>	<i>Groundwater only</i>	<i>Source type</i>	<i>Surface only or Surface and groundwater</i>
Endrin Lindane Methoxychlor Toxaphene 2,4-D 2,4,5-TP silvex	Community	Point of use water, at State discretion.		Point of use water once every three years. Samples must be obtained between April 15 and October 15.
	Noncommunity	State discretion ⁴		State discretion ⁴
Total trihalomethanes ¹	Community Serving 10,000 or more people		All source types that receive chlorination. The supplier of water must collect four samples per quarter per disinfection station. ^{1 2}	
	Serving fewer than 10,000 people		State discretion ⁴	
	Noncommunity		State discretion ⁴	

¹ At least 25 percent of the quarterly samples must be obtained at distribution points reflecting maximum residence time; the remaining samples must be taken at representative distribution points. All samples for a quarter must be obtained on the same day.
² The State may reduce the total trihalomethane monitoring frequencies at systems which do not exceed the MCL, in accordance with criteria acceptable to the commissioner.
³ The State may require a supplier of water to monitor for maximum total trihalomethane potential at a frequency specified by the State.
⁴ State discretion shall mean requiring monitoring when the State has reason to believe the MCL has been or may be violated.

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**TABLE 10--TURBIDITY
MINIMUM MONITORING REQUIREMENTS**

<i>Contaminant</i>	<i>Type of water system</i>	<i>Source type</i>		<i>Surface only or Surface and groundwater</i>
		<i>Groundwater only</i>		
Entry point turbidity	Community	State discretion ¹		Collect and analyze one sample per day from each entry point. All results must be recorded to two significant figures.
	Noncommunity	State discretion ¹		Collect and analyze one sample annually. Monitoring requirements must be increased at State discretion. ¹
Distribution system turbidity	Community	State discretion ¹		Five distribution samples each week unless otherwise determined by the State. No two samples may be obtained on the same day and no two samples are to be collected from the same distribution point during the week. For systems with a 5 NTU monthly average entry point turbidity MCL, a free chlorine residual must be obtained whenever a turbidity sample is collected.
	Noncommunity	State discretion ¹		State discretion ¹

¹ State discretion shall mean requiring monitoring when the State has reason to believe the MCL has been or may be violated.

TABLE 11—MICROBIOLOGICAL
MINIMUM MONITORING REQUIREMENTS

Contaminant	Type of Water system	Population served	Number of samples based on population ¹		Minimum number of samples per month
			Minimum number of samples per month	Population served	
Microbiological ²	Community	Up to 1,000	1	90,001 to 99,000	95
		1,001 to 2,500	2	99,001 to 111,000	100
		2,501 to 3,300	3	111,001 to 130,000	110
		3,301 to 4,100	4	130,001 to 180,000	120
		4,101 to 4,900	5	180,001 to 190,000	130
		4,901 to 5,800	6	190,001 to 220,000	140
		5,801 to 6,700	7	220,001 to 250,000	150
		6,701 to 7,600	8	250,001 to 280,000	160
		7,601 to 8,500	9	280,001 to 320,000	170
		8,501 to 9,400	10	320,001 to 360,000	180
		9,401 to 10,300	11	360,001 to 410,000	190
		10,301 to 11,100	12	410,001 to 460,000	200
		11,101 to 12,000	13	460,001 to 500,000	210
		12,001 to 12,800	14	500,001 to 560,000	220
		12,801 to 13,700	15	560,001 to 600,000	230
		13,701 to 14,600	16	600,001 to 660,000	240
		14,601 to 15,500	17	660,001 to 720,000	250
		15,501 to 16,300	18	720,001 to 780,000	260
		16,301 to 17,200	19	780,001 to 840,000	270
		17,201 to 18,100	20	840,001 to 910,000	280
		18,101 to 18,900	21	910,001 to 970,000	290
		18,901 to 19,800	22	970,001 to 1,050,000	300
		19,801 to 20,700	23	1,050,001 to 1,140,000	310
		20,701 to 21,500	24	1,140,001 to 1,230,000	320
		21,501 to 22,300	25	1,230,001 to 1,330,000	330
		22,301 to 23,200	26	1,330,001 to 1,430,000	340
		23,201 to 24,000	27	1,430,001 to 1,530,000	350
		24,001 to 24,900	28	1,530,001 to 1,630,000	360
		24,901 to 25,800	29	1,630,001 to 1,730,000	370
		25,801 to 26,700	30	1,730,001 to 1,830,000	380
26,701 to 27,600	35	1,830,001 to 1,970,000	390		
27,601 to 28,500	40	1,970,001 to 2,080,000	400		
28,501 to 29,400	45	2,080,001 to 2,270,000	410		
29,401 to 30,300	50	2,270,001 to 2,510,000	420		
30,301 to 31,200	55	2,510,001 to 2,750,000	430		
31,201 to 32,100	60	2,750,001 to 3,020,000	440		
32,101 to 33,000	65	3,020,001 to 3,320,000	450		
33,001 to 33,900	70	3,320,001 to 3,630,000	460		
33,901 to 34,800	75	3,630,001 to 3,960,000	470		
34,801 to 35,700	80	3,960,001 to 4,310,000	480		
35,701 to 36,600	85	4,310,001 to 4,680,000	490		
36,601 to 37,500	90	4,680,001 or more	500		

Noncommunity—Collect and analyze one sample quarterly. Monitoring may be increased at State discretion.³

¹ If chlorine is used as the disinfectant, a free chlorine residual determination shall be made at the same time and location as the microbiological sample.

² The State may permit a community water system, serving 1,000 or fewer people, to reduce the sampling frequency to not less than one sample per quarter based on justification submitted by the supplier of water.

³ State discretion shall mean requiring monitoring when the State has reason to believe the MCL has been or may be violated.

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TABLE 12—RADIOLOGICAL
MINIMUM MONITORING REQUIREMENTS

Contaminant	Type of water system	Source type
Combined radium-226 and radium-228 and gross alpha particle activity	Community	Once every four years, an annual composite of quarterly samples; or four quarterly samples must be obtained. ^{1 2 3 4}
	Noncommunity	State discretion ¹
	Groundwater only	State discretion ¹
Beta particle and photon radioactivity from manmade radionuclides	Community serving over 100,000 people	Surface and groundwater Once every four years, an annual composite of quarterly samples, or four quarterly samples must be obtained. ^{1 2}
	Community serving 100,000 or fewer people	State discretion ¹
	Noncommunity	State Discretion ¹
	Groundwater only	State Discretion ¹

¹ A gross alpha particle activity measurement may be substituted for the required radium-226 and radium-228 analysis, provided that the measured gross alpha particle activity does not exceed five picocuries per liter at a confidence level of 95 percent. (1.64 where is the standard deviation of the net counting rate of the sample.) When the gross alpha particle activity exceeds five picocuries per liter, the same or an equivalent sample shall be analyzed for radium-226. If the concentration of radium-226 exceeds three picocuries per liter, the same or an equivalent sample shall be analyzed for radium-228.

² The commissioner may permit the substitution of the analysis of a single sample for quarterly sampling when the average annual concentration is less than one half of the MCL.

³ The commissioner may require suppliers of water to conduct annual monitoring when the radium-226 concentration exceeds three picocuries.

⁴ If the average annual maximum contaminant level for gross alpha particle activity or total radium is exceeded, monitoring at quarterly intervals shall be continued until the annual average concentration no longer exceeds the MCL, or until a monitoring schedule as a condition to a variance, exemption or enforcement action is effective.

⁵ Monitoring compliance may be assumed without further analysis if the average annual concentration of gross beta particle activity is less than 50 picocuries per liter and if the average annual concentration of tritium is less than 20,000 picocuries per liter and the average annual concentration of strontium-90 is less than 8 picocuries per liter provided that if both radionuclides are present, the sum of their annual dose equivalents to bone marrow shall not exceed four millirems per year.

⁶ If the gross beta particle activity exceeds 50 picocuries per liter, an analysis of the sample must be performed to identify the major radioactive constituents present and the appropriate organ and total body doses shall be calculated to determine compliance.

⁷ When the commissioner determines that a community water system is using water contaminated by effluents from nuclear facilities, the supplier of water shall initiate quarterly monitoring for gross beta particle and iodine-131 radioactivity and annual monitoring for strontium-90 and tritium.

TABLE 18—REQUIRED NOTIFICATIONS

<i>Contaminant</i>	<i>Type of water system</i>	<i>Single sample exceeds MCL</i>	<i>MCL violation¹</i>	<i>Failure to meet monitoring requirements and/or failure to use applicable testing procedure</i>	<i>Variance or exemption in effect²</i>	<i>Failure to meet requirements of a variance or exemption schedule</i>
Arsenic	Community	State	State	State	Consumer	Consumer
Barium			Consumer	Consumer		
Cadmium	Noncommunity	State	Public	State	Consumer	Consumer
Chromium			Consumer	State		
Lead	Noncommunity	State	State	State	Consumer	Consumer
Mercury			Consumer	State		
Selenium	Community	State	State	State	Consumer	Consumer
Silver			Consumer	Consumer		
Fluoride	Noncommunity	State	Public	State	Consumer	Consumer
Nitrate			Consumer	State		
Chloride	Community	State	State	State	Consumer	Consumer
Copper	Noncommunity	State	State	State	Consumer	Consumer
Iron			Consumer	State		
Manganese	Community	State	State	State	Not applicable	Not applicable
Sulfate			Consumer	State		
Zinc	Community	State	State	State	Not applicable	Not applicable
Color			Consumer	State		
Corrosivity	Community	State	State/Consumer	State	Not applicable	Not applicable
Odor			Consumer	State		
Sodium ³	Community	State	State	State	Consumer	Consumer
Endrin			Consumer	Consumer		
Lindane	Community	State	Public	State	Consumer	Consumer
Methoxychlor			Consumer	Consumer		

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TABLE 13—REQUIRED NOTIFICATIONS (Cont'd.)

<i>Contaminant</i>	<i>Type of water system</i>	<i>Single sample exceeds MCL</i>	<i>MCL violation¹</i>	<i>Failure to meet monitoring requirements and/or failure to use applicable testing procedure</i>	<i>Variance or exemption in effect²</i>	<i>Failure to meet requirements of a variance or exemption schedule</i>
Toxaphene 2,4-D 2,4,5-TP Silvex	Noncommunity	State	State Consumer	State	Consumer	Consumer
Coliform bacteria	Community	Not applicable	State Consumer Public	State Consumer	Not applicable	Not applicable
	Noncommunity	Not applicable	State Consumer	State Consumer	Not applicable	Not applicable
Total trihalomethanes	Community	Not applicable	State Consumer Public	State Consumer	Consumer	Consumer
	Noncommunity	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Entry point turbidity	Community	State	State Consumer Public	State Consumer	Not applicable	Consumer
	Noncommunity	State	State Consumer	State Consumer	Not applicable	Consumer
Distribution point turbidity	Community	Not applicable	State	State	Not applicable	Consumer
	Noncommunity	Not applicable	State	State	Not applicable	Consumer
Combined radium-226 and radium-228	Community	State	State Consumer Public	State Consumer	Consumer	Consumer
	Noncommunity	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

TABLE 13—REQUIRED NOTIFICATIONS (Cont'd.)

Contaminant	Type of water system	Single sample exceeds MCL	MCL violation ¹	Failure to meet monitoring requirements and/or failure to use applicable testing procedure	Variance or exemption in effect ²	Failure to meet requirements of a variance or exemption schedule
Gross alpha particle activity	Community	State	Not applicable	State	Not applicable	Not applicable
	Noncommunity	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Beta particle and photon activity (manmade)	Community	State	State Consumer Public	State Consumer	Consumer	Consumer
	Noncommunity	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

¹ The need and method of public and consumer notification are at the discretion of the State based on specific criteria developed by the commissioner.
² When a supplier of water is either granted a variance or exemption, or fails to comply with the requirements of a variance or exemption compliance schedule, the supplier of water shall make consumer notification.
³ The State shall be notified if the sodium level exceeds 20 mg/l, and consumer notification performed if the sodium level exceeds 770 mg/l.

Historical Note

Sec. filed April 6, 1977; repealed, new filed: June 24, 1981; April 6, 1987 ext. April 6, 1987.

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5-1.53 — 5-1.54

Historical Note

Secs. filed April 4, 1977; amd. filed June 24, 1981; repealed, filed April 6, 1987 eff. April 6, 1987.

5-1.55

Historical Note

Sec. filed April 4, 1977; amds. filed June 24, 1981; Nov. 5, 1984; repealed, filed April 6, 1987 eff. April 6, 1987.

5-1.60

Historical Note

Sec. filed April 4, 1977; repealed, filed April 6, 1987 eff. April 6, 1987.

5-1.61 -- 5-1.64

Historical Note

Secs. filed April 4, 1977; amd. filed June 24, 1981; repealed, filed April 6, 1987 eff. April 6, 1987.

5-1.65

Historical Note

Sec. filed April 4, 1977; repealed, filed April 6, 1987 eff. April 6, 1987.

OPERATION AND QUALITY CONTROL

5-1.70 Applicability. Sections 5-1.70 through 5-1.78 of this Subpart shall be applicable to public water systems.

Historical Note

Sec. filed April 4, 1977; amd. filed April 6, 1987 eff. April 6, 1987.

5-1.71 Protection and supervision of public water systems. (a) The supplier of water and the person or persons operating a public water system shall exercise due care and diligence in the maintenance and supervision of all sources of the public water system so as to prevent, so far as possible, their pollution and depletion.

(b) The supplier of water and the person or persons operating a water treatment plant or distribution system shall exercise due care and diligence in the operation and maintenance of these facilities and their appurtenances to ensure continued compliance with the provisions of this Subpart. Facilities approved by the State shall be operated in general accordance with their design unless otherwise authorized under the provisions of section 5-1.22, 5-1.23 or 5-1.24 of this Subpart.

Historical Note

Sec. filed April 4, 1977; amd. filed April 6, 1987 eff. April 6, 1987.

5-1.72 Operation of a public water system. (a) The supplier of water and the person or persons in charge of the operation of a public water system shall operate and maintain the public water system in such a manner as to meet the requirements of this Subpart.

(b) The person or persons in charge of operation of a community water system shall be certified pursuant to Subpart 5-4 of this Part.

(c) Complete daily records shall be kept of the operation of a public water system on forms furnished or approved by the commissioner. A copy of such records shall be forwarded to the State by the 10th calendar day of the next reporting period. These records shall include the results of all tests, measurements or analyses required to be made by this Subpart or as requested by the State. Other operational records shall be available for inspection by the State.

(d) Any supplier of water of a public water system, subject to the provisions of this Subpart, shall retain at a convenient location the following records:

(1) Records of bacteriological analyses made pursuant to this Subpart shall be retained for at least five years, and records of chemical analyses made pursuant to this Subpart shall be retained for at least 10 years. Actual laboratory reports may be kept, or data may be transferred to tabular summaries, provided that the following information is included:

- (i) the date, place and time of sampling, and the name of the person who collected the sample;
- (ii) identification of the sample as to whether it was a routine distribution point sample, check sample, raw or process water sample or other special purpose sample;
- (iii) date of analysis;
- (iv) laboratory and person responsible for performing the analysis;
- (v) the analytical technique or method used; and
- (vi) the results of the analysis.

(2) Records of action taken by the supplier of water to correct violations of the requirements of this Subpart shall be retained for at least three years.

(3) Copies of any written reports, including summaries or communications relating to sanitary surveys of the public water system shall be retained for at least 10 years.

(4) Records concerning a variance or exemption granted to the public water system shall be retained for at least five years following the expiration of such variance or exemption.

(5) Copies of these records or appropriate data summaries shall be provided to any consumer of the public water system within 15 days upon written request by a consumer. The supplier of water may require prepayment of a fee to cover the cost of handling and reproduction of the records and data summaries requested.

Historical Note

Sec. filed April 4, 1977; amds. filed: June 5, 1979; June 24, 1981; April 6, 1987 eff. April 6, 1987. Amended (c), added (d)(5).

3-1.73 Water treatment plant laboratory. Every supplier of water shall provide, or have available, laboratory facilities satisfactory to the commissioner. Tests for the control of the operation of such public water system shall be made daily or more frequently as required by the State. The results of such tests shall be recorded on forms pursuant to subdivision (d) of section 3-1.72 of this Subpart.

Historical Note

Sec. filed April 4, 1977 eff. June 24, 1977 except as otherwise specifically provided.

3-1.74 Approved laboratories. For the purpose of determining compliance with this Subpart, results of analyses may be considered only if they have been performed by a laboratory approved in accordance with Subpart 55-2 of Part 55 of the administrative rules and regulations of the department (10 NYCRR Part 55, Subpart 55-2). However, measurements for turbidity and chlorine residual may be performed by any person acceptable to the State.

Historical Note

Sec. filed April 4, 1977 eff. June 24, 1977 except as otherwise specifically provided.

5-1.75 Additional sampling requirements. (a) Additional water samples for any contaminant shall be collected and analyzed from any public water system by the supplier of water as may be required by the State, to assure adequate control of the quality of the public water system.

(b) The State may collect and analyze water samples from any public water system at any time, either by its own personnel or by contract with others.

Historical Note

Sec. filed April 4, 1977; amd. filed June 24, 1981
eff. June 24, 1981.

5-1.76 Monitoring of consecutive public water systems. When a public water system supplies water to one or more other public water systems, the State may modify the monitoring requirements of this Subpart when the circumstances justify treating them as a single system for monitoring purposes. Any modified monitoring shall be conducted pursuant to a schedule acceptable to the State.

Historical Note

Sec. filed April 4, 1977 eff. June 24, 1977 except
as otherwise specifically provided.

5-1.77 Public health hazard notification. (a) Notwithstanding anything to the contrary contained in sections 5-1.12, 5-1.23 and 5-1.51 of this Subpart, the supplier of water shall make State notification when a condition exists that may constitute a public health hazard.

(b) Notwithstanding anything to the contrary contained in sections 5-1.12, 5-1.23 and 5-1.51 of this Subpart, the supplier of water shall make public notification when, upon the determination and at the direction of the commissioner, a condition exists which constitutes a public health hazard.

Historical Note

Sec. filed April 6, 1967 eff. April 6, 1967.

5-1.78 Multiple distribution systems. A water supply system or facility with multiple distribution systems on separate sources shall be considered a single public water supply if all the following conditions are met:

(a) the separate sources are the same source type, with:

(1) the groundwater sources located in the same aquifer area; or

(2) the surface water intakes located in the same water body and the intakes at the same approximate depth and location;

(b) the water supply system or facility is owned and operated by the same person(s);

(c) the water supply system or facility is operated for the same purpose and for the same time period; and

(d) the water supply systems or facilities serve 25 or more people or five or more service connections.

Historical Note

Sec. filed April 6, 1967 eff. April 6, 1967.

5-1.80 - 5-1.84

Historical Note

Secs. filed April 4, 1977; repealed, filed June 24,
1981 eff. June 24, 1981.

VARIANCES AND EXEMPTIONS

5-1.90 Variance from a maximum contaminant level. (a) The supplier of water may request, and the commissioner may grant, one or more variances from an MCL contained in section 5-1.51 of this Subpart (with respect to noncommunity water systems) to any public water system based upon a finding that:

(1) because of characteristics of the raw water sources which are reasonably available to it, the public water system cannot meet the requirements respecting such maximum contaminant level despite application of the best technology, treatment techniques or other means which are generally available (taking costs into consideration); and

(2) the granting of a variance will not result in an unreasonable risk to health.

(b) Within one year after the granting of the variance, the commissioner shall prescribe, and the supplier of water shall follow, a schedule for:

(1) compliance, including increments of progress, to meet each maximum contaminant level covered by the variance; and

(2) implementation of such control measures as the commissioner may require.

Historical Note

Sec. filed April 4, 1977 eff. June 24, 1977 except
as otherwise specifically provided.

5-1.91 Variance from required use of any specified treatment technique. (a) The supplier of water may request, and the commissioner may grant, one or more variances from the required use of any specified treatment technique contained in this Subpart upon a finding that such treatment technique is not necessary to protect the health of persons served by the public water system because of the nature of the raw water source or sources of such system.

(b) As a condition to the grant of a variance under subdivision (a) of this section, the supplier of water shall perform monitoring and other requirements as prescribed by the commissioner.

(c) Notwithstanding subdivisions (a) and (b) of this section, section 5-1.30 of this Subpart shall govern the conditions under, and the manner in which, a waiver of mandatory disinfection treatment for a ground source of water supply may be granted.

Historical Note

Sec. filed April 4, 1977 eff. June 24, 1977 except
as otherwise specifically provided.

5-1.92 Exemption from a maximum contaminant level or any treatment technique requirement. (a) The supplier of water may request, and the commissioner may grant, one or more exemptions from a maximum contaminant level or any treatment technique requirement, or both, contained in this Subpart (including any maximum contaminant level contained in the sections referenced in subdivision (a) of section 5-1.90 of this Subpart) to any public water system based upon a finding that:

(1) due to compelling factors (which may include economic factors), the public water system is unable to comply with such maximum contaminant level or treatment technique requirement;

- (2) the public water system was in operation on the effective date of such maximum contaminant level or treatment technique requirement; and
- (3) the granting of an exemption will not result in an unreasonable risk to health.
- (b) Within one year after the granting of the exemption, the commissioner shall prescribe, and the supplier of water shall follow, a schedule for:
- (1) compliance, including increments of progress, to meet the maximum contaminant level or treatment technique requirement covered by the exemption; and
 - (2) implementation of such control measures as the commissioner may require.
- (c) Such schedule prescribed by the commissioner pursuant to subdivision (b) of this section shall require compliance with each MCL or treatment technique requirement by no later than January 1, 1984, or seven years after the effective date of any revised MCL or treatment technique requirement mandated by revised national primary drinking water regulations.
- (d) Notwithstanding subdivision (c) of this section, if the public water system has entered into an enforceable agreement to become part of a regional public water system, such schedule prescribed by the commissioner pursuant to subdivision (b) of this section shall require compliance with each MCL or treatment technique requirement by no later than January 1, 1986, or nine years after the effective date of any revised MCL or treatment technique requirement mandated by revised national primary drinking water regulations.

Historical Note

Sec. filed April 4, 1977; amd. filed April 6, 1987
 eff. April 6, 1987.

5-1.93 Variance or exemption requests. All requests for a variance or an exemption shall be in a form prescribed by and submitted in writing to the commissioner. Suppliers of water may submit a joint request for variances or exemptions when they seek similar variances or exemptions under similar circumstances. The commissioner shall act on any request for a variance or an exemption submitted pursuant to section 5-1.90, 5-1.91 or 5-1.92 of this Subpart within 90 days of receipt of the request.

Historical Note

Sec. filed April 4, 1977 eff. June 24, 1977 except
 as otherwise specifically provided.

5-1.94 Notice and opportunity for public hearing. (a) Before a variance proposed to be granted by the commissioner under section 5-1.90 or 5-1.91 of this Subpart may take effect, the commissioner shall provide notice and opportunity for public hearing on the proposed variance. A notice given pursuant to the preceding sentence may cover the granting of more than one variance and a hearing held pursuant to such notice shall include each of the variances covered by the notice.

(b) Before a compliance or implementation schedule prescribed by the commissioner pursuant to the granting of a variance under section 5-1.90 or an exemption under section 5-1.92 of this Subpart may take effect, the commissioner shall provide notice and opportunity for public hearing on the proposed compliance or implementation schedule, or both. A notice given pursuant to the preceding sentence may cover the proposal of more than one such schedule and a hearing held pursuant to such notice shall include each of the schedules covered by the notice.

(c) Public notice of an opportunity for hearing pursuant to subdivision (a) or (b) of this section shall be circulated in a manner designated to inform potentially interested persons of the proposed action. Requests for hearing must be submitted to the commissioner within 15 days after issuance of such public notice.

(d) Notice of public hearings to be held pursuant to request submitted by an interested person or on the commissioner's own motion shall be given not less than 15 days prior to the time scheduled for the hearing, in a form and manner to be prescribed by the commissioner. Notices of public hearing shall be circulated in a manner designated to inform interested persons of the hearing.

(e) If no timely request for hearing is submitted and the commissioner does not determine to hold a public hearing on his own motion, the proposed variance or schedule prescribed pursuant to the granting of a variance or exemption shall become effective 30 days after notice of opportunity for hearing is given pursuant to subdivision (c) of this section. If a public hearing is held, the commissioner shall take appropriate action with respect to such proposed variance or schedule within 30 days after termination of the public hearing.

Historical Note

Sec. filed April 4, 1977 eff. June 24, 1977 except as otherwise specifically provided.

5-1.95

Historical Note

Sec. filed April 4, 1977; repealed, new filed June 24, 1981; repealed, filed April 6, 1987 eff. April 6, 1987.

5-1.96 Enforceability of final schedule prescribed pursuant to granting of variance or exemption. Once a schedule prescribed pursuant to the granting of a variance under section 5-1.90 or an exemption under section 5-1.92 of this Subpart has become final pursuant to subdivision (e) of section 5-1.94 of this Subpart, the conditions or requirements of any such schedule shall be enforceable, upon the application of the commissioner, by any court of competent jurisdiction in the same manner as an order of the commissioner under section 1107 of the Public Health Law.

Historical Note

Sec. filed April 4, 1977 eff. June 24, 1977 except as otherwise specifically provided.

SEPARABILITY

5-1.100 Separability. If any provisions of this Part are held invalid, such invalidity shall not affect other provisions which can be given effect without the invalid provisions.

Historical Note

Sec. filed April 4, 1977 eff. June 24, 1977 except as otherwise specifically provided.

SUBPART 5-2

WATER WELL CONSTRUCTION

Sec.		Sec.	
5-2.1	Statement	5-2.9	Completed works
5-2.2	Scope	5-2.10	Certificate or letter of compliance
5-2.3	Definitions	5-2.11	Notification of abandonment of a water well
5-2.4	Need for permit	5-2.12	Variance
5-2.5	Applications	5-2.13	General provisions
5-2.6	Permit	5-2.14	Applicability
5-2.7	Notice of disapproval and appeal		
5-2.8	Application to construct a water well		

Historical Note

Subpart (§§ 5-2.1--5-2.14) filed Aug. 3, 1972 eff. Aug. 3, 1972.

Section 5-2.1 Statement. The improper construction, operation, maintenance or abandonment of water wells and the improper installation of water well pumps and

pumping equipment represent a potential hazard to public health and safety. More than two million people in New York State depend upon private or individual water well supplies as their only sources of drinking water because public water supply systems are not available to serve them. To assure such consumers that the ground waters available to them will be reasonably and sanitary for drinking, culinary or food processing purposes, the following regulations for water well construction have been promulgated.

Historical Note

Sec. filed Aug. 3, 1972 eff. Aug. 3, 1972.

5-2.2 Scope. Minimum requirements are hereby prescribed governing the location, construction and abandonment of water wells used for drinking, culinary and food processing purposes other than municipal or public sources, together with procedures relating thereto, in implementation of this Subpart. No person shall construct or abandon or cause to be constructed or abandoned, any water well, nor shall any person install or cause to be installed, any pump or pumping equipment contrary to this Subpart. Distribution of water beyond the point of discharge from the storage or pressure tank, or beyond the point of discharge from the pump if no tank is employed and to wells used or intended to be used as a source of water supply for public water supply systems, or to any pump, well, or other equipment used temporarily for de-watering purposes shall comply with all other applicable State and local regulations.

Historical Note

Sec. filed Aug. 3, 1972 eff. Aug. 3, 1972.

5-2.3 Definitions. As used in this Subpart:

(a) *Abandoned well* means a well whose use has been permanently discontinued. A well shall be deemed abandoned if it is in such a state of disrepair that continued use for the purpose of obtaining a satisfactory ground water supply is impracticable.

(b) *Applicant* means the owner, lessee or other person having the possession and control of property on which a well is to be constructed or abandoned.

(c) *Construction of water wells* means all acts necessary to obtain ground water by wells, including the location and excavation of the well.

(d) *Permit-issuing official* means the health commissioner or health officer of a city of 50,000 population or over, the health commissioner or health officer of a county or part-county health district, the State regional health director or area director having jurisdiction, a grade I or grade II public health administrator qualified and appointed pursuant to Part 11 of this Title, or any county health director having all the powers and duties prescribed in section 3521 of the Public Health Law. The health commissioner or health officer of a city of 50,000 population or over, or the health commissioner or health officer of a county or part-county health district, or such grade I or grade II public health administrator or county health director may designate the director of environmental health of such district; and the State regional health director or area director may designate the district sanitary engineer as additional persons authorized to issue the permits required by this Part.

(e) *Installation of pumps and pumping equipment* means the procedure employed in the placement, protection and preparation for operation of pumps and pumping equipment, including all construction involved in making entrance to the well and establishing seals.



STATE OF NEW YORK DEPARTMENT OF HEALTH

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David Averod, M.D.
Commissioner

OFFICE OF PUBLIC HEALTH

Linda A. Randolph, M.D., M.P.H.
Deputy

William F. Leahy
Executive Deputy Director

October 22, 1987

Dear Water Supplier:

Re: New Monitoring Requirements For Organic Chemicals

On June 19, 1987, the United States Environmental Protection Agency (EPA) promulgated maximum contaminant levels for eight volatile organic chemicals (VOCs). In addition, EPA promulgated monitoring requirements for the eight regulated VOCs and a number of unregulated VOCs. One specific EPA requirement is that all systems serving a population of more than 10,000 persons must begin quarterly monitoring the first quarter of 1988.

The New York State Department of Health (NYSDOH) plans to promulgate similar or slightly more extensive sampling requirements in the near future. Since the state regulations requiring monitoring for VOCs may not be in place by January 1, 1988, individual notice is being given to systems serving more than 10,000 persons to allow time to budget and implement the monitoring program. In this case, NYSDOH is requiring VOC monitoring under its existing regulations to require additional sampling, pursuant to the State Sanitary Code, 10 NYCRR, Part 5, Section 5-1.75(a).

Consequently, the NYSDOH requires your water system to monitor for the list of VOCs on the attached Table 1, on a quarterly basis during calendar year 1988. Each source of water supply must be sampled prior to mixing with other sources and at or before the first service connection. Analysis must be performed by a laboratory approved by the NYSDOH, at a detection limit not to exceed 0.5 ug/l. Future monitoring frequencies will partially depend on the results of this first year of monitoring. Quarterly monitoring will continue at each source where VOCs are detected.

In addition to the above requirement, during 1988, each source derived from groundwater must be sampled once and analyzed for ethylene dibromide (EDB) and 1,2-Dibromo-3-chloropropane, (DBCP), at a detection limit not to exceed 0.02 ug/l.

All results shall be summarized and submitted quarterly to the local county (or state district) health department office. Any sample result greater than 5 ug/l shall be reported within five working days.

REQUIRED MONITORING

benzene
bromobenzene
bromochloromethane
bromomethane
n-butylbenzene
sec-butylbenzene
tert-butylbenzene
carbon tetrachloride
chlorobenzene
chloroethane
chloromethane
o-chlorotoluene
p-chlorotoluene
p-cymene
dibromomethane
m-dichlorobenzene
o-dichlorobenzene
p-dichlorobenzene
dichlorodifluoromethane
1,1-dichloroethane
1,2-dichloroethane
1,1-dichloroethylene
cis-1,2-dichloroethylene
trans-1,2-dichloroethylene
dichloromethane
1,2-dichloropropane
1,3-dichloropropane
2,2-dichloropropane
1,1-dichloropropene
1,3-dichloropropene
ethylbenzene
fluorotrichloromethane
hexachlorobutadiene
isopropyl benzene
n-propylbenzene
styrene
1,1,1,2-tetrachloroethane
1,1,2,2-tetrachloroethane
1,1,2,2-tetrachloroethylene
toluene
1,2,3-trichlorobenzene
1,2,4-trichlorobenzene
1,1,1-trichloroethane
1,1,2-trichloroethane
1,1,2-trichloroethylene
1,2,3-trichloropropane
1,2,4-trimethylbenzene
1,3,5-trimethylbenzene
vinyl chloride
m-xylene
o-xylene
p-xylene